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ABOUT BRAINCOMS

The Brazilian International Congress of Medical Students – BRAINCOMS – 2018 is the seventh and special edition of this great and successful congress.

The congress was established in 2012 by students of the Escola Paulista de Medicina –Universidade Federal de São Paulo (EPM/UNIFESP). Since then, as it is nowadays, the Congress is entirely planned, built up and ran by and for medical students. Since the first edition, the Congress has received many foreigners students, focusing on the international flow of knowledge in the medical area.

Due to this international visibility, we innovate not only adding new hands on workshops, but also inviting renowned Keynote Speakers such as Alexa Candy, Elmi Muller and Brandi Freeman and bringing you exciting sensitization activities with “ONG VIDAS”, “ONG CASA DAVID” and “Projeto Amozônicos”.

BRAINCOMS is a unique opportunity for you to include yourself in the international medical context by getting in contact with brand new subjects, building up network with other medical students from everywhere, and much more! All this in an engaging atmosphere with smart people, sense of humor, outstanding scientific quality and – why not? – great food and social events! This congress has everything to add a lot to your personal and medical formation.

You couldn’t spend these 3 days in a better way. We hope you all enjoy our “Like No Other” way of life!
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CIENTÍFICO E SENSIBILIZAÇÃO
Bárbara Hessel Rodrigues
4º ano
ORAL PRESENTATION
Analysis of the immunological profile during the vertical transmission of Trypanosoma cruzi in Balb/c females mice

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Background/Introduction: Chagas disease is a neglected disease caused by the protozoa Trypanosoma cruzi. The conventional transmission of this parasite occurs through a vector pathway. However, in Latin America, the control of domiciliated vector infestation have been successful. So, the importance of congenital transmission has recently increased. The pregnancy is already established as a state of immune response regulation, since the maternal system have to shelter a strange body (the fetus have 50% of its genome of paternal origin). In this study we tried to observe if this immune regulation at the pregnancy would interfere at the T. cruzi infection.

Objectives: Considering the tight regulation of immune system during gestation, this study aimed to investigate the changes in the immune response caused by T. cruzi infection in the gestation outcome.

Methods: Females from BALB/c were infected with trypomastigotes from G and Y strain, before or after mating with non-infected male mice. The mating was confirmed by the presence of vaginal plug, considered the first day of pregnancy. The females were divided in groups using three different controls: pregnant and not infected, infected but not pregnant and not infected and not pregnant. Some group was infected before mating, and the other was infected 4 days after confirmation of vaginal plug. All the groups were euthanized 8 days after confirmation of mating. The uterus and spleen were collected for qPCR (for parasites DNA detection), immunofluorescence and cytokine analysis (IFN-γ, TNF-α, IL-1β, e IL-4 dosage).

Results: The data showed an increase of IFN-γ (Th1 profile cytokine) in tissues of females that were infected before the vaginal plug detection, with both strains (Y and G), with a larger increase at Y strain infection, when compared to the
control group. Another Th1 profile cytokine analysed was IL-1β, that shows an increase only at the group of females infected with the Y strain before the vaginal plug detection. The Th2 profile cytokine, IL-4, showed a significant increase in the group of females infected with the Y strain before mating and in females infected with the G strain 4 days after mating. Due to the difficulty in detecting the presence of G strain parasites in tissue, we made a qPCR to detect a parasite DNA. It was observed a decreased parasite load when females were pregnant and infected with the G strain, when compared to the control group. The research for Y strain in tissues was done by immunofluorescence assay. We also observed a greater number of parasites from the Y strain in the uterus of females that were only infected, when compared to the embryo cuts of females infected and also pregnant.

Discussion/Conclusion: This work suggests that the infection with T. cruzi increased the expression of pro-inflammatory cytokines like IFN-γ, IL-1β and also of IL-4, a Th2 cytokine, responding locally to systemic changes caused by T.cruzi infection. We also observed that probably the pregnancy immune profile could be able to control, at certain level, the T cruzi infection, as showed by the results of qPCR and immunofluorescence.

Short-term of nebulized aluminum hydroxide promotes inflammation and oxidative stress in the lungs of adult Balb/C mice

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Background/Introduction: Aluminum (Al) is highly used in industry and in the pharmaceutical industry. Its affects mainly the lungs, kidneys and central nervous system. Chronic contact with aluminum results in a reduction in the activity of complexes in the electron transport chain, consequently, an excessive production of reactive oxygen species (ROS) that can lead to oxidative stress.
Objectives: This study aimed to evaluate the effects caused by exposure to aluminum, on oxidative stress and pulmonary inflammatory response.

Methods: The Ethics Committee of the Federal University of Ouro Preto (UFOP) approved the experiments, according the Protocol nº 2017/05. Twenty one male Balb/C mice, 8-9 weeks old, obtained from the Animal Science Center (CCA - UFOP), were divided into three groups (n=7): control group (CG); phosphate buffered saline group (PBSG) and aluminum hydroxide group (HAG). CG was exposed to ambient air while PBSG and HAG were exposed to PBS or aluminum hydroxide via nebulization three times per day for 5 consecutive days in an inhalation chamber. Twenty-four hours after the last exposure, the animals were euthanized and bronchoalveolar lavage fluid (BALF), blood and lungs were removed for biochemical analyses. Statistical analyses were performed using Graph PadPrism, data were expressed as mean ± SEM or median, minimum and maximum value and p <0.05 was considered statistically significant.

Results: Significant differences were not observed for the analysis of the concentration of erythrocytes, hemoglobin, hematocrit and leukocytes count, however for platelet analysis the animals of HAG presented lower concentration when compared to the control and PBSG. In BALF the total leukocyte, macrophages, lymphocytes and neutrophils was higher in HAG compared to CG and PBSG. The damage in lung parenchyma was evaluated by carbonylated proteins, there was a higher oxidation of proteins in HAG compared to CG and PBSG. There was a decrease in the activity of superoxide dismutase in HAG compared to CG and PBSG. A decrease in catalase activity was observed in HAG compared to CG and PBSG, and HAG presented a lower ratio between reduced and oxidized glutathione compared to CG. Myeloperoxidase activity was higher in HAG compared to the both groups. The immune enzymatic assay demonstrated an increase in Interferon levels in HAG when compared to control and PBSG.

Discussion/Conclusion: Recent evidence shows that aluminum can accumulate in the body being stored predominantly in the lungs, liver, kidneys and brain. Earlier studies have shown that chronic aluminum hydroxide exposure increased production of reactive oxygen species and lipid peroxidation in rat plasma. Otherwise, in a study with asthmatic patients, plasma aluminum levels was higher and can be associated with an increase in oxidative damage and decreased activity of catalase and glutathione peroxidase. In our study, we demonstrated that short-term of nebulized aluminum hydroxide already been able to promote influx of inflammatory cells into the lungs, oxidative stress and increase of inflammatory marker in the lungs of adult and healthy Balb/c mice.
Effect of an optimized antioxidant therapy on the ventricular function associated with myocardial ischemia reperfusion injury in an isolated rat heart model

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**Background/Introduction:** Ischemia reperfusion (IR) injury is associated with myocardial dysfunction. Both iron imbalance and oxidative stress actively participate in IR injury through damage to cell macromolecules and inflammation. Clinical trials with antioxidants have demonstrated a positive, but suboptimal effect diminishing IR injury. Is it possible to optimize these therapies with a multifactorial approach using ascorbic acid (AC), N-acetylcysteine (NAC) and deferoxamine (DFO) in aim to prevent IR injury.

**Objectives:** Evaluate the effect of a tri-therapy approach using antioxidants like AA, NAC, and DFO over the functional myocardial dysfunction generated in IRI. A secondary objective is to observe whether the possible influence in myocardial dysfunction is achieved through the effect on systolic function, diastolic function or both.

**Methods:** An experimental murine study approved by University of Chile ethics committee was performed. Using a Langerdorff technique of global myocardial ischemia, isolated rat hearts were subjected to IR. A total of 16 male Sprague-Dawley rats with weights between 200-250 g were divided into 4 experimental groups: Sham, Sham+Therapy, IR, and IR+Therapy. The therapy was administered during the myocardial reperfusion and the doses were AA 100 µM, NAC 100 µM and DFO 10 µM. End diastolic pressure (EDP) and ventricular pressure development (VPD) were measured in aim to objectify myocardial dysfunction. ANOVA test and Tukey test were performed (GraphPad Prism). Significant statistical difference was considered with p<0.05.

**Results:** The IR+Therapy group showed a significant decrease of end diastolic pressure (EDP 61.67+7.79 versus 86.66+4.93 mmHg; p=0.005) and a significant
increase of ventricular pressure development (VPD 31,17±4,34 versus 9,33±2,74 mmHg; p<0.0001), compared to the IR group.

**Discussion/Conclusion:** The associated therapy leads to a reduction on myocardial dysfunction generated by IR injury on isolated rat hearts. Moreover, myocardial function improved in both systolic and diastolic function. Early management of acute myocardial infarction (AMI) currently focus on ischemia and infarct size. Nonetheless, complications and subsequent morbidities of AMI are also related to myocardial function and novel approaches including this paradigm should be investigated. Hence, this multi-target therapy could be a therapeutic alternative for IR injury in humans, contributing to the reduction of complications of AMI.
ORAL PRESENTATION
SURGERY AND ORTHOPEDIC
SHOCK WAVE THERAPY ASSOCIATED TO ECCENTRIC STRENGTHENING FOR ACHILLES INSERTIONAL TENDINOPATHY: A PROSPECTIVE STUDY

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Background/ Introduction: The usual initial treatment for Insertional Achilles tendinopathy is non-surgical, comprehending modalities such as physical therapy and exercises. Yet, this approach has not produced encouraging results over the last years and currently there is still no standard conservative treatment for Achilles insertional tendinopathy. The low success rates have provided the impetus to explore practical and cheaper ways to induce the adequate reparation conditions. Shock Wave Therapy (SWT) has become a reliable option in the approach of this illness over the past years. The aim of this study is to report the effectiveness of low energy shock wave therapy associated to an eccentric strengthening protocol in 19 consecutive patients.

Objectives: Report the effectiveness of low energy shock wave therapy associated to an eccentric strengthening protocol in 19 consecutive patients regarding pain and function. The primary hypothesis is that these techniques will present good to excellent results.

Methods: This is a prospective study with 19 patients, between 26 and 72 years, diagnosed with insertional Achilles tendinopathy. The protocol consisted of SWT associated with Eccentric exercises for 12 weeks. All patients were evaluated at the first day and after 24 weeks (final follow-up) with the VISA-A Score, Visual Analogue Scale (VAS), AOFAS and by algometry. At the last follow-up patients were also assessed for adherence to the protocol, complication and final outcome (in their perception as success or fail).

Results: All patients in this study completed the protocol, with no complications. 15 (79%) patients were fully adherent to the Alfredson protocol, and 13 (68%) patients considered the treatment protocol successful. At the last evaluation, the patients demanded higher pressure on calcaneus to trigger pain (Algometry 1), reported less pain when the algometer was applied with 3Kg (Algometry 2), had less global pain (VAS), and had higher AOFAS and VISA-A Scores. All these differences were statistically significative.
Discussion/ Conclusion: This study, yet not placebo controlled, gives great evidence that eccentric loading associated with SWT can improve dramatically patients’ symptoms, as we found great improvement on clinical scores and objective and subjective pain measures. We can conclude that eccentric loading associated with SWT is an effective on treating Achilles insertional tendinopathy. More study, with longer follow-ups and placebo controlled are needed to further prove this affirmative.

ORTHOPEDIC INJURIES IN PROFESSIONAL MEN’S FOOTBALL IN BRAZIL: PROSPECTIVE COMPARISON OF TWO CONSECUTIVE SEASONS 2017/2016

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Mentor name: Moisés Cohen

Background/ Introduction: Playing football is complex and involves considerable risk of injury, associated to material economic and sports-related impact. Benching a professional starting athlete, due to injury, for one month, translates in the average loss of circa € 500,000.00 for the club, and also compromises the success of the team on the pitch. Moreover, because of the combination of physical and emotional stress, professional soccer is a sport with high risk of injury.

Epidemiological studies reveal the incidence rate of 16 to 28 injuries in matches and 2 to 11 injuries at practices for every 1,000 hours of exposure, at the professional level. According to other European and American studies on professional men’s football, the average injury rate is of 6-8 injuries per 1000 hours of exposure.

Football injuries affect especially the lower limbs – more specifically, the ankles, knees and thighs.

Susceptibility to given types of specific injuries nevertheless varies depending on each athlete’s position on field. Significant differences found in the injury incidence rates possibly occur for changes to game style and intensity, and the mood of the match also plays an important role in the specificities of each injury.

A study performed with elite athletes suggests that the different roles involved in each position require specific technical, physiological and tactical demands from
the players. Central defense players, for instance, are more likely to jump for the ball than external defenders, whereas external midfielders generally cover greater distances when running than central midfielders.

Professional men’s football injuries largely influence the final results of the teams in both national leagues and European cups and leagues. Such findings reveal the importance of preventing injuries to increase the teams’ chances of success and titles.

Implementing prevention strategies for a given population requires understanding and obtaining evidence on the specific pattern of said sample. As such, several epidemiological investigations have been conducted worldwide, and is common practice in the main leagues, world tournaments and World Cups.

Though football is the most popular sport in Brazil and the country is a global reference in the practice, there are few epidemiological studies and data on the regional and national leagues. The purpose of this investigation is to compare the incidence and specificities of injuries occurred in two consecutive seasons to better understand the pattern of such injuries, in order to establish prevention measures to avoid them.

Objectives: The purpose of this investigation is to compare the incidence and specificities of injuries occurred in two consecutive seasons to better understand the pattern of such injuries, in order to establish prevention measures to avoid them.

Methods: This research project was approved by the Ethics Committee of the Federal University of São Paulo /Escola Paulista de Medicina. (Number 1.660.701)

This is a prospective study performed by means of an electronic form previously developed by the Medical Committee of the São Paulo Football Federation (Federação Paulista de Futebol), sent to the physicians in charge of the teams of the A1 and A2 series of the São Paulo State Football Championship, after each round of the 2017 São Paulo State Football Championship. Data was compared to a prior similar study conducted during the last season, following data collection and statistical analysis.

The abovementioned form was sent after each round to analyze the incidence of the injuries and characteristics thereof. The form was comprised of 15 questions on the specificities of the match, athlete and injury.

The definition used to determine a football injury was the consensus statement set out by Fuller et al.25 for the 2005 FIFA consensus, described as: “Any physical complaint sustained by a player that results from a football match or
football training, irrespective of the need for medical attention or time loss from football activities”.

A form was sent for each injury occurred to analyze the outcome of each reported injury, filled out after the athlete returned to both training and matches. There are eight questions in the form, to indicate the complementary tests and exams run and the final diagnosis.

The São Paulo Football Federation was asked to provide the records on the different matches to obtain the time of each match, classified as follows: morning (matches beginning before 12 p.m.), afternoon (matches before 6 p.m.) and night (matches after 6 p.m.).

Incidence of injuries was calculated to assess injury risk, expressed as the number of injuries per 1000 hours of exposure (Fuller et al.25; Hägglund et al.26.). The following formula was used to calculate exposure:

Exposure = number of matches x number of players starting the match (22) x duration of the match in minutes (90) / 60

The following formula was used to calculate incidence at matches:

Incidence = number of injuries at matches x 1000 hours/time of exposure

Parametric statistics was used for data is both quantitative and uninterrupted. The Two-Proportions Test was used to characterize the distribution of the relative frequency of the qualitative variables. Differences with p<0.05 were deemed statistically relevant. Software SPSS V17 was used to perform the analysis.

Results: Mapping of the Injuries:

The average age of the injured players was 27.5 years, whereas the average time loss caused by injuries was of 23.5 days. Most matches occurred in the afternoon (39.9%), 11.3% matches were held in the morning and 48.8%, at night.

A total of 160 injuries were described during all 305 matches, with an average of 0.52 injuries per game. As for playing position, 32.1% of the injuries were sustained by external defenders, 29% by forwards, 22.1% by central defenders, 18.3% by external midfielders, 16% by central midfielders and 4.6% by goalkeepers. Most injuries occurred at the end of the first half of the match, between 31-45 minutes (25.6%).

In what concerns the location of injury, the most common injuries were: lower limbs (73.8%), head (17.5%), upper limbs (6.3%) and trunk (1.9%). Injuries occurred most often on the right side (47.5%), and the side did not apply in 13.1%
of the cases. There was contact in 51.9% of the injuries. As for the type of injury, the most common injuries were muscle strains (34.4%), followed by sprains (18.1%) and contusions (13.1%). With respect to final diagnosis, the most frequent diagnoses were: hamstring strain (16.5%), adductor muscle strains (12.7%), crush/laceration injury to the face (10.8%) and concussion, Medial Collateral Ligament (MCL) injury, Anterior Cruciate Ligament (ACL) injury and quadriceps injury (4.4%).

There were 17.63 injuries per 1000 hours of matches in the A1 Series, and 14.91 injuries per 1000 hours of matches in the A2 Series. When grouped, 15.89 injuries occurred in 1000 hours of matches in both series.

Treatment of the Injuries:

When requested, the most common complementary tests and exams run were: Magnetic Resonance Imaging (MRIs) (38.9%) and ultrasonography (14.3%), followed by Radiography (6.8%) and Computed Tomography scans (CT) (6.8%). No tests were necessary for 29.5% of the injuries. Surgery was required in 11.9% of the total recorded injuries. Most injuries were deemed moderate according to the severity scale, with time loss ranging from 8 to 28 days (41.9%).

Comparison: 2016 and 2017 Seasons:

The incidence of injuries per 1000h of match dropped from 24.16 to 17.63 in the A1 Series (p<0.037), from 19.10 to 14.01 in the A2 Series (p<0.064), and, when grouped (A1 + A2), from 21.32 to 15.89 from the 2016 to the 2017 season (p<0.003).

The prevalence of injuries also dropped from 35.0% to 26.4% (p<0.001) when the two consecutive seasons were compared.

With respect to the complementary tests and exams requested, the number of cases in which no tests were requested increased from 23.2% to 29.4%, whereas the request for radiographies dropped from 15.4% to 6.9% and for ultrasound exams decreased from 28.2% to 14.4%.

The relationship between surgery and type of injury was also investigated, and strains generally do not require surgery, while fractures are likely to evolve into surgery.

There is also a relationship between the type of injury sustained and the requested tests and exams. MRIs are generally requested for sprains, while ultrasound exams are requested for strains. No tests or exams were requested for crush/laceration injuries and radiographies are generally requested for fractures.
The severity of the injury seems to be related to the requested tests or exams; in general, no tests or exams are requested for slight severity, minimal severity is generally associated to Computed Tomography scans. Ultrasound exams are generally requested for major severity and Magnetic Resonance Imaging are likely to be requested for severe severity.

Discussion/Conclusion: Discussion: This investigation essentially focused on the analysis of orthopedic injuries sustained in the São Paulo State Championship of Series A1 and A2, of the 2017 season, which was compared to the 2016 season.

The incidence and characteristics of the injuries of the 2017 season are similar to data available in the literature, though both the incidence and distribution of the injuries of the injuries dropped when compared to the previous season.

Such difference is likely attributable to the decreased exposure of the athletes, considering the number of matches fell from 261 to 305 matches, especially in the number of games of the A1 Series. Said decrease in the number of matches allowed for more time between the matches, whereby athletes had a longer recovery period during the 2017 season.

In addition to decreased exposure, other factors may have also contributed to the drop in the incidence and prevalence of injuries, such as the preventive measures clubs implemented and improved pitch conditions.

Strains, sprains and contusions were the prevalent types of injuries in this study, as was the case of several other investigations available in the literature. Only 11.9% of the injuries required surgery, an most diagnoses relate to non-surgical treatment. Fractures and severe ligament injuries only are generally operated on.

MRIs were the most commonly requested tests; A1 Series clubs had the highest rate of MRI requests, likely due to the costs involved, for AI Series clubs have higher financial support.

The age of the athletes did not affect the type of injury sustained or the respective time loss, both with respect to the comparison between two seasons and between series, as seen in previous studies.

Most injuries occurred during the last 15 minutes of the first half of the matches, as was the case of the previous season, unlike the previous studies, in which incidence was higher in the last 30 minutes of the match. However, the tournament in one of such studies was organized as a single-elimination system, which may have translated into greater dedication by the athletes during the last portion of the match.
The greatest limitation of this study from the methodological standpoint is the reliability of the information provided by the clubs' medical personnel, as well as the lack of official records on injuries sustained during the matches. Moreover, it is not possible to accurately measure each athlete’s exposure.

Conclusion

The incidence and prevalence in the number of injuries sustained in the 2017 season decreased when compared to the 2016 season.

Most injuries occurred in the lower limbs; strains were the most common type of injury, followed by sprains and contusions. MRIs were the most commonly requested test, and most injuries were classified as moderate. Approximately 12% of the injuries evolved into surgery. Results similar to those available in current literature.

EVALUATION OF FIBROGESIS INDUCED BY POLIPROPILENE MESH IN DIFFERENT INCISIONAL HERNIA REPAIR TECHNIQUES

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Mentor name: Ponce Leon, F. - UFRJ

Background/Introduction: Incisional hernias occur through a previously incision in the abdominal wall, usually caused by a weakness in a surgical wound. Systematic reviews show that the surgical treatment of the incisional hernia has recurrence rates from 16% up to 24%. Meta-analysis are demonstrating that the retromuscular mesh hernial repair, sublay technique, have less recurrence rates, however there is no physiological explanation of those findings.

Objectives: Our goal is to compare the fibrogenesis in different techniques of incisional hernia repair and how it effects the abdominal wall reinforcement using an experimental model in rats.

Methods: Forty Wistar rats were divided in four groups according to the incisional hernia repair technique: Control (CT), Simulation (ST), Onlay (OL) and Sublay (SL). 42 days after the operation, we removed the abdominal wall for histological examination, tensiometrically analyzed the polypropylene mesh-tissue interaction and also recorded the number of abdominal adhesions.

Results: SL group presented greater value on tensiometric evaluation, with an average 36,75N for minimal tensile strength (MTS) necessary to remove the
mesh (standard deviation (SD): 5,92N). In the OL group we had an average MTS of 26,4N (SD: 3,50N). The SM group presented an average 23,0N MTS (SD: 3,39N) and the CT group had an average 24,1N (SD: 2,51N) (p<0,0001). SL group had the most adhesions with an average grade of 2,75 (SD: 1,16). OL group had an average grade of 0,8 (SD: 0,63) and SM group had an average grade of 0,5 (SD: 0,52) (p<0,0001). Using the Pearson’s correlation test for the number of adhesions and tensiometric values, was obtained a r value of 0,7795 (p<0,0001). Histologically, we observed in SL group higher granuloma, histiocytes and neocollagenization values. The Pearson correlation coefficient between tensiometric score and neocollagenization was p<0,05 for all groups.

**Discussion/ Conclusion:** The sublay technique for treatment of incisional hernias in an experimental model, provides an increase in both adhesions and tensiometric values, in comparison to other techniques. Also, the histopathological findings in the sublay group were higher and strongly related to a more efficient fibrogenesis than in the onlay group. We can assume that the use of sublay technique in incisional hernia repair provide better fibrogenesis, and the fortification of the abdominal wall may be more efficient with such an improvement.
ORAL PRESENTATION

CLINICS AND INTERNAL MEDICINE
MICROVASCULAR OBSTRUCTION MEASURE BY CARDIAC MAGNETIC RESONANCE: A NOVEL RADIOLOGY PREDICTOR OF INFARCT SIZE AND FUNCTIONAL PARAMETERS AFTER ACUTE MYOCARDIAL INFARCTION

Type of research: Clinics/Internal Medicine

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Mentor name: Jaime, G. and Ramón, R.

Department: Molecular and Clinical Pharmacology Program, Institute of Biomedical Sciences (ICBM), University of Chile.

Background/Introduction: Acute myocardial infarction (AMI) is a major problem for public health due to its high morbimortality rates. The cardiac magnetic resonance (CMR) is the gold standard imaging for predicted functional and morphological changes after AMI. Microvascular obstruction (MVO) measured by CMR represents non-irrigated areas of heart after percutaneous coronary angioplasty (PCA). MVO is associated to myocardial zones with damage produced by ischemia, reperfusion and microvascular previous damage.

Objectives: To evaluate the relationship between MVO measured by CMR and morphological and functional parameters as infarct size, left ventricle ejection fraction (LVEF), left ventricular end-systolic volume indexed to body surface area (ESVI) in patients with AMI and treated by PCA.

Methods: A retrospective analysis of multicenter randomized clinical trial (PREVEC trial ISRCTN registry: 56034553) was performed. The studied population was composed by seventy-seven patients with chest paint compatible with ST segment elevation AMI (STEMI) undergoing PCA. At 7-15 days after reperfusion a CMR was performed. CMR was analyzed by three thoracic radiologists blinded to clinical information. Infarct size, LVEF and ESVI were calculated in each CMR. For the statistical analysis, Mann-Whitney U-test, t-student test, Pearson and Spearman correlation test were used. A p<0.05 was considered significant.

Results: In MVO patients, the infarct size was significantly higher (p=0.005, evaluated by Mann-Whitney U-test), the LVEF was significantly lower (p=0.0075, with t-student test) and ESVI was significant higher (p=0.0219, with t-student test). A significantly positive correlation was found between MVO mean and the following parameters: infarct size (p=0.0001, with Spearman correlation value: 0.4893) and ESVI (p=0.0001, with Pearson correlation value:0.2681). In addition,
there was significant negative correlation between MVO mean and LVEF (p=0.0162, with Pearson correlation value: 0.0162).

**Discussion/Conclusion:** Previous studies support the role of MVO as a predictor of increased mortality and pathological remodeling at 6 months. In this study, patients who developed MVO had a increased infarct size, accordingly with preceding evidence that proposes infarct size as the best predictor of complications after AMI. The LVEF is related with higher morbidity and mortality. Furthermore, ESVI would be a robust predictor of pathological remodeling at 6 months. Our study has shown that patients with MVO have a worse LVEF and higher ESVI at 7-14 days after AMI. In conclusion, the presence of MVO could be a valid predictor of post-AMI complications in patients treated with PCA. Further studies should evaluate the role of MVO measurement in patients treated with other reperfusion techniques.

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**CROSS SECTIONAL STUDY ABOUT A POSSIBLE CORRELATION BETWEEN SEVERE ACNE AND METABOLIC SYNDROME**

**Type of research:** Clinics/Internal Medicine

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**Background/Introduction:** Acne is a chronic inflammatory, immunomediated and multifactorial disease that affects the pilosebaceous unit. It is characterized by non-inflammatory, inflammatory lesions and scars.

Metabolic syndrome (MS) is a group of alterations that increases cardiovascular diseases. Among the ethiopatogenic factors, the peripheral resistance to insulin is considered a causing or aggravating factor for acne. The main goal of this study was to investigate a possible correlation between severe acne and MS. The main researcher consulted electronic medical records of patients accompanied at Dermatology and Lipid Outpatient Clinics (both at UNIFESP/EPM). Those who presented altered findings characteristic of risk or presence of metabolic syndrome were evaluated by clinical examination according to the presence of acne scars, and those who had acne scars were submitted to clinical and laboratorial investigation in order to check the presence of metabolic syndrome.

**Objectives:** - Determine the prevalence of metabolic alterations or MS in adults with scars due to severe inflammatory acne.
- Identify the presence of scars due to severe acne in patients treating metabolic alterations or MS.

**Methods:** The patients included in this study were those aged 25 or older, accompanied at the Lipids Outpatient Clinic from Medicine Department as well as from Dermatology Department at UNIFESP/EPM, after approval of Institutional Ethics Committee and signature of the Consent Form (CF).

Inclusion criteria were: signature of CF, age 25 or older, presence of acne scars on face, chest or upper back; metabolic alterations and/or diagnosis of metabolic syndrome, and agreement with the terms and conditions of the study.

Exclusion criteria were: non-agreement with the study criteria and CF signature and age younger than 25 years.

The patients electronic records were accessed, as well as those from new patients referred to the Lipid or Dermatology clinics, from July 2017 to June 2018. The ones presenting risk characteristics or presence of metabolic syndrome were evaluated by clinical examination in order to detect the presence of acne scars. On the other hand, those presenting acne scars on face, anterior thorax and upper back were evaluated through clinical and laboratorial investigation in order to detect the presence of metabolic syndrome. Data were submitted to correlations in both groups of patients.

The clinical analysis comprised anamnesis (emphasys to behaviors such as smoking and alcohol consumption), measurement of waist circumference, blood pressure, weight, height and body mass index.

The laboratory tests included: fasting glucose, blood count and serum levels of insulin, triglycerides, LDL, HDL, ALT, AST, urea and creatinine.

Statistical analysis consisted of prevalence with Confidence Interval, in a 95% range (CI 95%) of the presence of metabolic alterations or MS among patients with acne scars and acne history or scars among patients in treatment at the Lipids Clinic. The Chi-Square Pearson’s test or Fisher’s exact test were used to evaluate the association of social and demographic data, clinical and lab exams with the presence of MS or acne scars. A statistical 5% significance level was adopted; that means, p-values inferior to 0.05 (p<0.05) were considered statistically significant.

**Results:** The total study population was composed of 115 participants (n=115), 58 from the Dermatology Department and 57 from the Lipids Clinic.

From the 58 patients from Dermatology Clinic with acne scars, 7 (12,1%), 6 women and 1 man, didn’t perform lab tests for metabolic alterations or MS evaluation. Nevertheless, the 6 women were not considered to present MS due to clinical criteria. So, from the 57 patients, 21 presented criteria for the diagnosis of MS (36,8%, CI95%, varying from 24,4% to 50,6%). Excluding the 6 women
who didn’t perform lab tests, from the remaining 51, 38 (74.5%) were female and 13 (25.5%) male. The mean age for the whole population was 36.1 ± 11.56 years; 31.6 ± 7.6 for those without MS and 42.5 ± 13.2 years for the ones presenting MS, with a significant statistical difference (p=0.002). Those patients with MS were 10.9 ± 3.2 years older than those without MS. There was no association between MS and gender (p=0.282). No significant difference was observed between patients previously treated with oral drugs and those who received just topical treatments for the presence of MS (p=0.301; p=0.413; p=0.603, respectively). On the other hand, patients with acne scars and elevated alcohol consumption, high blood pressure, elevated waist measurement and BMI presented significant differences when compared to those with negative results. Regarding the lab exams, levels of triglycerides, LDL and glucose were the most elevated, as well as the HDL levels were lower among patients with MS (p<0.5). The complete blood count, insulin, hepatic and renal function tests didn’t present differences between patients with or without MS (p<0.05).

The 57 patients treating MS at the Lipids Clinic were evaluated for the presence of acne scars. Among them, 24 (42.1%; CI95: 28.9%; 55.3%) reported previous history of acne and 11 (45.8%; CI95%: 24.3%; 67.3%) presented acne scars; there was no statistical difference between those with or without acne and scars according to gender, alcohol and tobacco consumption, waist circumference, blood pressure, BMI and laboratory tests (p>0.05).

Discussion/Conclusion: Apart from the small sample size, in both groups, the correlation between acne and metabolic syndrome could be suggested, mainly for dermatologic patients. Additionally the high presence of acne history or scars in patients under treatment for MS may also indicate a possible correlation with any type of acne. This hypothesis may raise the discussion about this association like the already proven risk of metabolic alterations in patients with other inflammatory chronic dermatosis, such as psoriasis, rosacea, lupus and hidradenitis; regardless acne severity (Takeshita, 2017; Lim & Oon, 2016; Akin et al, 2016; Bengtsson et al, 2016).

We highlight the importance of early treatment and follow up for patients with MS that could be observed in this study as clinical and laboratorial criteria were all at normal levels among patients from that specific outpatient clinic.

Regarding acne, the results, although limited, can claim attention to the evaluation of clinical criteria and laboratory investigation related to the risk of metabolic syndrome, specially for severe forms. The early diagnosis is particularly important to adult women with acne, when it is associated with hirsutism and menstrual irregularities (Ozdemir et al, 2010). Besides that, the early diagnosis of MS can contribute to the reduction of costs for the health system related to metabolic and cardiovascular diseases, highly prevalent in general population.
Further studies, such as case-control, cohort or multicentric, with greater number of participants, are necessary to confirm this hypothesis (Shlyankevich, 2014). We consider this a pilot study since we didn’t find, in the searched literature, any other discussing a possible correlation between severe acne in adolescents and metabolic alterations or syndrome in adults.

INFARCT SIZE AND EJECTION FRACTION DETERMINED BY CARDIAC MAGNETIC RESONANCE: CORRELATION WITH BIOMARKERS OF MYOCARDIAL DAMAGE

Type of research: Clinics/Internal Medicine

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Mentor name: Rodrigo, Ramón

Department: Program of Molecular and Clinical Pharmacology, Faculty of Medicine, University of Chile

Background/Introduction: Acute myocardial infarction (AMI) is the leading cause of morbidity and mortality in the world. The final infarct size (FIS) and left ventricular ejection fraction (LVEF) are the greatest predictors of post-AMI mortality, with cardiac magnetic resonance (CMR) being the gold standard for their measurement. Biomarkers are used to diagnose AMI and estimate myocardial damage. It would be plausible to use them as predictors of FIS and LVEF, however, current evidence is not clear about this role.

Objectives: Evaluate the correlation between two predictors of post-AMI mortality (FIS and LVEF) determined by CMR, and the elevation of myocardial damage biomarkers in patients undergoing primary coronary angioplasty (PCA), to study the potential predicting power of myocardial damage biomarkers.

Methods: A retrospective analysis of PREVEC (ISRCTN registry: 56034553), a multicentric, randomized, double-blind clinical study was performed. 67 patients with ST-Elevation Myocardial Infarction (STEMI) undergoing PCA were analysed. The CMR was performed 7-15 days after the event. Three radiologists blinded to clinical information measured FIS and LVEF. Total CK and CKMB were measured in peripheral venous blood at 6-8 hours after PCA. Pearson's or Spearman's correlation coefficient were obtained according to the parametric or non-parametric distribution of the variables, and its respective tests were considered significant with a p value <0.05. The software GraphPrism 6.0 was used for the statistical analysis.
Results: A significant positive correlation was obtained between levels of cardiac biomarkers and FIS determined by CMR [total CK (r-square 0.3, p<0.0001) and CK MB (r-square 0.15, p<0.0027)]. In addition, the levels of these biomarkers showed a significant negative correlation with LVEF [total CK (r-square 0.3, p<0.0001) and CK MB (r-square 0.18, p<0.0012)].

Discussion/Conclusion: The myocardial damage biomarkers are reliable, easy to determine, and cost effective tests, and are useful predictors of FIS and LVEF measured by CMR in post-AMI patients. Due to this, myocardial damage biomarkers could be included in future Risk Scores.
APPLICATION OF A SURVEILLANCE SYSTEM FOR CONGENITAL ANOMALIES IN THE HOSPITAL SÃO LUCAS DA PUCRS

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Background: ECLAMC (Latin American Collaborative Studies of Congenital Malformations) is a clinical and epidemiological research program on developmental anomalies reported in hospital births in the member countries. The program was implemented in Hospital São Lucas da PUCRS (HSL) in 2016, and since then, it contributes to the academic growth and scientific groundwork of the students of the School of Medicine at PUCRS. It also allows the improvement of the detection and the diagnosis of newborns with congenital malformations.

Objectives: The objective of our experience report is to demonstrate an effective surveillance program of newborns and the results coming from it, including the most common malformations in our hospital.

Methods: Medical students from the third semester perform, as volunteers ECLAMC members, a physical examination of all births of Hospital São Lucas in their first day of life, aiming to identify any congenital malformation. In case of, a standardized record with maternal information is done. The next birth of the same sex without abnormalities is the control, that will be registered too. The data collected is reviewed and sent to the central coordination of ECLAM monthly.

Results: Since august of 2016 until december of 2017 we were able to register 3981 births. Of these newborns, 150 (3,77%) presented some type of malformation at birth. The most frequent anomalies were dermatologic anomalies (38 newborns), defects in the outer ear (29), polidactilia (17), genitourinary malformations (13), genetic syndromes (11) and multiple malformations (7). We could also observe a certain number of heart malformation (6), extranumeric nipple (6), foot posicional deformations (6) and abdominal wall defects (6). These frequencies are in accordance with the ones observe in other hospitals on Latin America.

Discussion/ Conclusion: The etiology of most congenital anomalies have a complex interaction between genetic and environmental factors, but in a significant number of cases it remains unknown. Therefore, it is important to have a surveillance program that is able to help the prevention by research. In addition, the ECLAMC system becomes a relevant and didactic tool to the academic formation of the medical students.
THE COMBINATION OF HEMINA AND CINACIGUAT MODIFIES THE STRUCTURE OF RESISTANCE PULMONARY ARTERIES IN CHRONICALLY HYPOXIC AND PULMONARY HYPERTENSIVE NEWBORN LAMBS

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Mentor name: Llanos, AJ.

Background: Pulmonary Hypertension of the Newborn (PPHN) is a syndrome that presents a significant morbi-mortality, with a prevalence of 2-6 per 1,000 live births. The only available treatment is inhaled nitric oxide (iNO), effective only in 60% of the cases. Thus, new treatments are required to produce vasodilatation and to decrease remodelling on resistance pulmonary arteries (RPA). We propose that the combined treatment with cinaciguat and hemina in high altitude pulmonary hypertensive chronically hypoxic newborn lambs will decrease the wall thickness of RPA.

Objectives: To determine by histology if the combination cinaciguat-hemina decreases the RPA remodelling, by assessing the adventitia and muscle layer thickness of RPAs in lambs with PPHN.

Methods: An animal experimental study was performed, using the best animal model available for PPHN. For this, 12 newborn lambs born above 3600m above sea level were intervened.

Hematoxylin-eosin and van Gieson stains were used in lungs of 6 lambs treated with cinaciguat-hemin and 6 controls, to evaluate the structure of RPA.

We analyzed two ranges of luminal diameter of RPAs: 50-100μm and 101-150μm. The thickness of the muscular and adventitial wall was calculated. All procedures were approved by the Animal Bioethics Committee-CBA # 0643.

Results: In both luminal diameter ranges, the thickness of the muscle layer of the cinaciguat-hemin group was thinner than the control (44 ± 1.7% vs. 48 ± 1.0% for 50-100μm, 34 ± 1.1% vs. 40 ± 2.1% for 101-150μm respectively, with p <0.05). In contrast, the thickness of the adventitia layer of the cinaciguat-hemin group was greater than the control group (55 ± 1.7% vs. 44 ± 1.0% for 50-100μm, 52 ± 1.4% vs. 46 ± 0.5% for 101-150μm respectively, with p <0.05, Mann-Whitney test).

Discussion/ Conclusion: The decrease in the muscle layer thickness is consistent with the lower baseline pulmonary vascular resistance (PVR) in the cinaciguat-hemin group. In contrast, the increase in the adventitia thickness, that determines a lower elasticity, agrees with an increased PVR in hypoxic conditions. These results do not support the use of combined therapy of
cinaciguat-hemin for the treatment of PPHN, because although it decreases the muscle thickness, it increases the adventitia layer.

PHARMACOLOGICAL TREATMENT FOR PRESCHOOL CHILDREN WITH ATTENTION DEFICIT AND HYPERACTIVITY DISORDER (ADHD): A SYSTEMATIC REVIEW

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Background: Attention deficit/hyperactivity disorder is one of the most frequent mental disorders in children. Since ADHD’s formal recognition by the American Psychiatric Association (APA) in the late 1960s, fewer studies were conducted with preschool children with ADHD in comparison with those conducted with school age children, especially in regard to treatments. For this reason, a clinical trial (NCT02807870) is being conducted at the Institute of Psychiatry, University of São Paulo, aiming to improve evidence about the importance of early interventions in preschool children with ADHD.

Objectives: The aim of this review was to systematically review the evidence on the recommended medications (notably stimulants and non-stimulants) for treatment of preschoolers with ADHD.

Methods: We conducted a systematic and comprehensive search for peer-reviewed papers, published and unpublished RCTs meeting the inclusion criteria from the initiation of the databases until 30 July 2018 in Medline, EMBASE, WHO International Clinical Trials Registry Platform (ICTRP) and ClinicalTrials.gov. We used common MeSH terms for participants (all variants of ADHD, "minimal brain disorder", "minimal brain dysfunction", "overactive child syndrome", "hyperkinetic disorder", "attention deficit", "attention deficit disorder", "attention deficit disorder with hyperactivity"), preschool children (the terms "child" or "preschool" were used to capture research on children in the target age group, and the terms were not restricted to titles or keywords, but could be present anywhere in the database records), and medications. These yielded approximately 1580 records. After removing duplicates, screening and assessing eligibility, 19 studies and their suitable reference citations were reviewed and included the final qualitative synthesis.

Results: ADHD treatment with both stimulants and non-stimulants medications presented effective results in reducing ADHD symptoms in preschoolers. 07 studies evaluated non- stimulants (clonidine, atomoxetine, guanfacine, risperidone), but only one double-blind RCT was conducted, assessing the
efficacy of atomoxetine. For stimulants, 12 RCTs were found. Side effects were exhibited in different variety and intensity by the participants. Based on the existing literature, stimulants, particularly methylphenidate, should be the preferred medication for treatment of preschoolers with ADHD.

Discussion/ Conclusion: Stimulants shows positive results for ADHD in preschool children, but given the variety and intensity of side effects, it should be accompanied closely by the psychiatrist. There is scarce literature on the efficacy of non-stimulants for this population. More studies are needed, especially with more rigorous methodologies.
THE SOCIOECONOMIC PROFILE OF PREGNANT WOMEN AT A NORTHEASTERN BRAZILIAN HOSPITAL: A PROSPECTIVE STUDY

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Mentor name: FERNANDES, E.S.

Background: The Maternal and Child Health National Division (DINSAMI) have taken important steps in Women Care, such as the development of Women's Health Assistance Program (PAISM), the Prenatal and Birth Humanization Policy and "Rede Cegonha" aiming to guarantee that every Brazilian pregnant woman would have access to a high quality prenatal and childbirth care. Nevertheless, due to social economic disparities the Northeast region still registers high rates of Maternal and Child mortality.

Objectives: Through this study, we aim to analyze the social economic background of women in use of obstetric medical services at Santa Casa de Misericordia de Sobral.

Methods: This is a prospective, longitudinal study developed with pregnant women hospitalized in an obstetric care unit in Santa Casa de Misericórdia de Sobral, between November 2017 and January 2018. For the execution of the research, weekly visits were carried out and a questionnaire with closed questions was applied, addressing the following themes: age, civil status, government aids, housing, number of pregnancies, gestational age, schooling, monthly income, expectations and desire for gestation, knowledge and use of contraceptive methods. All of the pregnant women who agreed with the research signed a Informed Consent Term. The results were grouped in Microsoft Excel spreadsheet and organized in tables and graphics.

Results: Among the 60 pregnant women who were assessed, 2 refused to answer the questionnaire and 7 had their survey interrupted. The youngest was 13 and the oldest 46 years old. Half of them were married. The average gestational age was 33.19 weeks, with a standard deviation of 8.21. Over the period of study, 98% of admissions had a prenatal care. Most pregnant women (60.78%) lived in their own home, while 29.41% lived in a rented house and 1.96% occupy a rented room. The main complaints of pregnant women were: low belly pain (23.3%), loss of fluid (16.6%) and bleeding (11.6%). School dropout was identified in 60.78% of total. All of them were literate and belonged to socioeconomic classes D (9.8%) and E (90.19%). 52.94% of the subjects use government financial support (Bolsa Família) and 50.98% did not plan their pregnancy.

Discussion/ Conclusion: The information collected in this study calls to attention the amount of pregnant women of a low socioeconomic profile and of unwanted pregnancy. This scenario indicates the necessity of including sexual education in Brazil’s public schools and of creating programs to bring awareness to contraceptive methods and
family planning, even to people without a formal education. By implementing this as a tool of promotion and protection of health, mother and child’s well-being would be improved and the prenatal care offered could have a higher quality. Furthermore, the results also show that, despite low income, almost all pregnant women were accompanied by prenatal care, which indicates an effectiveness of the Family Health Strategy at the place of study.

PERSISTENT DEPRESSIVE DISORDER IN MEDICAL ACADEMICS

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Background: Depression, anxiety, sadness and distress are frequent symptoms in medical students and can have a major impact on career development. Drop in income, increased dropout rates and increased suicide. Persistent Depressive Disorder, better known as dysthymia, is understood as a chronic form of depression, but with milder symptoms. This disorder has a high prevalence among medical students, a context where there is continuous and excessive collection by the university, family and the student.

Objectives: The purpose of this bibliographic study was to present a literature review on the prevalence of dysthymia among medical students, identifying the associated demographic and psychosocial factors, and to determine if the stress of university life is a triggering factor for the disorder among undergraduates.

Methods: The methodology used was the exploratory bibliographic research of already published materials, of qualitative approach on the etiology and prevalence of graduations of depressive disorders, with emphasis on dysthymia in medical students. The strategy used to search for relevant articles included manual reference checking, methodologies and statistical significance levels (p <0.05). Among the exclusion / inclusion criteria, the articles present in the databases of SciELO and BIREME were selected from Medline, Pubmed and Lilacs sources, published between 2004 and 2016, in Portuguese and English. The descriptors used were: 1. Academics of Medicine, 2. Depression, 3. Disorders, 4. Dysthymic Disorder. The selection of articles also had as criteria the adequacy to the theme of the titles and abstracts, being selected at the end a total of 15 articles.
Results: According to the analysis of the studies, medical students are more likely to develop great stress and anxious symptoms during their academic life. Despite the milder and chronic symptoms of dysthymia, when undiagnosed, its impairments to quality of life outweigh that of other types of depression. However, 64% of dysthymics are misdiagnosed. In addition, 77% of those affected will have associated psychiatric comorbidities, making early diagnosis of dysthymia more important. During the course of medicine the highest prevalences were found between the first and last semesters, with the female being the holder of the highest rates. Early identification and referral for pharmacological and / or psychotherapeutic treatment minimize depressive symptoms and the risk of suicide. Studies with cognitive behavioral therapy have been shown to be effective in the prevention of anxiety and depressive disorders, as well as nonpharmacological strategies such as physical activity, meditation and leisure.

Discussion/ Conclusion: We find that the medical student is exposed to factors that contribute decisively to the onset of persistent depressive disorder, resulting in severe impairments in personal and professional quality of life. Therefore, it is extremely important to offer psychiatric and psychological support to students in all periods of the course due to their effectiveness in reducing the impact of stress among academics. Curricular changes that reduce stress and encourage the development of student resilience are essential for universities to support future professionals. Dysthymia is now a treatable entity that needs to receive more attention because of its morbidity. This disorder, although not new, needs more interest from professionals, since it affects a large part of the population, especially university students of the medical school.

ASSESSMENT OF THE PREVALENCE AND LEVEL OF ANXIETY IN MEDICAL STUDENTS AND ITS CONSEQUENCES

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Background: Anxiety is a sensation or symptom arising from the excessive excitation of the nervous system that can be interpreted as the intersection between the physical body and the psychic body of a person. Anxiety is often observed in health students, particularly among medical graduates and is a complex and multifactorial, self-reinforcing individual behavioral response reinforced by the personal ideation of medical "being" and stress rooted in the course matrix. These factors depress mental, physical and social health, negatively affecting the quality of life of the academics.
Objectives: To evaluate the degree of prevalence and anxiety levels in medical students of the University Center of Volta Redonda (UniFOA) and then to relate the conclusions obtained by the inventory with the results and interventions proposed by other researches, in order to quantify the current situation and raise potential approaches that could provide better health and living conditions for the institution’s medical students. It is very relevant the adequate investigation, because the early diagnosis of anxiety disorders improves the prognosis and prevents that the stress level rises to the point of the student having their academic life impaired and later also their professional life. Thus, this approach is justified by the theoretical relevance and the need for interventions to reduce stressors to university students, to increase students’ individual resilience and to deconstruct this pre-conceived image of the physician.

Methods: This is a vertical and observational study in which the research data were collected through the application of a questionnaire already established in the literature, the Beck Anxiety Inventory (BAI). The Beck Inventory was applied at UniFOA - University Center of Volta Redonda, Campus Olezio Galotti in the state of Rio de Janeiro in the second semester of 2016. The survey covered 30% of the students in each (5th to 12th) of the medical course of that modular signed and consented to the Informed Consent Form.

Results: The clinical cycle presented higher intensity and more intense degrees of symptoms, whereas the period of internship was lower, reaching the lowest degree of symptoms with moderate and severe degrees. However, the values found in UniFOA, when compared to other universities, were somewhat surprising as they were expected by lower levels, since the level of collection due to the practical method of assessing it is generally less stressful.

Discussion/Conclusion: Proper investigation is important because the early diagnosis of anxiety disorders improves the prognosis and prevents the level of stress from rising to the point where the student has his or her academic life and subsequently the professional life impaired. Chronic stress causes students to become ill and interfere with their social lives and professional development. To take care for your neighbor you have to take care of yourself first. The physician-patient relationship involves transference and countertransference, so if the doctor is ill he can not adequately fulfill his patient. The university center of Volta Redonda presents several projects that aim to improve the quality of life of the students, however, the data raised point to an alarming situation if compared to other institutions. Therefore, it is suggested that there be a review of the functionality of the existing projects focused on the attention and care of the students’ emotional state and there is a need to create other projects that can act directly in order to reduce the stress caused, to increase the individual resilience of students and to deconstruct the idealization.
POSTER SECTION
POSTER SECTION

BASIC SCIENCES
Analysis on animal ethics knowledge among Graduation students working with pre-clinical research

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Background/Introduction: Law number 11.794 was incorporated into the Brazilian Federal Constitution in 2008 and regulates the use of animals in research and educational activities over the entire country. One of the environments with significant use of animals in research is the University setting, where undergraduate students are exposed to early animal manipulation during their scientific projects. During the last 5 years, the Animal Care and Use Committee (Comissão de Ética no Uso de Animais, CEUA) of the Federal University of São Paulo (UNIFESP) approved 149 scientific projects for undergraduates that made use of animals, demonstrating a meaningful amount of individuals exposed to this activity.

Objectives: Assess the knowledge of medical and biomedical undergraduate students of UNIFESP about Law number 11.794/2008 and the most important CONCEA normatives.

Methods: A questionnaire about Law number 11.794/2008 and the most important National Council for the Control of Animal Experimentation (CONCEA) normatives was applied to medical and biomedical students of UNIFESP between August and November of 2017.

Results: From the 61 answers received, we were able to locate an association between being aware of a Law that regulates animal use in research and knowing who ensured the well-being of animals during research (hygiene, water and food) (p=0,028). In addition, being aware of the Law was related to greater comprehension on animal reutilisation after reaching the main objective of the research (p=0,006), with the knowledge on anesthesia (p=0,005) and euthanasia (p=0,027). We also noticed that students who knew about the Animal Committee (CEUA) were more aware of animal facilities’ conditions, as temperature control (p=0,046). Students who had regular classes about Law 11.794/2008 at the
University used only the approved number of animals by CEUA in their projects (p=0.046).

Discussion/Conclusion: Considering the results and analysis, we were able to design a landscape of knowledge regarding animal ethics of medical and biomedical undergraduate students of UNIFESP. The results show the benefits of regular classes about the theme and indicate the need to introduce them in the courses’ schedule. The data suggest that the understanding of Law 11.794/2008 and the CEUA principles provide better awareness regarding ethics and animal care, showing the importance of spreading these crucial tools inside the institution. Legislation may be helpful in the constitution of new professionals with solid ethical values of responsibility and respect toward other living beings’ existence. These values, when transmitted by professors, are included in the students’ formation process, providing a valuable background of integrity.

Morphological Aspects of Dendritic Spines of Neuroblastoma Derived Cells with DiI labeling

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Background/Introduction: Dendritic Spines are small protrusions localized in the Dendrites of Neurons, and auxiliate in the individualization of the excitatory signal of synapses. These Spines can be categorized in four main subtypes: filopodia, thin, stubby and mushroom. The development of new studies of Dendritic Spine are specially important for the comprehension of neuroplasticity and it’s behavior in pathologic conditions, such as Alzheimer’s Disease.

Objectives: In this initial phase of our study, we aim use the dye DiI in culture cells to visualize Dendritic Spines in mice Neuroblastoma cells N2a, and evaluate whether Dendritic Spines are already present after 72h of differentiation.
Methods: We could observe that Dendritic Spines are present in N2a cells after 72h of differentiation and are detectable through both fluorescence microscopy with an objective of 100x, and confocal microscopy through an objective of 63x.

Results: It was observed that the four types of Dendritic Spines are visible in this cell lineage, and that the treatment of cannabidiol and memantine, in our initial results, were not able to alter the density of spines in this cell line (p > 0.05, ANOVA).

Discussion/Conclusion: We conclude that the method of using DiI as a membrane dye to observe Dendritic Spines with in vitro models is a cheap, fast and effective way to quantify study this structures and its morphological characteristics, being important to the comprehension of pathophysiology of neurodegenerative diseases.
has been explored in gastric cancer cells only in a limited number of approaches. Thus, the need of integrative and comparative studies still persists, thus, we evaluate the antiproliferative effects and observe the possible effects of cell death that can be induced in the presence of cannabinoid agonists

Methods: The types of death were evaluated using several techniques to confirm that the agonists employed in this study induce some type of death in gastric cancer cells. AGS and SW837 cells were seeded in 24-well plates at a density of 7 × 10⁵ cells per well and treated 24 h later with AEA, Meth-AEA or CP 55,940 (CP) at growing concentrations (0.5, 2.5 and 5 μM) and their respective controls (DMSO) and ionomycin and staurosporine as positive control of cell death. Morphological evaluation, cell viability assay, DNA laddering assay and flow cytometry assay was used in this study. The effects of different cannabinoid agonists, anandamide AEA), (R) - (+) - methanandamide (Meth-AEA) and CP 55,940 (CP) were tested in the gastric (AGS) and rectum (SW837) cell lines at 24 hours. Results are represented as mean values ± one S.E.M. of three experiments per group (each in triplicate). Data were statistically analyzed by two-way analysis of variance (ANOVA) for repeated measures, followed by post hoc Tukey's test. Values of P b 0.05 were considered of statistical significance.

Results: In the presence of staurosporine and ionomycin as positive death controls, changes in the morphology and the electrophoretic profile were observed with respect to the control without treatment. At 24 hours with the cannabinoids agonist the cell lines shown, morphological changes, DNA degradation pattern and loss viability, was observed with respect to the control without treatment. The dot plots in flow cytometry show cell death in human AGS and SW837 cell lines after exposure to 5 μM for 24 h. This indicates the existence of cell death mechanisms in short periods of time

Discussion/Conclusion: In previous studies antiproliferative effects associated with cannabinoids in gastric cancer cells have been demonstrated, however, little is known about the molecular mechanisms that support the events of cell death. The three agents tested exhibited similar concentration-dependent effects in the induction of the cell death. Differences among the cannabinoids tested were mostly observed in the density of cells found in early and late apoptosis and necrosis, favoring AEA and CP as the more effective inducers of apoptotic mechanisms, and Meth-AEA as a more effective inducer of necrosis through transient and rapid apoptosis. Through a comparative approach, our results support and confirm the therapeutic potential that cannabinoid receptor agonists exert in gastrointestinal cancer cells and open possibilities to use cannabinoids as part of a new gastric cancer therapy.
Intranasal instillation with distilled water, hypertonic solution and sodium bicarbonate induces leukocyte influx and oxidative stress in the airways of C57B

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Background/Introduction: Mechanical ventilation has a positive impact on the survival of patients with respiratory failure, but retention of trachea bronchial secretions is common place, which may require aspiration to clear the airways. The risks associated with the instillation of an expectorant solution shave have already been studied, but the effects of these solutions on the antioxidant defense and immune system have not yet been fully understood.

Objectives: This study has evaluated the instillation effects of different solutions on oxidative stress and lung inflammatory response in C57BL/6 mice.

Methods: C57BL/6 mice (8-10 weeks old) were divided into 5 groups (n=10 for each one): control (CG); distilled water (DWG), hypertonic solution (HSG), saline (SG) and sodium bicarbonate (SBG). CG was exposed to ambient air while DWG, HSG, SG and SBG had 25 μl of respective solutions administered intranasally twice a day during 5 consecutive days. Twenty-four hours after the last intranasal instillation, the animals were euthanized and bronchoalveolar lavage fluid (BALF), blood and lungs were removed for biochemical and morphometric analyses. Statistical analyses were performed using GraphPad Prism software version 5.00 for Windows 7. Data were expressed as mean ± SEM and p <0.05 was considered statistically significant. The Ethics Committee of the Federal University of Ouro Preto (UFOP) approved the experiments, according the Protocol # 2016/67.
Results: There was an increase blood neutrophil count in SBG when compared to CG, moreover, the monocyte count, was higher in SBG and DWG compared to CG. All solutions increased the counting of total leukocyte in BALF when compared to CG. The numbers of macrophages increased in DWG, SBG and SG when compared to CG. Furthermore, there was an increased neutrophil infiltration in SBG and HSG when compared to CG. Biochemical parameters revealed a decrease of superoxide dismutase activity in HSG compared to CG; catalase activity was reduced in SG, while it increased in SBG and DWG when compared to CG. Carbonylated proteins had a high concentration in SBG and HSG compared to CG. There was no significant variation within the groups in stereological analyses. Finally, there were increases in the levels of tumor necrosis factor alpha in DWG and SBG compared to CG, as well as CCL2 in DWG and SBG compared to CG.

Discussion/Conclusion: In our study we evaluated the effects of intranasal instillation with distilled water, hypertonic solution, sodium bicarbonate and saline on cell recruitment and oxidative stress for a short-term compared to control animals exposed to ambient air. Previous studies in human patients have demonstrated that the treatment with different solutions improves lung function, however, studies with an experimental murine model of nebulization with distilled water during a long period led to recruitment of macrophages and neutrophils into the lung and increased oxidative damage. In general, our data suggest that the intranasal instillation with distilled water, sodium bicarbonate and hypertonic solution for a short-term has already been able to generate a higher influx of inflammatory cells, oxidative stress and pro-inflammatory cytokines in the airways of C57BL/6 mice.

Head and neck cancer and its association with human papillomavirus: a review of literature

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Background/Introduction: Head and neck cancer (HNC) is the sixth leading cause of death caused by cancer, according to the National Cancer Institute (INCA) in Brazil, with squamous cell carcinoma being the most common type. In the past, the main causes of HNC were tobacco and alcohol, but now the human papillomavirus infection has become a factor of attention. It is estimated that about 25-50% of these tumors are HPV-determined and the major types of virus involved in cell carcinogenesis are hpvs 16, 18, 31, 33 and 35.

Objectives: The objective of this review article is to show the influence of new life habits, mainly in sexual context, to alter the epidemiological profile of head and neck tumors. The article aims to emphasize the role of human papillomavirus, a sexually transmitted DNA virus, in epithelial cell carcinogenesis, emphasizing the site of action of the virus and to verify the relationship of prophylactic vaccination in the fight against some types of HPV positive tumors.

Methods: This is a systematic review of literature, in which a search was made in the electronic database PUBMED (National Library of Medicine and National Health Institute) using the descriptors "head and neck cancer related to human papillomavirus", "head and neck cancer", "hpv", and a pre-selection of English articles was performed. We selected 50 articles, restricting to those published in the last 10 years and then categorized for analysis. In addition, an independent search was conducted in the databases of CA Cancer Journal for Clinicians, Journal of Clinical Oncology, Journal of Pathology and Leukemia-Nature, using the descriptor "HPV related to head and neck cancer", and another 12 English articles published between the years of 2006 and 2018 were also selected for analysis.

Results: HPV is a Papillomaviridae virus, non-enveloped, with a double-stranded DNA genome. The virus is present in about 25% of all squamous cell carcinomas of the head and neck, and in carcinomas of the oropharynx is greater than 50%, the associated types are 16, 18, 31, 33 and 35. Head and neck tumors related to alcohol and tobacco have declined, while those related to HPV have increased, especially in young people. To be considered a HPV + type, it needs to express HPV-related oncogenes, which makes the tumor morphologically different and probably of better prognosis. The pathogenesis of HPV oncogenesis is related to the E6 and E7 proteins, which can be aggregated into the infected genome and promote suppression of the p53 and p16 genes. Prophylactic vaccines for HPV infection are available, however, there are no relevant studies demonstrating their relationship in prophylaxis to HNC currently yet.

Discussion/Conclusion: From this review article, it can be concluded that risk factors such as alcohol and tobacco are no longer the only ones related to the
development of head and neck cancer, and the contribution of HPV infection to the development of some types of head and neck cancer, mainly in the oropharynx. The epidemiological profile of patients with head and neck cancer has been changing, with an increase in HPV-related diseases, especially in young people. In addition, virus-directed tumors are called HPV + and also probably have a better prognosis. The relationship between vaccination against HPV infection and its prophylaxis for the development of head and neck cancer has not been well defined yet, which demonstrates the importance of further research on the subject.

Meningitis mortality rate related to sociodemographic variables, clinical signs and comorbidities in Santa Catarina in 2015: a transversal study

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**Background/Introduction:** Infectious meningitides, particularly bacterial ones, are a group of preventable and treatable diseases with high lethality rates in Brazil. In 2015, 9,282 cases of the disease were notified in the country, with a mortality rate of 9.87%. Despite the magnitude of the problem and the amount of data that come from compulsory notification sheets, there is a lack of statistical analysis regarding the association between prognostic factors of the disease and its final outcome.

**Objectives:** The aim of this study is to analyse the influence of sociodemographic variables (gender and age), clinical data (meningitis type, vomiting, seizuring, petechiae, hemorrhagic suffusions, comatose condition) and comorbidities (pre-existing HIV-AIDS or tuberculosis) towards meningitis lethality in Santa Catarina, in 2015. The knowledge of which variables are significantly related to worse prognosis establishes an useful tool for the guidance on treatment and management of meningitis.
Methods: A transversal study was made throughout data provided by Florianopolis’ epidemiological surveillance directorate (DIVE). The analysis comprehended only notification sheets of meningitis in Santa Catarina in 2015 that were completely fulfilled. The sample resulted in 709 individuals. An association amongst multiple independent variables (sex, age, pre-existing HIV/AIDS or tuberculosis, vomiting, seizuring, Kernig and Brudzinski signal, petechiae, hemorrhagic suffusions, comatose condition and type of meningitis according to etiology) and the dependant variable (death by meningitis) was searched. In order to achieve the statistical analysis, the chi square hypothesis test was used throughout the software PSPP version 3, 29th June of 2007. There was no requirement of permission from the ethics committee since the data are in public domain and no participants’ identification is provided. The study has no financial support or conflict interests.

Results: The meningitis mortality rate in the analysed sample was 10.58%. The death proportion in patients with age above 60 years (17.46%) was significantly higher than both those with age ranging from 20 to 59 years (14.20%) and those ranging from 0 to 19 years (5.19%). The mortality rates amongst patients with petechiae and/or hemorrhagic suffusions (30%) and patients with tuberculosis (29.17%) were three times superior than the general rate of the study (10.58%). The death incidence amongst HIV/AIDS patients (19.64%) was twice higher than the non-HIV/AIDS individuals (8.88%). Amongst the coma patients, 37.84% passed away. Regarding the meningitis etiologic classification, the greatest mortality rate was due to the meningococcal type (32.14%), followed by the tuberculous (27.78%) and pneumococcal type (27.50%). The lowest mortality rate was verified in aseptic meningitis (2.5%). The other analysed variables did not show statistically relevant differences to the final outcome (p > 0.005).

Discussion/Conclusion: The variables related to the prognosis of death by meningitis are: age, comorbidities (HIV/AIDS), petechiae, comatose state and etiology of the disease. The disease mortality rate documented in Santa Catarina in 2015 (10.58%) was similar to Brazil’s in the same year (9.87%)*. In Rio de Janeiro*, HIV/AIDS was also considered a prognostic factor for meningitis, with a mortality rate of 45%. The lethality of meningococcal meningitis in Santa Catarina (32.14%) is higher than that recorded in studies from Rio de Janeiro (13.33%)* and Londrina (10.2%)*, which could be an outcome of more adequate disease management in these locations. Petechiae presentation was also associated with meningitis death by Toews and Bass in a clinical study of 1974. The knowledge of prognostic factors can serve as a guide for health professionals on the management of the disease and can be useful on the development of prevention measures targeted to risk groups, such as vaccination and early diagnosis campaigns.
Background/Introduction: Galectin-9 (Gal-9) is a tandem-repeat member of a glycan-binding protein family characterized by two distinct carbohydrate recognition domains connected by a linker peptide. In experimental models of inflammation, Gal-9 has been pointed as an anti-inflammatory mediator. However, in relation to its mechanisms of action in allergy, Gal-9 can play a dual role, either regulating or activating the cellular response.

Objectives: Evaluate the expression pattern of Gal-9 and its relationship with inflammatory cells in ovalbumin (OVA)-induced experimental atopic dermatitis in mice.

Methods: The skin of OVA-immunized male BALB/c mice was challenged with drops containing OVA on days 11, 14–18 and 21–24. Additionally, in the last week, a subset of animals was treated intraperitoneally with dexamethasone (Dex). After 24 hours of the last OVA challenge, mice were euthanized for histological, immunohistochemical and western blot analyses.

Results: AD was characterized by epidermal hyperplasia and a marked influx of eosinophils (134±22.7 cells/mm²), mast cells (94±7.5) and CD207/langerin-positive cells (38±13) compared to control group (5±2.5, 32±1.6 and 5±3, respectively, P<0.01). Additionally, AD induced increased levels of Gal-9 in the skin, as evidenced by immunohistochemistry and western blot, especially localized in the epidermis and inflammatory cells. Dex-treated mice exhibited skin thickness similar to control group, as well as reduced inflammatory response and skin Gal-9 levels in relation to untreated AD group.
Discussion/Conclusion: The modulation of Gal-9 levels in the skin indicates its participation in the inflammatory response induced by experimental AD.

Epidemiological Aspects of Human Visceral Leishmaniasis in Governador Valadares, Minas Gerais, Brazil, from 2008 to 2017

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Background/Introduction: Human Visceral Leishmaniasis (HVL) is a disease caused by the genus Leishmania protozoan in a heteroxenic cycle in which phlebotomine mosquitoes transmit the parasite to humans. Previously of a rural character, the disease has expanded to urban areas and presented high incidence and lethality in certain regions, especially in places lacking basic sanitation. It is amongst the six most important endemic diseases in the world. Since 2008, Governador Valadares (GV) has been living an HVL epidemic.

Objectives: To describe the epidemiology of HVL cases in residents of Governador Valadares, Minas Gerais, from 2008 to 2017, in relation to time, place and person.

Methods: Secondary data obtained from the SINAN-NET – Notification of Injury Information System – available by the Department of Health Surveillance of the Municipal Health Department of Governador Valadares were used. In addition, for the construction of the indicators, population data from the Brazilian Institute of Geography and Statistics were used. The variables studied were: year of notification, neighborhood of residence, sex, age group, confirmation criterion, evolution and co-infection with HIV. The analysis was conducted in the light of descriptive epidemiology and statistics. Rates of lethality and specific mortality were calculated.
Results: In total, 193 cases of HVL were confirmed in residents of GV. The year with the highest number of cases was 2009 with 29 cases, followed by 2010 with 27. The cases were distributed in 58 (69.0%) of the 84 neighborhoods, and 10.4% (20 cases) were concentrated in the neighborhood with the highest incidence: Altinópolis. Among the demographic variables, the following results stand out: 68.9% were male and 24.9% were 1 to 4 years old. Regarding the clinical variables, it is noteworthy that 13.5% of the cases were co-infected with HIV and that the laboratory method was used as a confirmation criterion in 97.9%. In addition, the evolution showed the following results: 79.3% cure, 1.0% dropout, 14.5% HVL deaths and 5.2% deaths from another cause. The deaths and the lethality rate of the whole period were 29 and 14.5%, respectively. The year 2009 showed the highest mortality rate due to HVL with 8 deaths (3.0 deaths per 100,000 inhabitants) and the highest mortality rate (41.2%) in 2017.

Discussion/Conclusion: According to the Brazilian Ministry of Health, GV is an area of intense transmission of HVL since it presents an average of more than 4.4 cases in the last five years presented (15.2). The incidence distribution in the neighborhoods is closely related to the socioeconomic and geographical situation of each one, being a reflection of the city's situation. The sex and age variables agree with the literature, in which men and children under five years present the highest proportions. Confirmation by the laboratory method was more used since the disease presents nonspecific symptoms. Although cure results are high, GV lethality is still high. The co-infection presents in 13.5%, this ratifies that HIV carriers are more susceptible to HVL in endemic areas, being an opportunistic disease. It is concluded that public policies aimed at the municipality should be developed, prioritizing the places and groups that have the highest incidence since HVL is a major public health problem.

Analysis on the Advisor's Role in the Awareness about Animal Ethics among Undergraduate Medical and Biomedical Students Engaged in Animal Experimentation at UNIFESP

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Background/Introduction: The Law no 11.794, also known as Arouca's Law, was approved in Brazil in 2008. It regulates the use of animals in research and educational activities, based on ethics and focusing on animal’s welfare. Once a recommendation, it is now a priority and has specific normatives and guidelines. Nevertheless, there are still a discrepancy of the information between the researchers, faculties and students. And few institutions provide ethics-related subjects in the Medical School’s curriculum.

Objectives: To assess the knowledge of undergraduate Medical and Biomedical students regarding the Law no 11.794/2008, its compliance during their research, the role of the advisors in providing the information of said law and how these three aspects are related.

Methods: An online questionnaire was elaborated with objective, multiple choice questions regarding the Law no 11.794/2008, its compliance, and the role of the advisor in informing their students about it. The including criteria were: being an undergraduate student at UNIFESP from either Medicine or Biomedicine courses, who were performing or had already performed research involving live animals. The project was approved by the UNIFESP Research Ethics Committee (CEP 2.147.796), and the participants agreed to participate via a written informed consent. The results were statistically analyzed through SPSS by means of chi-square or Fisher’s test. P-value<0,05 were considered statistically significant.

Results: We received 44 answers from participants who fit the inclusion criteria. When asked about previous knowledge about Arouca’s Law, 47.7% (N=21) reported being unaware of it. Regarding the UNIFESP’s curriculum, 70.5% reported not having classes addressing animal ethics. From the 44 participants, 54.5% (N=24) were unaware of the penalties they could be subjected to, and 65.9% (N=29) reported receiving no information about these penalties from their advisors. Concerning the advisor’s guidance on the subject, 79.5% (N=35) reported being uninformed. Regarding euthanasia, 93.2% (N=41) confirmed their advisors informed them about the proper technique to conduct it. A statistically significant association was observed between not being informed of the reutilization of animals by the advisor and having or not the knowledge of the types of penalties one could be subjected to (No 65.7%; Yes 34.3%; p<0,05) and receiving the information from the advisor concerning penalties (No 80%; Yes 20%; p<0,05).

Discussion/Conclusion: We can propose that animal ethics knowledge is based upon three pillars: the institution, the student and the advisor/faculties. Our results showed most of the participants do not have classes regarding this topic, suggesting the first aspect was unsatisfactory. The lack of knowledge identified
in the current study showed an insufficient proactivity from the students in searching for information. The responsibility of informing the student falls upon the advisor, who is the main researcher and is held responsible for the proper conduction of the project. It is the faculty’s role to set an example for how future professionals should behave and they have the chance to change the current animal ethics scenario. Therefore, the last pillar, and probably the one with most potential for improvement, collapses under further scrutiny, with the students reporting they are not being informed by their advisors on important matters, such as penalties, reutilization and euthanasia.

ASSOCIATION BETWEEN THE HUMAN HERPESVIRUS TYPE 8 INFECTION AND THE KAPOSI SARCOMA PATHOGENESIS: LITERATURE REVIEW

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Background/Introduction: The infectious agents, mainly viruses, are among the few known causes of cancer. Kaposi Sarcoma (KS) is a vascular tumor that assaults specially the skin. It is a malignancy associated predominantly to immunosuppression, as Acquired Immune Deficiency Syndrome. Nowadays, epidemiologic studies suggest a possible association of the infection by the human herpesvirus type 8 (HHV-8) as a determining factor on the KS pathogenesis, once the viral DNA was identified in many types of this illness.

Objectives: The aim was to perform a literature review about the association between the human herpesvirus type 8 infection and the subsequent Kaposi Sarcoma development and inflammatory response involved in this process.

Methods: A literature search was made with MedLine (accessed through PubMed and google scholar) using human herpesvirus type 8, Kaposi Sarcoma pathogenesis and inflammatory response as basic descriptors. English and Portuguese languages were restricting. The most relevant articles were selective, totaling 7.
Results: The results showed that HHV-8 is a causal agent in the pathogenesis of KS. The virus infects cells that will be KS progenitors and is able to subvert the immune system of the human host to thereby establish latency in infected cells. The mechanism of viral actuation consists in the coding of oncogenes and genes that induce the development of KS and the overcoming of innate cellular immunity of the host, because the pathogen is able to modulate the production of interferon type I (IFN). HHV-8 encodes a G protein-coupled receptor, a viral oncogene, that is responsible for stimulating signaling pathways that cause cell proliferation and thereby induces the transformation of cells into an angiogenic phenotype and tumorigenicity. IFN type I is responsible for the expression of genes that inhibit cell proliferation and induce apoptosis, and those genes are up-regulated by IFN regulatory factors, so to subvert this mechanism, the pathogen encodes viral proteins in the form of such regulators.

Discussion/Conclusion: Epidemiological studies point to an association between an infectious agent and the subsequent development of KS. This agent is HHV-8 or herpesvirus associated with Kaposi’s sarcoma (KSHV), since the virus genome is responsible for encoding proteins that stimulate latent growth, induce angiogenesis and interfere with host immunity. Virus-encoded oncogenes are related to the pathogenesis of KS, for example, we can cite the role of the G protein-coupled receptor, which is a viral oncogene expressed in disease lesions, responsible for the stimulation of signaling pathways related to cell proliferation. The G protein coupled receptor stimulates the same signaling pathways that are activated by inflammatory cytokines (eg, type I IFN) and leading to angiogenesis. That herpesvirus can also modulate the innate immune response of the host to ensure its life cycle in cells that will be KS progenitors, so understand his role in the pathogenesis illness is fundamental to determinate right therapy.
Background/Introduction: Trypanosoma cruzi is the etiologic agent of Chagas disease. This trypanosomiasis has become a global public health problem due to migration of Latin Americans to nonendemic countries. The main forms of T. cruzi transmission correspond to vector transmission, transmission by blood transfusion, congenital and oral route. With the advances in the control of the domiciled vectors and the strict control in blood banks in every endemic area, other transmission routes began to have more importance as the oral and congenital transmission routes.

Objectives: Considering the congenital route of Chagas disease, in this study we aimed to check the gestational development, at the onset of conception, in BALB/c female mice infected with trypomastigotes from the G or Y strains of T. cruzi. We also seek to analyze the capacity of infected females in pregnancy maintenance at different stages, correlating with the involvement of metaloproteinases (MMP2 e MMP9).

Methods: T. cruzi G and Y strain were used to infect female BALB/c mice before or after mating with non-infected male mice. The presence of vaginal plug was used as indicative of mating. Females were euthanized 8 days after confirmation of vaginal plug. We used three female control groups: only infected; only pregnant; non-infected and non-pregnant females. Two groups were infected before mating and other two were infected 4 days after confirmation of the vaginal plug. The uteri were collected for immunochemistry in order to detect metaloproteinases.

Results: Our results showed that the females infected with the Y strain (higher virulent than G strain) before mating were unable to become pregnant, while 50% of females infected with the G strain at the same situation were able to become pregnant. When the infection occurred four days after mating (vaginal plug detection), there was a higher number of pregnant females, infected with both strains. Therefore the females were able to maintain the gestation longer. Furthermore, the immunohistochemical assay identified the expression of MMP 2 and MMP9 in the uteri, of infected and not infected females, and were expressed in the implantation site where the embryos were, also by embryonic cells (trophoblasts) and maternal cells (uterine decidua cells).

Discussion/Conclusion: In conclusion the results showed that despite the MMP’s expression has been similar among the groups, the infection with Y strain (the higher virulent strain) impaired gestation outcome in comparison with G strain. The infection probably caused tissue damage and increased local inflammatory cells in females that were not able to develop gestation. This work
also suggests that T.cruzi infection can impair gestation outcome and we presume that a local response to this infection was able to control the parasite replication allowing pregnancy to occur in certain conditions.

Performance evaluation of a commercially available indirect immunofluorescence kit for the sorological diagnosis of Dengue

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Background/Introduction: Dengue is a public health issue in Brazil, due to its epidemics. The majority of serological test available in Brazilian laboratories are foreigners and their validation take place in regions with low prevalence of the disease that also didn’t went through other arbovirus outbreaks, that could result in false-positive due to antibodies cross reaction. One indirect immunofluorescence test that differentiates Dengue, Zika and Chikungunya infections was released in Brazil competing with ELISA.

Objectives: Evaluate the diagnostic performance of an indirect immunofluorescence commercial test for diagnosis of Dengue in a population with high prevalence of arbovirus infections.

Methods: 200 serum samples from the routine of the Clinical Laboratory of Hospital Israelita Albert Einstein were used. They were collected in 2014 with clinical suspicion of Dengue infection and were defined as positive or negative for Dengue by an immunoenzymatic test (ELISA). All samples were also tested by indirect immunofluorescence (IFI) Mosaic Biochip. Using the Software EP EVluator, specificity, sensibility and the Kappa coefficient were calculated. In discordant samples, virus research was carried out by Polymerase Chain Reaction (PCR), as a diagnostic confirmation method.

Results: Among the 200 samples, 20% were classified as positive and 80% as negative for anti-DENV IgM antibodies in the reference test ELISA. Among the 40 positive samples, 25% were negative in the IF test; of these, only 20% were also negative for dengue. Of the 160 negative samples in the ELISA test, 5% were positive in the IFI test; of these, 33% had Dengue virus detected by PCR. In the Kappa test, the agreement index was 0.7 (0.572-0.829). Sensitivity and specificity of IFI were: 75% and 94%.
For anti-DENV IgG antibodies, among the 200 samples, 15.5% were positive and 84.5% were negative in the ELISA. Of the 31 positive samples, 12.9% were negative in the IFI test; of these, 25% presented "undetected" DENV in the PCR. Of the 169 negative samples, 8% were positive in the IFI test; of these, 64% were also positive in the PCR. In the Kappa test, the agreement index was 0.695 (0.563-0.83). Sensitivity and specificity of the IFI were: 87.1% and 91.7%.

**Discussion/Conclusion:** The agreement (Kappa index) between IFI and ELISA was acceptable, demonstrating a good performance of the new test. However, when compared with the PCR results, the method used as confirmatory in the discordant samples between the tests, it demonstrated greater agreement with ELISA in the majority of cases, except in cases negative in the ELISA and positive in the IFI for anti-DENV IgG antibodies in which the The PCR result was 64% coincident with IFI.

We concluded that, for the diagnosis of acute infection, the use of the ELISA alone would be sufficient for the serological diagnosis, not justifying the incorporation of another method. Replacement of ELISA for IFI could compromise the sensitivity, increasing the number of false-negative for IgM. In spite of this, IFI has the advantage of helping in the serological differentiation among 3 common arboviruses in Brazil at a single test, what may be advantageous in concomitant epidemics by more than one etiological agent.

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**Immunohistochemical evidence of nitrosative stress in ischemia-reperfusion injury on myocardial tissue**

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**Background/Introduction:** Oxidative and nitrosative stress (NS) contributes to the extensive morphological and functional damage from myocardial ischemia-reperfusion (IR). NS is produced by a reaction between superoxide anion and nitric oxide generating peroxynitrite, which damages protein aromatic residues (especially tyrosine). Determination of nitrotyrosine by immunohistochemistry
(IHC) has been used as an NS marker in other tissues subjected to IR. However, evidence in myocardial tissue is limited.

**Objectives:** Deterninate the presence of nitrotyrosine residues by IHC in myocardial tissue subjected to IR.

**Methods:** A qualitative pilot study was made with Langendorff technique in male Sprague Dawley rat hearts (200-250 g). Myocardial tissue samples were taken from Sham rats and rats subjected to IR. IHC was used to determine the presence of nitrosamine residues, along with hematoxilin-eosin stain.

**Results:** In IR subjected myocardial tissue it is observed a noticeable presence of nitrosamine residues, in contrast to Sham rats.

**Discussion/Conclusion:** Results in the present study support that it is possible to observe NS products in the myocardial cell after IR process.

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**THE EFFECT OF ASCORBATE OVER LIPID PEROXIDATION ON AN ISOLATED RAT HEART ISCHEMIA-REPERFUSION MODEL**

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**Background/Introduction:** Acute myocardial infarction (AMI) is a high morbimortality disease worldwide. Myocardial damage is produced due to an ischemia-reperfusion (IR) phenomenon, occurring during both ischemia and reperfusion, with a burst of reactive oxygen species in the latter. Consequently, lipid peroxidation occurs, which can be quantified through malondyaldehyde
(MDA) levels in myocardial tissue. Ascorbate administration during reperfusion is a potential antioxidant therapy aimed to decrease lipid peroxidation.

**Objectives:** The purpose of this study is to evaluate myocardium MDA levels on a rat heart IR Langendorff model after ascorbate administration. A secondary objective is to quantify the effect of IR over lipid peroxidation.

**Methods:** A total of 11 rats 200-250g were included into an isolated perfused rat heart Langendorff model, divided into three experimental groups: control (n=3), IR (n=4), and IR + ascorbate 100 uM (n=4). Ascorbate was administrated during reperfusion. MDA concentrations were measured in myocardial tissue after reperfusion in the three groups through a HPLC assay. The study was approved by University of Chile ethics committee. Significative differences were compared using ANOVA post-hoc Tukey test measured by Graph Pad Prism. The difference between the groups was considered significant with a p-value < 0.05.

**Results:** Rats treated with ascorbate had significant lower myocardium MDA levels in comparison to IR group (p<0.05). A statistically significant difference between IR and control group was not found.

**Discussion/Conclusion:** Ascorbate administration can successfully reduce myocardium MDA levels in rat hearts, accounting for a decrease of lipid peroxidation. The relevance of these results lies in the possibility to improve clinical outcomes in AMI patients through the incorporation of ascorbate administration at the time of reperfusion, expecting a decrease of the oxidative damage over myocardium.

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**MELANOMA’S ALTERNATIVE THERAPY WITH MEDICINAL PLANTS: SYSTEMATIC REVIEW**

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**Presenter name:** Bárbara Paschoal, Brenno De Russi, Gabriela Cardoso e Vitória Almeida.

**Mentor name:** Tefé-Silva, C.
**Background/Introduction:** Melanoma is a skin cancer of high mortality due to the large chances of metastasis, high aggressivity and low response to therapies. The melanoma is a result of many factors, such as the genetics, of the hosts and the environmentals. In Brazil, 30% of the malignant tumors correspond to melanoma. Since the conventional treatment - surgical, radiotherapy and chemotherapy - is extremely aggressive, we study a possibility of an alternative therapy for melanoma using medicinal plants.

**Objectives:** The purpose of this study is to evaluate the effectiveness of therapeutic treatment of melanoma with medicinal plants in order to reach the tumor regression in a less invasive way.

**Methods:** The PUBMED (National Library of Medicine and National Health Institute) database was consulted. We selected 15 articles, restricting to those published in the last 10 years, and then categorized for analysis. The descriptors used were "melanoma", "medicinal plants", "Camellia sinensis", "Solanum torvum", "Arctium lappa" and "Syzygium polyanthum".

**Results:** Were analysed, from previous studies, four medicinal plants with possible therapeutic effects on melanoma. The results demonstrated that the Solanum torvum plant inhibits melanin formation in melanoma B16 cells and the Camellia sinensis plant suppresses cell growth, significantly affecting the cell density of the different melanoma lines. While the plant Syzygium polyanthum inhibits the formation of melanin and the viability of the tumor cell and the plant Arctium lappa also acts on the inhibition of melanin synthesis.

**Discussion/Conclusion:** After a comparative literary review with the obtained data, we concluded that the two main compounds of the Syzygium polyanthum leaf significantly reduced the extracellular formation of melanin in B-16 melanoma cells. According to the study involving the root of the plant Solanum Torvum, it was found the antimalatogenesis effect by the melanin inhibition. Also, the extract Fructus Arctii (Arctium lappa) and the ATG compound significantly inhibited melanin synthesis. From recent studies, it was analyzed that Camellia sinensis has four main catechins and it has been noted that they may have an act in the inhibition of human melanoma cells. Besides, in analyzing metastatic melanoma cells lines, it was showed that the whole of catechins is important to prevent the growth of tumor cells. Based on this results, must be strengthened the idea of less aggressive therapies, being necessary more studies for more in-depth examination to advance on the efficiency of the treatment of melanoma.
Quantification of proliferation index Ki-67 on pancreatic neuroendocrine tumors with digital image analysis

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**Presenter name:** Chen, H. R. Q. ; Ikedo, L.M.

**Mentor name:** Bernardi, F. D. C.

**Department:** Pathology

**Background/Introduction:** Pancreatic (Pan) Neuroendocrine Tumors (NETs) are epithelial neoplasms with neuroendocrine phenotypes, which can be secretive or not, symptomatic and metastatic. According to the WHO 2017 classification, Pan NETs are classified in: G1 (<2 mitoses/10 HPF and/or <3% Ki-67 index); G2 (2–20 mitoses/10 HPF and/or 3–20% Ki-67 index); G3 (>20 mitoses/10 HPF and/or >20% Ki-67 index). It's difficult to determine the cellular proliferative index through immunohistochemistry marks of tumor cells by Ki-67 with accuracy, reproducibility and practicality.

**Objectives:** Compare the proliferation index from the visual estimative with the manual counting of cases diagnosed as Pan NET in ISCMSP from 2004 to 2016. The visual estimative it's a fast and cheap method most used nowadays, but with low accuracy. The manual counting is a practical and reliable alternative, in which the histological cuts are scanned to an image analyser program to count areas with high positivity for Ki-67. Epidemiologic data from the cases will also be compared with the literature.

**Methods:** Cases were collected in the database of the Pathology Department of ISCMSP. Cases with insufficient material and / or data were excluded. Paraffin blocks of these cases came from surgical specimen, biopsy or puncture. They were submitted to histological sections, dewaxed into successive and serial baths of alcohol, then washed. The reaction of immunohistochemistry was performed with antigenic recovery and endogenous peroxidase blockade. The slides were washed, incubated with primary antibodies, post-primary reagents, and third-party polymers marked with immunoglobulins and enzyme peroxidase, then revealed with diaminobenzidine, against staining with hematoxylin and scanned.
Fields with higher positivity were selected and analyzed in software. In the manual method, the Ki-67 index was represented by the ratio of the number of positive tumor cells (stained in brown) and total tumor cells. In the visual method, pathologists of the department made the estimate. The slides were classified as G1, G2 or G3.

**Results:** 24 cases were collected, 83.33% female and 16.67% male. The mean age was 46.9 years and the median age was 45.5 years. From those 24 cases, 12 were excluded for insufficient materials and/or data. A total of 15 slides stained with Ki-67 were examined. The material came from surgical specimens, biopsies and punctures. The mean number of fields analyzed per case was 11.6 and the mean number of cells counted per field was 1683.6. By the visual estimation method 10 cases were classified as G1, 2 cases as G2 and 3 cases as G3, whereas by the manual counting method 9 cases were classified as G1, 4 as G2 and 2 as G3. In 83.34% cases, we obtained the same classification by the two methods. In 3 cases we analyzed two samples from the same patient, and in one of them there was difference in the classification between the two samples.

**Discussion/Conclusion:** The epidemiology of the cases coincided with the literature, with predominance of women and average age close to 50 years. Only 5 materials were of surgical specimen, which has the best tumor representation, affecting the quality of the samples. In the cases with 2 different material blades, the surgical specimen had a histological grade inferior to that of puncture. Thus, we interpret that in a fast visual estimate we can consider positive those non-tumor cells. The cases with discordant grades were of intermediate degree, evidencing the main problem in the graduation. Depending on the method used for tumor grade, prognostic classification of patients may change.
CASE REPORT OF GRADE IV RENAL TRAUMA AND NON-OPERATIVE MANAGEMENT

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Mentor name: Silva, D.A.F. - Unifesp/EPM

Background/Introduction: We reported a case of grade IV renal trauma in a 26-year-old man who fell on a stone with trauma in right flank while practicing sport. In emergency room, after initial resuscitation, we secured hemodynamic stabilization. Abdominal computed tomography angiography was performed due to hematuria. The imaging revealed large area of laceration of the right kidney as well as perirenal hematoma. Although usually indicated ureteral stent and arterial embolization in cases of urine leakage and active bleeding, the patient was conducted in a non-operative management, with success.

Objectives: Man, 26 years old, sought care due to fall of his own height on a stone with trauma in the right flank while practicing sport. He appeared spontaneously and unaccompanied to the service approximately 12 hours after trauma without specialized transportation. In the initial evaluation, he presented normal thoracic expansibility and vesicular murmurs, with associated dyspnea. He also reported intense pain in the right flank and hematuria, with a pulse rate of 98 bpm, blood pressure 87/51 mm Hg and anemia (12.5 g/dL).

Methods: Due to hematuria, hypotension and tachycardia, suspicion of active bleeding was figured out. Focused assessment with sonography for trauma (FAST) examination was normal. Hemodynamic stabilization was obtained through infusion of 1,000 mL of Ringer’s Lactate. In addition, patient received opioids for pain relief. After stabilization, he was referred for abdominal computed tomography, which showed a large area of laceration in middle and lower thirds of the right kidney with calicinal rupture and irregular contours of hilar vessels, as well as perirenal hematoma with signs of active bleeding (grade IV injury). For this reason, the patient was admitted to the intensive care unit.

Results: At the time of admission to the intensive care unit, twelve hours after first attendance, the patient presented worsening hemoglobin drop (10.5 g/dL). Serial blood tests were performed in order to constantly evaluate this parameter. Due to the fact that hemoglobin was stable over the time, ranging from 9.7 to 9.9 g/dL, surgical procedure was refused and patient was discharged seven days after admission. He was instructed to return to postoperative clinic five days later with the result of blood tests and renal function.
Discussion/Conclusion: In blunt abdominal trauma, spleen is affected in 40-55% of cases, liver in 35-45% and kidneys in 10%. Eighty to 95% of renal trauma are associated with blunt abdominal trauma. Because kidneys are in retroperitoneal space, signs of bleeding in FAST may not be found. Hematuria is the most frequent sign. Although ureteral stent and arterial embolization are recommended in cases of extravasation of urine and active bleeding (to avoid complications such as urinoma and renal bleeding), in our reported case patient was approached in another way, obtaining success with conservative management. Therefore, in selected cases, such as late presentation with hemodynamic stability, the non-operative management is an option, even in grade IV renal trauma.

PREVALENCE OF SMOKING IN PATIENTS WITH PERIPHERAL VASCULAR DISEASE

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Background/Introduction: Peripheral vascular diseases are a group of diseases that can affect both veins and arteries of the peripheral vascular system. They have a great prevalence around the world and can affect 50% of the population over 70 years old. One of the main risk factors for the appearance of peripheral vascular disease is smoking.

Besides that, recent studies have shown that ceasing to smoke can improve the treatment and outcome of the disease. Therefore, knowing the smoking profile of a vascular patient is of extreme importance in the therapeutic plan and in the development of the disease.

Objectives: The main purpose of this survey is to analyze the prevalence and establish the smoking profile of a patient with peripheral vascular disease, regardless of its main disease, whether is arterial, venous or lymphatic, and observe if there are any correlations between the diseases and the present or past smoking habit of the patients.

It’s expected that the data of this research will be able to guide multidisciplinary integrated programs so the vascular patient can have a proper follow up and be treated globally, not only by the vascular surgeon or angiologist’s view.
**Methods:** Prospective study, developed on the vascular surgery discipline clinic, between June of 2017 until April of 2018. 50 patients were approached and evaluated about their age, gender, profession, ethnicity, family history, main diagnosis and smoking habit. Regarding the smoking habit, a questionnaire was applied and were appraised the past and present smoking habits, quantifying, when possible, the periodicity in days, amount of cigarettes smoked by day, years of smoking, pack-years and, when convenient, the Fagerstrom test of nicotine dependence.

The sample was composed by 39 women and 11 men, with an average age of 59,48 years old. 50% of the patients approached were white, 30% brown, 18% african american and 2% oriental.

**Results:** As main diagnosis for the participant patients we found varicose veins, present on 28 patients (56% of the total), followed by deep venous thrombosis (DVT), present on 11 patients (22% of the total). Regarding the past and present smoking habit, 19 patients have a history of past smoking habit (38,5% of the total), but only 7 patients still have a present smoking habit (14% of the total). Therefore, the majority of the analyzed sample doesn’t present a smoking habit past or present, corresponding to 62% of the sample’s total.

Of all the patients with deep venous thrombosis, 45% had a present or past smoking habit, and of all the patients with varicose veins, 20% had a present or past smoking habit. Besides that, considering all patients that are or were smokers, the average of pack-years of 26,96. Regarding the Fargestron test of nicotine dependence, 57,9% of the patients were classified with a high (6 or 7 points) or extremely high (8 to 10 points) dependence.

**Discussion/ Conclusion:** This study showed 55% of patients with venous diseases have a present or previous smoking habit, 45% of patients with DVT and 20% of patients with varicose veins. However, most of literature articles don’t establish a connection between venous diseases and smoking. The Tan paperwork, from 2015, didn’t determine smoking as a risk factor for venous thromboembolism in patients who underwent surgery for fractures below the hip. Besides that, a study made by Ahti in 2010 concluded that smokers had a higher incidence of varicose veins, however without statistical significance.

Therefore, besides the results obtained on this study, the association between smoking and venous diseases is still uncertain. However, knowing the smoking habit of the patients is very important for guiding the treatment plans, because its influence has already been associated with poor healing, and because it’s a known risk factor for other vascular diseases, such as peripheral arterial occlusion.
CLINICAL EVOLUTION OF PATIENTS TREATED WITH DEEP VENOUS THROMBOSIS AT HOSPITAL SAO PAULO

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Mentor name: Luis C. U. Nakano

Background/Introduction: Deep venous thrombosis is defined as the acute formation of thrombus in deep veins, upper limbs and/or lower limbs. Its worldwide incidence is 1 to 2/1000 people per year. The clinical condition depends on the extent of thrombosis and which veins were affected. DVT is important worldwide because it is responsible for a high incidence of complications related deaths, such as pulmonary thromboembolism and chronic venous insufficiency. Therefore, its management is essential to avoid the occurrence of complications and decrease the number and severity of sequels and death.

Objectives: Since there are no recent studies that show the outcomes of DVT treatment at Hospital São Paulo, the objective is to evaluate the clinical evolution and therapeutics of patients treated for deep venous thrombosis at Hospital São Paulo from 2011 to 2016.

Methods: Data from the last 5 years were collected via an electronic medical record, compiled and analyzed to evaluate the outcome of the treatments and the occurrence of complications.

Results: According to the literature, clinical treatment for DVT is based on the use of anti-coagulants. From the data collection, it was concluded that 49% of patients received low molecular weight heparin, 37% Warfarin, 8% unfractionated heparin and 6% ASA - it is worth noting that most patients received more than one type of anti-coagulant during hospitalization. Of the 234 patients evaluated, there were 8 deaths (3.4%), of which 50% occurred due to PE and 25% due to sepsis. In addition, in relation to follow-up, it was observed that only 51% of the patients performed post-admission follow-up.

Discussion/Conclusion: Since São Paulo Hospital is a tertiary institution of SUS, it usually serves patients from all over Brazil with complex and already established complications, and it is important to know what the epidemiological characteristics of these patients are so that the best conduits to be taken. With the data collection, it was observed that the majority of the affected are female (59%), mainly in the age group of 41-50 (18.24%). On the other hand, in males
the most affected age range was 71-80 years (19.58%). Another important characteristic was related to the local of impairment (which refers to the severity of the clinical condition), which was more prevalent in the proximal region (49.57%) of the lower left limb (57, 75%). Finally, in relation to the risk factors presented by the patients, it was observed that the prevalent are: hypertension (26.92%), neoplasm (21, 36%), smoking (11.53%) and surgeries in the last 30 days (3.84%), with predominance of vascular surgery (33.33%), followed by orthopedic and gastro surgery (both 22.22%).

This is the most recent study that reveals the outcomes of DVT treatment at Hospital São Paulo and it is concluded that the treatment of patients and the occurrence of complications is in agreement with the literature, which contributed to confirm the efficacy of the management in the HSP and also indicate ways to improve it besides providing epidemiological data on the high casuistic disease.

ANTHROPOMETRIC PROFILE OF THE CAUCASIAN NOSE IN THE CITY OF RIO DE JANEIRO: IMPORTANCE FOR THE AESTHETIC PLASTIC SURGERY

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All co-authors names: -

Mentor name: Mury I.C.

Background/Introduction: Patterns that relate to nasal esthetics are essential for proper preoperative assessment and surgical programming. The standardized nasal aesthetic measures used today, in general, are a mixture of the artistic ideals of beauty obtained by models and celebrities. Because they do not consider population measures in these standard measurements, such measures vary according to those different populations and allow a discrepancy between the desire of the plastic surgeon and the patient's real desire for rhinoplasty. Not all patients wish to obtain an aesthetic result according to these values currently offered, but rather a natural result, with some characteristics that resemble their ethnicity and population of origin. The Brazilian population lacks population studies about their nasal measurements.

Objectives: To evaluate the anthropometric measurements of the nose in Caucasian patients in the city of Rio de Janeiro and compare it with the aesthetic ideas of Powell & Humphreys.

Methods: Cross-sectional, observational, descriptive, quantitative and qualitative study about the anthropometric pattern of Caucasian volunteers aged 18 to 50 years of the Unigranrio´s Clinic. Patients with a history of face and nose trauma,
previous facial surgery and non-Caucasian patients will be excluded. The following variables will be obtained through frontal and lateral views: intercantal distance, alar distance, nasal dorsum length, nasofrontal angle, nasolabial angle and nasal tip projection (Goode's method). Statistical analysis will be performed to compare the measurements obtained between the genders and with the ideal esthetic standards.

**Results:** The study counted on the participation of 100 volunteers, being 50 men and 50 women. The minimum age was 18 years and the maximum of 40 years, with an average age of 22.4 years. The mean age of the men was 22.3 years and the average age of the women was 22.4 years.

The mean values obtained in the population of Rio de Janeiro were: nasolabial angle of 104.7 °; nasofrontal angle of 136.2; Goode’s method of 0.75; distance ratio (width) / nasion-pronation of 1.29; distance interannary distance / distance ratio of 1.33. Only 4% of the population sample had an intercanthal distance equal to the alar distance (ratio of alar distance to intercanthal distance of 1.0), while the vast majority (96%) presented a greater distance to the intercanthal distance. The alar distance was significantly greater than the intercanthal distance (p <0.001).

The statistical analysis comparing the results obtained in the population sample studied between the sexes is presented below. The nasofrontal angle (p = 0.004281663) and the intercanthal / alar distance (p = 0.00210256) showed a significant difference between the genders.

**Discussion/ Conclusion:** The population sample of the city of Rio de Janeiro differs statistically from the current aesthetic standards of nasal anatomy, except for the nasolabial angle. In the comparison between the genders, men presented a sharper nasolabial angle, a more projected nasal tip and a greater intercanthal / alar distance than women. Given the importance, it is necessary to promote facial anthropometry so that future studies may contribute to surgeons' knowledge of specific nasal measurements in different populations. Thus, the aesthetic result of future rhinoplasty can be increasingly natural and appropriate to the demographic aspects of the patient.
**Mentor name:** Silvimar Nunes de Oliveira

**Background/ Introduction:** Pelvic fractures correspond to 25% of fractures in polytraumatized patients, presenting high rates of morbidity and mortality. Resulting from high energy trauma, pelvic fractures classified as complex, present mechanical and hemodynamic instability and injuries in other body segments. Associated lesions are present in 90% of cases, 54% being of abdominal injuries. It is estimated that retroperitoneal haemorrhage associated with pelvic fracture accounts for 33% of deaths. Pelvic fractures presenting mechanical and hemodynamic instability and injuries to other body segments have a worse prognosis and require more aggressive therapy.

**Objectives:** To perform a critical study of the specialized literature in order to demonstrate the relevance of bleeding as a factor of worse prognosis in patients with pelvic fracture.

**Methods:** Articles were searched in the Scielo and Google Academic databases from 2007 to 2017, using descriptors: pelvic fracture, hemoretroperitoneum, intra-abdominal hemorrhage.

**Results:** Pelvic trauma has an overall mortality of 23%. About 60% of the deaths occurred at the site of the accident, mainly due to hemorrhage, with 66% being abdominal. Those traumatized with pelvic fractures had a higher frequency of ARDS, persistent shock, coagulopathy and organ failure. Due to hypoperfusion, 30% of those traumatized with pelvic fractures require blood transfusions, receiving up to four units. In patients with hemoperitoneum with clinical manifestations, the use of opioids should be avoided, since it aggravates hypotension.

**Discussion/ Conclusion:** The presence of pelvic fracture is considered a marker of severity in the trauma due to the high energy required for this type of injury, as well as the possibility of a pelvic organ. Thus, anamnesis, physical examination including gynecological and rectal examination to identify associated lesions, retroperitoneal bleeding, hemodynamic instability, identification of hemorrhagic focus, control and improvement of the prognosis is mandatory.

**ANALYSIS OF PROLONGED PERIPHERAL AND CENTRAL NERVOUS SYSTEM BLOCKADE WITH AN INFUSION PUMP IN BRAZIL IN 5 YEARS**

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Mentor name: Fruet, F. - Hospital Balbino

Background/Introduction: Sympathetic nociceptive pathway block is a medium to high complexity method used mainly for the prevention and treatment of chronic pain syndromes such as fibromyalgia, ontological pain, low back pain, trigeminal neuralgia and myofascial syndrome.

Objectives: It is intended, through statistical analysis, to reiterate the importance and possible complications of prolonged peripheral and central nervous system blockade with an infusion pump.

Methods: Statistical analysis by DATASUS platform evaluating the period between May 2014 and 2018. The following variables were analyzed: hospitalizations, the urgency of hospitalization, deaths, mortality rate and length of hospitalization.

Results: Between May/2014 and 2018, Brazil registered 7,776 hospitalizations for prolonged nervous system blockade with an infusion pump, with Southeast having the highest hospitalization rate (3,516), followed by the South (1,601), Central West (1,370), Northeast (1,049) and North (240). In Brazil, 2,979 cases had an emergency nature with 68 deaths and a mortality rate of 2.28%, and 4,797 were elective with 44 deaths and a mortality rate of 0.92%. It is estimated that a total of R$5,958,038.43 was spent in the country related to prolonged blocks of the nervous system with an infusion pump, being R$2,727,155.64 spent in the Southeast, followed by R$1,248,864.33 in the Central West. The mean length of hospitalization was 2.8 days in total, while the largest was 3 days in the Midwest and South and the lowest was 2.6 days in the Southeast. There were 112 deaths in the country, with a mortality rate of 1.44%, with 69 deaths in the Southeast with a rate of 1.96%, 23 in the Central West with 1.68% rate, 18 in the South with 1.12% of taxa, 2 in the Northeast with 0.19% of taxa and no deaths in the North.

Discussion/Conclusion: This analysis corroborates the reasoning that blockages are the most commonly performed procedures in the Southeast and, as a result, there is a proportional increase in its execution in this region, 45% of the total value spent. Thus, it is possible to infer that this situation is due to the Southeast being the most populous Brazilian region and a great center of technology and infrastructure, which certainly makes possible the greater access of patients to the service needed. The lower admission record as well as a lower mortality rate of the national average or even absent in the Northeast and North regions, respectively, can be understood as an indication of a deficiency of their
health systems. Therefore, further studies and functional and structural analyzes of federal and local health institutions are necessary to confirm this framework.

MANAGEMENT OF UNPLANNED PERIOPERATIVE HYPOTHERMIA: A STUDY REVIEW

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Background/Introduction: Hypothermia (core temperature <36°C) is a frequent adverse event of the surgical process, occurring in 50-70% of cases. Although temperature is one of the vital signs, it is not commonly measured in the perioperative environment, which makes early recognition difficult. Contributing factors, that can result in negative outcomes, include low room temperatures, surgical exposure, heat-loss due to anesthesia and duration of surgery. There are several warming devices available to prevent this complication. However, there are no specific guidelines for their use.

Objectives: To evaluate the methods available to prevent perioperative hypothermia

Methods: Literature review, based on 52 articles published between 2001 and 2018. The research was conducted on PubMed and Scielo databases, with keywords: “unplanned; perioperative; hypothermia” and its synonyms. There are worldwide articles, including randomized clinical trials, case reports and meta-analysis.

Results: The warming systems are divided in active ( Forced-air, circulating water mattresses, resistive heating blankets, warming of irrigation and IV fluids, airway heating and humidification, negative-pressure) and passive (warm cotton and reflective blankets, thermal suit). The forced-air warming device is widely used, showing positive results in the literature. It is known that lower core temperature before the anesthetic induction is a risk factor for hypothermia, therefore patients should undergo warming procedures in the preoperative period, called prewarming. All the articles analyzed indicate that 1 active warming system (ex: forced-air) should be used on prewarming, combined with other methods. Even with aggressive vigilance, though, the papers could not present a method with 100% of effectiveness. Moreover, the passive measures isolated were not
capable of maintaining the core temperature since they only prevent the heat-loss, an inevitable condition in general anesthesia.

**Discussion/ Conclusion:** Managing unplanned perioperative hypothermia is not an easy task, despite of various methods available. Considering the high percentage of cases, its prevention must be stimulated. Passive systems are low-cost options, suitable in countries such as Brazil, which has a large number of users of the public health system. Furthermore, in this review, studies pointed out that cost-effectiveness of using at least one active warming system overcomes the costs to treat complications of hypothermia in the postoperative period. Further studies are needed to report risk groups and create a unified algorithm to manage patients with perioperative hypothermia, in order to reduce the number of cases.

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**3D PRINTING IN CARDIOVASCULAR SURGERY**

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**Mentor name:** Dalva, M – Uninove (Moise Dalva)

**Background/ Introduction:** Goal: To report the patient's case J.L.A.S., diagnosed with Tetralogy of Fallot at birth and investigate the impact of 3D printing on surgical management and evolution of the patient in the postoperative period.

Materials and methods: The information contained in this study was obtained from a review of the patient's medical record, containing descriptions of his physical examination and surgical procedures, in addition to his clinical evolutions. Images of the exams, segmentations and 3D impressions were also used. Results: Understanding the anatomical specificity of each patient is a challenge, since imaging studies transform three-dimensional structures into two-dimensional figures, making it difficult to understand structures and anatomical relationships. However, with the application of 3D printing in the preoperative period, anatomical and pathological three-dimensional alterations of each patient can be observed. Conclusions: 3D printing in cardiovascular surgery is certainly a strategy that demands a high financial and temporal cost to be realized. However, it is an exam that has been extremely beneficial in the diagnosis and therapeutics of patients with cardiovascular diseases. New studies will be needed for 3-D printing technology to prove a cost-effective relationship, which may
benefit a broad range of patients who currently do not have access to this technique.

KEYWORDS: cardiovascular surgery, 3D printing, anatomical changes, Tetralogy of Fallot, diagnosis.

Objectives: Patient J.L.A.S., male, 1 year and 6 months, referred for follow-up with pediatric cardiologist at the second month of life by Tetralogy of Fallot diagnosed at birth.

The patient had already been submitted to a systemic-pulmonary anastomosis on the seventh day of life (anastomosis between the right subclavian artery and the right pulmonary artery-modified Blalock-Taussig-with 4 mm PTFE tube interposition). Medications in use: AAS 5 mg / kg.


Methods: Conduct: The echocardiograms performed at the beginning of the follow-up showed the presence of Tetralogy of Fallot and normal-pulmonary systemic anastomosis, but the examination performed in the tenth month of follow-up revealed signs of PTFE tube obstruction, and a surgical approach was indicated for total correction of the pathology.

Surgical conduct 1: The patient underwent median sternotomy, flange lysis, establishment of aorto-bicaval cardiopulmonary bypass at thirty degrees, aortic clamping, infusion of cardioplegic solution Custodiol (30 mg / kg), pulmonary systemic anastomosis ligation and section, right atrium opening, right ventricular outflow tract opening, resection of RV musculature with exit of the right ventricle, and enlargement with bovine pericardium monocuspid flap extending to the pulmonary artery trunk until its bifurcation and ventriculoplasty with bovine pericardium.

In the intraoperative period, there was a marked angulation between the main portion of the RV and the exit pathway, which resulted in great difficulty in occlusion of the VSD.

Results: Evolution 1: Heart auscultation after surgery showed a systolic murmur 3 + / 6 +, rude. Clinically, the patient presented signs of pulmonary hyperflow.
Echocardiogram evidenced the presence of residual VSD of moderate repercussion and effective amplification of the RV outflow tract, and a new surgical approach was indicated.

Surgical conduct 2: The patient was submitted to the new median sternotomy and establishment of extracorporeal circulation for occlusion of residual defect, performed by trans pulmonary route. However, there was great difficulty in locating residual VSD.

Evolution 2: Maintained systolic murmur, with improvement of signs of pulmonary congestion. He presented bilateral chylothorax, with need for pleurodesis. Echocardiogram showed no residual VSD, however, due to the maintenance of the murmur and clinical presence of pulmonary hyperflow, a transesophageal echocardiogram was performed, which revealed the presence of a small residual VSD. Indicated heart angiotomography to attempt to locate the IVC.

Indicated 3-D reconstruction, which showed clearly the presence of 3 small communications in the inferior region of the correction flap and marked angulation between RV body and exit pathway.

Based on the clinical improvement and images obtained, we opted not to perform a surgical approach.

The patient was discharged from the hospital in good health condition after the resolution of the chylothorax.

Discussion/ Conclusion: Discussion: Understanding the anatomical specificity of each patient is a challenge, since imaging studies transform three-dimensional structures into two-dimensional figures, making it difficult to understand structures and anatomical relationships.

However, with the application of 3D printing in the preoperative period, anatomical and pathological three-dimensional alterations of each patient can be observed. And with this, surgery can be better programmed, possibly leading to fewer intraoperative complications and clinical repercussions in the postoperative period, thus ensuring a greater effectiveness of the surgery.

The 3D printing technology in the case reported showed the presence of VSD, which could be seen from the angiotomography, but also showed the presence of angulation between the RV body and the exit pathway. This anatomical alteration was possibly the triggering factor of the difficulty in locating the presence of residual VSD, reported in the conduct surgery 2.

Conclusion: 3D printing in cardiovascular surgery certainly is a strategy that demands high financial and temporal cost to be realized. However, it is an exam
that has been extremely beneficial in the diagnosis and therapeutics of patients with cardiovascular diseases.

New studies will be needed for 3-D printing technology to prove a cost-effective relationship, which may benefit a broad range of patients who currently do not have access to this technique.

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**INTRA AND INTER-OBSERVER CONCORDANCE OF WALCH CLASSIFICATION SYSTEM FOR SHOULDER JOINT ARTHRITIS**

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**Mentor name:** Tamaoki, M.J.S.

**Background/Introduction:** Osteoarthritis (OA) of the shoulder is a very prevalent condition and causes limitations in the daily activities of many patients. OA of the shoulder is progressive, evidenced by the worsening of the symptoms and the joint configuration demonstrated by the imaging tests. Orthopedic classifications are essential for determining the disease, its epidemiology, communication among orthopedists, definition of treatment algorithms and prognosis. The classification of Walch, proposed in 1999, and modified in 2016 by the same author, is one of the most used among orthopedists to graduate the OA of the shoulder joint, but its reproducibility rarely evaluated.

**Objectives:** To evaluate the inter- and intra-observer concordance of the Walch classification system for shoulder arthritis.

**Methods:** Computed tomography studies of the shoulder joint of adult patients were selected between 2012 and 2016. They were classified by physicians with different levels of orthopedic experience. The images were examined at three different times and the analyses were evaluated by Fleiss’ Kappa index to verify the intra- and inter-observer agreement.

**Results:** The Kappa index on intra-observer agreement ranged from 0.305 (ENE1) to 0.545 (ENB).

Interobserver agreement was very low at the end of the three evaluations (k = 0.132).
Discussion/ Conclusion: The intra-observer agreement of the modified Walch classification was shown to be variable, between moderate and poor agreement. Inter-observer agreement was low.

SURGICAL TREATMENT OF DIAPHYSEAL FEMUR FRACTURES IN CHILDREN AND ADOLESCENTS

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Background/ Introduction: Diaphyseal femur fractures in children and adolescents represent 1.7% of total pediatric fractures. Direct traumas (car accidents, falls or aggressions), indirect traumas (rotational fracture) and lesions in pathological bone (ostogenesis imperfecta or tumors) can cause them. Whether by conservative or surgical treatment, the therapeutic goal of these lesions is bone healing, restoration of limb length, alignment and function, without harming the joints.

Objectives: The present study aims to compare the results obtained in the surgical treatment of diaphyseal femur fractures in children and adolescents, as well as the implants used as a therapeutic measure.

Methods: This is a retrospective, cross-sectional, descriptive research. Data were obtained from surgical medical records of children and adolescents with diaphyseal femur fractures cataloged at the Medical Archive Service of Hospital Infantil Dr. Jesser Amarante (HJAF), in Joinville – SC, from January 2012 to December 2015. Incomplete, illegible or discordant records were disregarded. Gender, age, trauma mechanism, type of implant used, surgical site infection, loss of reduction and fracture healing were the analyzed variables. The type of implant used in the surgical treatment was analyzed through postoperative radiographs. Fisher’s test was performed for categorical data. The Ethics Committee of HJAF, under the number 70607017.9.000.5363 approved this study.

Results: 61.7% of the 47 medical records identified belonged to the male gender. The most frequent trauma mechanism was the automobile accident (40.4%). Surgical implants used were 18 flexible intramedullary nails, 13 rigid intramedullary nails, 6 bridge plates, 4 dynamic compression plates 6 other types of implants - external fixator and Kirschner wire. Surgical site infection was
present in 2 patients treated with a rigid intramedullary nail and a bridge plate. None of the patients treated with rigid or flexible intramedullary nail reported loss of fracture reduction. However, was founded in patients treated with dynamic compression plates, external fixator and Kirschner wire. 43 patients obtained the fracture healing. Meanwhile, 2 children with dynamic compression plate and 2 with bridge plate did not achieve the consolidation. There was a statistically significant difference between the types of implants used and loss of reduction (p = 0.01), as well as fracture consolidation (p = 0.0019).

Discussion/Conclusion: Similarities were found between this study and the literature regarding a higher prevalence of gender and trauma mechanism, as well as the low prevalence of surgical site infection. In contrast, there was a difference in the relation of fracture healing and the implant used. According to the results, the rigid and flexible intramedullary nails present better results if compared to the other implants - which should be reserved for cases where the use of intramedullary nails is not possible, since there is a higher prevalence of loss of reduction and non-consolidation of the fracture. There are still few studies in the literature that retrospectively compared the results obtained in the surgical treatment of diaphyseal femur fractures in children and adolescents with different types of implants. Therefore, the findings obtained in the study may help orthopedic surgeons in the choice of treatment, reducing the risk of possible postoperative complications.

PREVALENCE OF ANXIETY AND DEPRESSION BY HOSPITAL ANXIETY AND DEPRESSION SCALE (HADS) IN CHRONIC ULCER CARRIERS

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Background/Introduction: There is a great number of vascular pathologies that give rise to ulcers specially in the lower limbs that can have arterial, venous or lymphatic origin. Many of these wounds are of difficult treating, meaning a significant loss of quality life for the patient, getting in the way of work and daily life.

Many times these patients go several times to ambulatories specialized in dressings that give plain of support for treatments that aim the healing of the wound, however there is no protocol to aid the mental health of ulcer carriers
Screening the mental health of such patients is of extreme importance not only for the identification of the problem but also for the management of more grave cases in specialized services.

A validated scale of anxiety and depression of easy applicability in clinical practice is HAD

**Objectives:** To study the prevalence of anxiety and depression in ulcer carriers who receive ambulatory treatment

**Methods:** The study will be developed in the ambulatory of dressings of the vascular surgery department. Will be included in our study all patients who are carriers of chronic ulcers (over 4 weeks long) independently of the cause, gender or race. Will be excluded patients who are carriers of amputations, with cognitive disorders or psychiatric history.

The chosen scale was HAD, which evaluates the level of anxiety and depression. The questionnaire consists of 14 questions, 7 for anxiety and 7 for depression.

The data collected will be of all patients in the inclusion criteria, with no fixed number for the research.

**Results:** As of now our study amounts to 24 participants, 12 female and 12 male, with 5 probable cases of anxiety (20.8%), 4 probable cases of depression (16.7%), as well as another 5 possible cases of anxiety and 4 possible cases of depression. These may vary with age, gender, elapsed time with the wound, but we can already begin to understand that the prevalence is very high, and these conditions may play an important role in decreasing quality of life for the patients.

**Discussion/Conclusion:** With the study we aim to establish the prevalence of anxiety and depression among the studied population and propose a protocol for managing mental health care in specialized services. Also, we mean to warn vascular surgeons about the importance of mental health evaluation of the ulcer carrier and improve integral assistance in health.

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**COMPARATIVE ANALYSIS BETWEEN PRIMARY PANCREAS TRANSPLANTATION AND PANCREAS RETRANSPLANTATION**

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Mentor name: Perosa, M.

**Background/ Introduction:** Pancreas transplantation (PT) is the only treatment capable of normalizing seric glucose levels and reversing secondary complications in type 1 diabetics. There has been a decline in PT procedures in the last decade and even more in the number of pancreas retransplantation (PRT), which is considered a more challenging operation. About 30% of pancreatic grafts present technical or immunological loss in the first five years after primary PT and a significant portion of these patients, since carefully selected, may be PRT candidates.

**Objectives:** The current study aims to investigating and comparing the evolution of primary PT and PRT.

**Methods:** Between 1996 and 2018, 72 PRT and 274 Solitary (Pancreas After Kidney (PAK) and Pancreas Transplantation Alone (PTA)) Primary PT were performed. The groups were statistically compared according to scalar variables with the Mann Whitney test, such as donor and recipient’s age and the organ’s time of ischemia. Categorical variables were analyzed through the Likelihood Ratio test, such as recipient’s gender, donor’s cause of death, category of PT (Simultaneous pancreas-kidney, PAK or PTA), type of exocrine (bladder or enteric) and venous drainage (portal or systemic-iliac/cava), use of transfusion, need of reoperation, cause of graft failure (immunological or technical), one and five-year patient and graft survival. The statistical analysis considered p < 0.05 as significant.

**Results:** It was observed statistical similarity in all scalar variables (donor and recipient’s age and time of ischemia) and in some of the categorical ones, such as recipient’s gender, donor’s cause of death, model of exocrine drainage, necessity of transfusion or reoperation, cause of graft failure and both patient and graft survival (either one and five years after PT). In contrast, it was found more PAK recipients(p<0.001) and use of systemic-cava drainage(p<0.001) among the PRT group.

**Discussion/ Conclusion:** PRT procedures are more challenging than primary PTs, requiring surgeon’s ability to overcome unexpected situations. There are few centers worldwide with an expressive PRT experience, being the present series of cases one of the largest reported so far. PRT’s most prevalent indication includes patients previously submitted to a SPK, with preserved function of the renal graft and loss of the pancreatic graft. For this reason, it was not surprising the higher rate of PAK recipients among PRT procedures in the current study. It is an interesting technical strategy in PRT to avoid a previously manipulated surgical field, searching for a more preserved and free of adhesion area. Vena cava is rarely used in primary PT and it may justify the higher use of systemic-
cava among PRT, since this is a more preserved and easier to dissect vein in a second or third PT. We concluded that although PRT represents a more complex and challenging procedure, it is worth for a selected group of patients and able to achieve 1 and 5-year patient and graft survival at least as good as primary PT.

DOUBLE ARTERIAL RECONSTRUCTION OF PANCREATICODUODENAL ARCADE IN PANCREAS TRANSPLANTATION – REPORT OF TWO CASES

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Background/Introduction: Pancreas transplantation (PT) faces several technical challenges, from organ procurement to back-table and recipient’s surgery. One particular concern after organ recovery is the adequate vascularization of graft duodenum and head of the pancreas, confirmed by a positive reflux test of the pancreaticoduodenal arcade (PDA). We report two cases of PT in which the reflux test was negative and a different reconstruction was required and made the PT feasible.

Objectives: Case Report 1: A 43 year-old patient, female, Type 1 diabetic for 34 years and with end-stage renal disease had undergone a living-donor kidney transplant (LDKT) in 2016 and a pancreas after kidney (PAK) transplant in april 2017. The patient had an uneventful outcome, but after a treated acute rejection, there was graft loss due to venous thrombosis, being relisted for a second PT. Case Report 2: A 35 year-old patient, female, Type 1 diabetic for 26 years, and with end-stage renal disease underwent a preemptive LDKT in february 2018; six months later a PAK was performed.

Methods: Diagnostic and therapeutic focus and assessment: The first patient underwent a pancreas retransplant in march 2018 from a 19-year old donor, victim of gunshot, with an excellent macroscopic finding of the pancreas. During the organ procurement, it was observed a right hepatic artery (RHA) arising from superior mesenteric artery (SMA). During the back-table surgery, the reflux test was negative showing lack of perfusion to cephalic portion and graft duodenum, what could jeopardize the use of the organ. Besides, it was noticed that inferior pancreaticoduodenal (IPD) artery took off from the anomalous RHA and was sectioned for separation between the pancreas and liver graft. To optimize the use of the pancreas graft, a traditional Y graft reconstruction was performed, but with three termino-lateral anastomosis in external iliac segment of the Y: one with
SMA, other with gastroduodenal artery (GDA) and the third with IPD. Doing that, both PDA were revascularized, the superior by anastomosis with GDA and the inferior by anastomosis with the sectioned PDI. In the recipient’s surgery, the organ was implanted with systemic-cava and bladder drainage. Reperfusion showed a nice organ aspect, particularly in the concerned area of duodenum and cephalic portion. In the second case, the donor surgery was uneventful and no anatomical variation was initially noticed. During the back-table surgery, the reflux test was also negative and a misplaced and sectioned PDI artery was found at the upper margin of the pancreas. The reconstruction was quite different from the first case but with the same goal of revascularizing the both PDA. The sectioned anomalous PDI artery was anastomosed to SMA and the segment of external iliac artery of the Y graft was again anastomosed to SMA and GDA. The recipient surgical technique was a systemic-cava and enteric drainage. Reperfusion also showed a good macroscopic appearance of the graft, particularly the duodenum and cephalic portion of the pancreas.

Results: Follow-up and outcomes: Both patients had an uneventful recovery, achieving a quick normoglycemic and insulin-free state. In the first case, the recipient was discharged in the 9th postoperative day and one month alter was diagnosed with cytomegalovirus infection. At home and during the clinical treatment of the viral infection, the patient presented a sudden hypotension and dyed after a cardiorespiratory arrest. The necropsy findings suggested an upper digestive hemorrhage unrelated to the PT. The second patient was discharged in the 6th postoperative day and is doing fine one month after surgery.

Discussion/ Conclusion: Double arterial reconstruction of pancreaticoduodenal arcade showed as a feasible and alternative technique, although more complex, and can allow the use of pancreas grafts when the irrigation of the duodenal-cephalic portion may be compromised.

LIVER-KIDNEY TRANSPLANTATION: 30 CASES EXPERIENCE

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Mentor name: Miranda, M.P.; Santos, R.G.

Background/ Introduction: Following the advent of the MELD (Model for End-Stage Liver Disease) score in allocation of liver grafts, heavily influenced by the creatinine value, a greater number of hepatopathy patients with renal dysfunction
reach the top of the waiting list and are submitted to Liver Transplantation (LT) or Combined Kidney-Liver Transplantation (CLKT).

**Objectives:** To demonstrate a clinical series of CLKT detailing mainly the indication and outcome of these simultaneous transplantations.

**Methods:** In the period between 2006 and 2018, 30 patients undergoing CKLT from deceased donors were retrospectively analyzed. Pre and post-operative variables of donors and recipients involved were detailed.

**Results:** All donors were deceased and had average age of 32.1 years (12-54), 40.9% of whom had a cerebrovascular event, with average creatinine levels of 1.3 mg/dl (0.38-4.1). Regarding the recipients, the average age was 53.1 years (26-66), of which 21 (70%) were males and 21 (70%) were white. Seventeen patients (56.6%) were undergoing dialysis at the time of CLKT. Among patients without pre-LT dialysis, the creatinine level average was 3.03 mg/dl (1.4-9.77). The main etiologies of liver disease were cirrhosis by NASH and C virus in 6 (19.3%) cases each, 2 (6.67%) liver retransplants, 3 (10%) renal retransplantation at the time of CKLT and 70% of the patients had comorbidities, with higher prevalence of DM and SAH. The preoperative average MELD was 22.8 (14-38). The patient’s one-year survival, hepatic and renal grafts were, respectively, 63.3%, 53.3% and 50%. The main cause of mortality was septic shock, which occurred in 4 (40%) cases.

**Discussion/Conclusion:** The indication of CKLT has increased after the advent of the MELD score due to the great impact of the serum creatinine levels on the count of this score. CLKTs are generally indicated in liver disease patients with concomitant chronic kidney disease, provided that creatinine clearance is less than 30 ml / min, or in those with hepatorenal syndrome not responsive to clinical treatment and with a period of more than eight weeks on dialysis. In the present study, 29 of the 30 TFR cases occurred due to the presence of chronic renal disease in patients with frequent comorbidities and almost 60% of them already undergoing dialysis, which may explain the 36.6% mortality in this group.

The CKLT represents a current reality in the world and the current experience of the group demonstrates results slightly lower than the isolated LT versus the severity of these patients with simultaneous failure of two organs.
CHRONIC SEVERE NEUTROPENIA: A CASE REPORT

Type of research: Case report

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Background/Introduction: Severe chronic neutropenia (SCN) is a rare blood disorder characterized by abnormally low levels of neutrophils. Symptoms associated with SCN include recurring fevers, mouth ulcers, and/or inflammation of the tissues that surround and support the teeth. Due to low levels of neutrophils, affected individuals may be more susceptible to recurring infections that, in some cases, may result in life-threatening complications. SCN may last for months or years and can affect both children and adults.

Objectives: A 1 year and 6 months old female patient was admitted in April 1 presenting fever, aqueous diarrhoea, dehydration and hyporexia. The patient started the symptoms about five days earlier and had a historic of several admissions due to pneumonia, chronic obstipation, and recurrent furunculosis, associated with low weight gain. At her first physical examination, she was emaciated, dehydrated, pale, feverish (38ºC), with anal plicomas and without any abnormalities in the other systems.

Methods: After her admission, laboratorial blood tests were required and confirmed hyperchloremic and hypokalemic metabolic acidosis, neutropenia and a microcytic hypochromic anemia. The initial potencial diagnosis were acute gastroenterocolitis, febrile neutropenia, primary immunodeficiency, iron deficiency anemia and chronic malnutrition. After three days of her hospitalization, she started a painfull ulcerated anal and vaginal lesion, with extrusion of the mucosa that bleeded after manipulation. The hypothesis then were ureterogénital fistula, inflammatory intestinal disease, chronic granulomatous disease and plicomas due to chronic obstipation. The patient was evaluated by the pediatric gastroenterology and surgery teams and then started an empiric treatment with albendazole (for 5) days, lactulose and cefepime. The continuou severe chronic neutropenia (<500/mm³) and her clinical history of
recurrent infections led to a more specific investigation of primary immunodeficiency, starting a treatment with Granulokine®, after 1 week admission.

Results: After the association of cefepime, albendazole and Granulokine®, the patient had a total remission of the perineal lesion. Although her blood tests continued to present a hyperchloremic metabolic acidosis and a kidney ultrasound suggesting nephrocalcinosis, the hypothesis of renal tubular acidosis (type 1) was sustained, and so indicated to start an oral use of sodium bicarbonate. Also, the high levels of triglycerides implies a detailed investigation for genetic diseases such as inborn errors of metabolism. Without any lesions, a normalization of her granulocytes and good general state, she was discharged from the hospital and advised to an outpatient return to investigate the etiology of the chronic neutropenia. The regular medication prescribed was: Granulokine® (5mcg/kg/day) to be used in alternating days, Neutofer® (5mg/kg/day), sodium bicarbonate (500 mg once a day), lactulose (7ml once a day), hyper caloric and hyperproteic diet.

Discussion/Conclusion: Documentation of neutropenia in a child can be made in a variety of contexts, ranging from the occasional finding to the infection of extreme severity. In addition, the etiological diagnoses are very diverse, being congenital or acquired, acute or chronic and primary or secondary, since it may result from viral infection, due to use of certain drugs, and/or following exposure to certain poisons, aside from genetic causes and autoimmune conditions. Neutropenia may also occur as a secondary finding due to other primary disorders such as leukemia. This diversity hinders its approach, which must be investigated in a way possibly protocolled and efficient, but at the same time versatile and broadened. In this particular case, the patient had a variety of manifestations, which delayed her accurate diagnose. The primary cause of her chronic neutropenia remains still unknown, and is being investigated.

A COMPARISON BETWEEN FEATURES OF RESTLESS LEG SYNDROME IN END-STAGE RENAL DISEASE AND GENERAL POPULATION

Type of research: Clinics/Internal Medicine

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Department: Departamento de Psicobiologia - Universidade Federal de Sao Paulo - Sao Paulo, Brazil
Background/Introduction: Restless Legs Syndrome is a highly prevalent sleep disorder that affects about 10% of the general population and up to 25% of patients with renal disease, particularly those on dialysis. Usually, Restless Legs Syndrome is accompanied by Periodic Limb Movements of Sleep. The mechanisms behind this association are not completely understood.

Objectives: Considering that both Restless Legs Syndrome and Periodic Limb Movements of Sleep are associated with increased risk of mortality in patients on dialysis, we evaluated features of Restless Legs Syndrome in this population as compared to a matched control population.

Methods: Control subjects were obtained from a previous Epidemiologic Sleep Study and matched 3:1 for age, sex, body mass index and severity of sleep apnea with patients on dialysis. Diagnosis of Restless Legs Syndrome was based on International pre-established criteria. All patients underwent overnight polysomnography.

Results: Patients with Restless Legs Syndrome in the control group presented lower ferritin levels and in the dialysis group had higher index of Periodic Limb Movements of Sleep, independent of the severity of sleep apnea, arousals and age; patients on dialysis presented lower amount of N3 (p=0.037) and REM sleep (p=0.006).

Discussion/Conclusion: Restless Legs Syndrome in patients on dialysis is highly associated with Periodic Limb Movements of Sleep, consistent with a unifying hypothesis that Restless Legs Syndrome in patients on dialysis has a distinct physiopathology. Given the high risk of mortality in this population, it would be important to elucidate the pathophysiology, and to determine whether the treatment would reduce the overall mortality in this population.

SOCIAL ASPECTS OF TEENAGERS AND YOUNG ADULTS HIV INFECTED THROUGH VERTICAL TRANSMISSION

Type of research: Clinics/Internal Medicine

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Background/Introduction: In past years, there has been a large decrease in vertical HIV transmission, which occurred concomitantly with a higher life expectancy and a decline in opportunistic infections. However, a successful
treatment depends on aspects related to difficulty of medicine adhesion, need for a caretaker and influence of the family structure, along with possible repercussions of the disease stigma, motor and cognitive consequences and barriers to social development.

**Objectives:** The general objective of this study is to know the interpersonal and relation profile of teenagers and young adults infected with HIV through vertical transmission. The specific goals include studying the demographic characteristics, identifying the people who gave them support since their birth, understand the difficulties that they had to go through after the diagnosis disclosure and comprehending their relationship with their parents.

**Methods:** This is a cross-sectional study analyzing 22 patients who acquired HIV through vertical transmission and received clinical attention at Serviço de Ambulatórios Especializados de Infectologia "Domingos Alves Meira" (SAEI-DAM) and at Outpatients Pediatrics at Hospital das Clínicas da Faculdade de Medicina de Botucatu. The researcher was responsible for data collection through a semi structured interview elaborated with a psychologist who has experience in this area, with the intention of studying how a person infected vertically by HIV deals with factors related to their general life experiences, including: psychological support, how they cope with social aspects of life and their relationship with their parents.

**Results:** We have studied 22 patients aged between 10 and 34, including 13 women. The most supportive people in aspects related to the disease were the mother (50%), grandparents (27%) and health system (14%). When questioned about the number of current support figures, answers varied among three (36%), two (32%), four (23%) and one (9%). The most common forms of support were: help with medications (43%), attendance in medical appointments (38%), listening (30%) and counseling (18%). Patients also mentioned “not talking about the matter” (8%) and “being treated as a normal person” (5%). Prejudice because of HIV was described by 45%. Discrimination was more often present among school classmates (30%), school authorities (20%), family members (20%), acquaintances (20%) and the health system (20%). Only 32% had a present father and 45%, a present mother, although the rate of death for both parents was 47%. Regarding living parents, 27% of the fathers and 14% of the mothers were alive but absent.

**Discussion/Conclusion:** The restricted number of support figures stand out, as the maximum reported was four. This shows the stigma present in this disease not only in the lack of assistance offered but also in the limited number of people with whom they decide to share the diagnosis. This stigma can be noticed when the participants describe “being treated as a normal person” or “not talking about the matter”. It can also be demonstrated by almost half having suffered prejudice, which is more relevant when it’s considered that most of them disclose the diagnosis only to trusted people. It can be seen that the mothers are crucial for
the interviewed, whilst fathers are often not as important. This doesn’t seem to be related to paternal death, as the rate is the same as the mothers’, but to the common abandonment by the fathers, that could be related to sociocultural aspects independent of the HIV infection, to a non-acceptance of the child’s condition and to feelings of guilt weaker than the mother’s.

ORAL APPLIANCE THERAPY IN UPPER AIRWAY RESISTANCE SYNDROME: ADHERENCE IN A RANDOMIZED PLACEBO-CONTROLLED CLINICAL TRIAL

Type of research: Clinics/Internal Medicine

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Background/Introduction: Upper Airway Resistance Syndrome (UARS) is a Sleep Related Breathing Disorder characterized by increased respiratory effort episodes, multiple arousals, fatigue and excessive daytime sleepiness. The mandibular advancement device (MAD) is a type of oral appliance therapy option for UARS patients, however, there is few data regarding this treatment adherence in UARS patients.

Objectives: Primary: To analyze MAD adherence in UARS treatment and the possible predictive factors associated to it. Secondary: To compare MAD to placebo adherence in UARS patients in a randomized, placebo-controlled clinical trial.

Methods: This study was a part of a clinical trial. Thirty UARS patients were recruited from the sleep disorders outpatient clinic at the Universidade Federal de São Paulo. Individuals of both genders, between the ages of 25 and 50 years with a BMI ≤ 30kg/m2 were included. UARS criteria were presence of sleepiness (Epworth Sleepiness Scale – ESS - ≥ 10) and/or fatigue (Modified Fatigue Impact Scale – MFIS - ≥ 38) associated with an apnea/hypopnea index (AHI) ≤ 5 and a respiratory disturbance index (RDI) > 5 events/hour of sleep and/or more than 30% of total sleep time with flow limitation. Patients with a UARS diagnosis were randomized into two groups: placebo (an oral appliance without mandibular) and mandibular advancement device group. All patients completed the Beck Anxiety and Depression Inventories, Insomnia Severity Index and Stress Symptoms Inventory (Lipp test). Evaluations were performed before (baseline) and after 6 months of treatment. Placebo and MAD adherence were evaluated subjectively
through a sleep diary. We considered good adherence when the patient used the placebo or MAD for more than 70% of nights.

**Results:** Thirty patients were evaluated: 15 randomized in each group. Mean age and BMI were 43.7 ± 7.9 years and 26.4 ± 4 kg / m², respectively. There was no significant difference in gender (p = 0.01), age (p = 0.4) and Epworth and Fatigue Scales in both groups at baseline values.

MAD 6-months use significantly reduced snoring (VAS), decreased depression severity (Beck Inventory) and stress level in alert and resistance phases (Lipp test) when compared to placebo’s use (p< 0.001, p = 0.004, p = 0.005, p = 0.01, respectively).

Mean treatment adherence in both groups was 6.3 ± 1.8 hours / night. The appliances were used on average in 77% of nights. There was no statistically significant difference in adherence comparing both groups: mean placebo adherence was 6.6 ± 2.6 hours / night and mean MAD was 6.1 ± 2.4 hours / night (p = 0.5).

According to logistic regression baseline fatigue, excessive daytime sleepiness, severity of depression symptoms, anxiety, stress level, insomnia, and nasal abnormalities that could did not predict MAD and placebo adherence in UARS patients after 6 months of treatment (p = 0.8, p = 0.4, p = 1, p = 0.2, p = 0.3, p = 0.6, p = 0.9 respectively).

**Discussion/Conclusion:** MAD is a good option to UARS treatment since it has a good adherence decreased snoring, symptoms of depression and stress after 6-months use.

MAD adherence were similar to placebo.

According to our results, we could not consider excessive daytime sleepiness, fatigue, severity of insomnia, of anxiety, of depression and of stress severity and nasal anatomical abnormalities.

Symptoms related to disease did not predict MAD adherence in UARS treatment.

The side effects of each device were mild and solved in a short-term during treatment.

A limitation of this study was that the adherence was done subjectively. However, Dieltjens M et al in 2013 compared the objective measurement of MAD adherence (thermosensitive device) with subjective self-report of use after 1 year and found a high agreement subjective measure underestimated in average 30 minutes the objective one.

Finally, we can conclude that nasal abnormalities, excessive daytime sleepiness, fatigue, severity of anxiety, depression, stress and insomnia were not able to
predict MAD adherence after 6 months of UARS treatment. MAD adherence also
did not differ from placebo’s.

LATE-ONSET PRESENTATION OF AMYOTROPHIC LATERAL SCLERORIS
TYPE 4

Type of research: Case Report/Internal Medicine

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Presenter name: Seneor, D.D. - UNIFESP

Mentor name: Oliveira A.S.B. - UNIFESP

Department: Department of Neurology - Discipline of Neuromuscular Diseases

Background/Introduction: Amyotrophic lateral sclerosis (ALS) type 4 is a familial form of the disease, whose gene mutated is SETX. It is characterized by juvenile onset (before 25 years old) and presents predominance of lower motor neuron syndrome, without early bulbar or respiratory symptoms.

Objectives: Case 1

Clinical findings: Male, 54 years old. Patient complained about superior limbs muscular weakness with onset 15 years ago, followed by inferior limbs muscular weakness that begun 9 years ago, accompanied by fasciculation and muscle cramps. He presented muscular weakness graded 3 proximally and 2 distally in superior limbs, and 4 proximally and 3 distally in inferior limbs. Bilateral ankle and patellar clonus, bilateral Hoffmann sign. Absence of cognitive impairment. No familial history of neurodegenerative diseases.


Methods: Case 2

Clinical findings: Feminine, 38 years old. Patient complained about inferior limbs muscular weakness for 8 years, followed by superior limbs muscular weakness for 4 years. She presented muscular weakness grade 4 in inferior limbs and 3 in superior limbs, as well as amyotrophy in the four limbs, predominantly proximal. Osteotendinous patellar reflexes 3+/4+, patellar clonus bilaterally, without other
signs of pyramidal liberation. Absence of lingual fasciculation or cognitive impairment. No familial history of neurodegenerative diseases.


**Results:** No further outcomes

**Discussion/Conclusion:** The present work describes, two cases of ALS with mutated SETX that did not have juvenile onset. Furthermore, none of the two patients had familial history of ALS, or other neurodegenerative diseases, showing the sporadic character of the disease in both cases. It suggests that there may be a mechanism of sporadic mutation in the SETX gene that contributes to the genesis of ALS in individuals older than 25 years old, fact never described before.

PSEUDOXANTHOMA ELASTICUM PRESENTING AS HYPOKINETIC-RIGID PARKINSONISM AND DEMENTIA

**Type of research:** Case Report/Internal Medicine

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**Presenter name:** Seneor, D.D. - UNIFESP

**Mentor name:** Oliveira A.S.B. - UNIFESP

**Department:** Department of Neurology - Discipline of Neuromuscular Diseases

**Background/Introduction:** Pseudoxanthoma elasticum is a rare genetic disorder caused by ABCC6 gene mutation. It is characterized mainly by cutaneous and ophthalmological alterations. Vascular alterations usually arise in the late phase. MRI-detected microangiopathic alterations have been described in the scientific literature.

**Objectives:** Clinical History

Male, 54 years old, telephone technician, diagnosed with pseudoxanthoma elasticum more than 20 years ago. Self-limited episode of muscular weakness in right dimidium 5 years ago. Former smoker 20 pack-years. Three years ago, patient began to present psychomotor lentification and to present disattention and confusion. One year ago, he started to show behavioral alterations.
Methods: Physical exam

Neurological exam: disoriented temporospatially, dysarthrophonic speech, hypomimia. Bilateral bradykinesia, plastic rigidity in all members, parkinsonian march, postural instability and involuntary movements.

Osteotendinous reflexes 4+/4+, absent Babinski sign, bilateral exhaustible ankle clonus, muscular strength grade 4 globally. Primitive reflexes were present.

Dermatological exam: yellowish papules linearly disposed and grouped on the cervical region skin, as well as on the mucosa of the lower lip.

Complementary exams

Skin biopsy: histopathological diagnosis of pseudoxanthoma elasticum

Brain magnetic resonance: multiples areas of lacunar infarctions, remarkably in basal ganglia and internal capsule. Internal capsule with hyposignal in GRE. Periventricular hypersignal in T2.

Results: No further outcomes

Discussion/Conclusion: In the present case, small vessels alterations are atypically exuberant and cause neurological alterations secondary to basal ganglia and internal capsule lesions, originating remarkable parkinsonism, cognitive impairment and pyramidal liberation signs. It shows that diffuse microvascular infarcts may be a late manifestation of pseudoxanthoma elasticum and might originate a wide variety of clinical manifestations.

QUALITY OF LIFE OF PATIENTS WITH AURICULAR KELOIDS

Type of research: Clinics/Internal Medicine

Author name: Brandes, G.I.G. - Unifesp

All co-authors names: Yarak, S. - Unifesp

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Department: Dermatology

Background/Introduction: Keloids are abnormal proliferations of scar tissue that do not regress spontaneously and overcome the original margins of the scar. It may cause physical and psychological symptoms.

Objectives: To evaluate the impact of auricular keloids on the quality of life of the patients.
Methods: This is an analytical observational cross sectional study which analyzed, starting from August 2016, the first 15 patients with auricular keloids, from both genders, from 12 to 60 years old, treated at UNICCO – UNIFESP (Cosmiatry, Surgery and Oncology Unit) – approved by PE/UNIFESP 0797/2016. The recruited patients had medical appointments to analyze demographic and clinic parameters and filed the QualiFibro questionnaire, which encompasses physical and psychological domains. The questionnaire is valid and specific to evaluate the quality of life (QoL) of patients with keloids. It contains a score from -5 to +5; the closer to +5 higher is the keloid impact on the patient’s QoL. The patients also filed two numeric scales regarding physical factors (pain and itching).

Results: Fifteen patients (6 female and 9 males), with age from 13 to 57 (mean of 27) were analyzed. The most affected area was the earlobe (86.66%), especially in the left ear (68.42%). Most of the keloids were posterior (63.6%). The keloid volume varied from 0.26 cm³ to 37.7 cm³, with a mean of 7.18 cm³. Regarding the itching, in a scale from zero to 10, there was a mean of 4.53 and median of 5. As for the pain, in the same 0 to 10 scale, there was a mean of 3.5 and median of 3. The mean score in the QualiFibro questionnaire for physical damage was -1.51. The results varied between -5 (smallest impact identified) and +4.6 (largest impact), forming a very heterogeneous group. In the psychological damage scale, the mean score was 0.43 and median of 0.33. The scores varied between -4.55 and +4.55.

Discussion/Conclusion: Most patients presented a high score psychological damage in the QualiFibro questionnaire, demonstrating an association of the auricular keloids with the feeling of shame, low own self-acceptance, negative effect on sexual activity and discomfort when asked about the scar. In the physical aspect, most of the patients denied having their movements restricted by the auricular keloids; 80% of them, however, reported itchiness in the area. The question on QualiFibro that had the most positive mean (with the highest impact) was Q14 – “I do not feel well when asked about my scars”, presenting a mean score of +1.8.

Regardless of the variation in the symptoms, all patients, with no exceptions, associated their keloids with some sort of negative impact in their life.

PERCEPTION OF ONCOLOGICAL PATIENTS AND THEIR CAREGIVERS ON PALLIATIVE CARE AFTER EDUCATIONAL INTERVENTION

Type of research: Clinics/Internal Medicine

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Presenter name: Blanco, I.P.

Mentor name: Cubero, D.I.G.; Giglio, A.

Department: Oncology

Background/Introduction: Palliative care is a medical area of operations aimed at improving the quality of life of people with incurable diseases. Despite its importance in the comprehensive treatment of cancer patients, palliative care is still not widespread in our country.

Objectives: To assess the understanding of cancer patients and their caregivers about palliative care after educational intervention, identifying the effectiveness of informative booklet application elaborated specifically for this project and seeking its validation as an educational tool.

Methods: The study was divided into the stages: diagnosis and intervention. In the first, a questionnaire was applied to cancer patients and their caregivers in order to assess their level of knowledge about palliative care. From the results of the questionnaire, an educational primer was developed. In this second stage, the booklets were given to the participants of the study and, after reading them, the same questionnaire used in the first stage was applied. A quantitative and qualitative analysis of the results was performed, in addition to the comparison of these results with the results obtained in the previous stage.

Results: We present the second phase of the project. In the period from November to December 2017, there were 50 people interviewed, 32 of them women and 18 men, median age 50.7 years, mostly with education level elementary school completed. To the question "Do you know what palliative care is" 69.39% said "yes"; 14.29% answered "I have a slight idea" and 16.33% answered "no." Of those who answered "yes" and "I have a slight idea" (83.68%), there was a 59.85% increase in previous study (23.83%). In this same sample, 100% of the patients believed that palliative care improved the quality of life, were not only meant for cancer patients and did not only meant for the last days of life.

Discussion/Conclusion: This study shows the educational booklet effectiveness developed to inform for patients and caregivers about palliative care.

We realize that educational booklets contributes to increase the knowledge about palliative care, however there is still much to be done for the population’s understanding about the subject.

INFLUENCE OF THE UNIFESP - CAMPUS SÃO PAULO’S OPEN UNIVERSITY FOR SENIOR PEOPLE IN THE QUALITY OF LIFE AND PHYSICAL CAPACITY OF ITS PARTICIPANTS
Background/Introduction: In 2003, the Brazilian Senior Citizen's Statute characterized the Open University for Senior People as an organization for continuing education, which should provide knowledge and updates to the elderly, integrate them to other generations and cherish their part in society.

Objectives: The main goal of this study was to investigate the influence of Unifesp – Campus São Paulo’s Open University for Senior People in the physical capacity and in the quality of life of its participants.

Methods: In 2017, in two moments, in the middle (August) and in the end of the program (November) we applied the battery of functional tests “Short Physical Performance Battery (SPPB)” and the questionnaire SF-36 about quality of life.

Results: We analyzed 14 seniors in August and repeated the analysis with 10 of them in November. The SPPB had high scores in both data collections, however the elderly seniors showed a bigger decline when compared to the younger seniors. Therefore, the theoretical curriculum of the Open University for Senior People was not enough to avoid a decline in physical capacity, particularly between the elderly seniors, above 70 years old. About the quality of life, the individuals analyzed had high scores in the physical, social and emotional aspects of the SF-36. The pain section showed the lowest scores in the first analysis but showed an expressive improvement for almost all the individuals when the program ended. The sections about vitality and mental health showed a decline also between the elderly seniors.

Discussion/Conclusion: Although we cannot generalize the results, the theoretical program seemed to have a positive influence in the perception of pain, but not in the physical capacity or in the perception of vitality and mental health, mainly for the seniors that were above 70 years old.
All co-authors names: Devito, B.P.; Devito, L.P.; Del Papa, G.P.; Hamerschlak N.

Presenter name: Devito, L.P.; Dal Bo, C.R.; Devito B.P.; Del Papa, G.P.

Mentor name: Hamerschlak N.

Department: Hospital Israelita Albert Einstein

Background/Introduction: Situs Inversus Totalis (SIT) is a rare congenital abnormality characterized by mediastinal and abdominal organs in the opposite usual topography, with estimated incidence of 1/8000 to 1/25000. Reports show concomitance between SIT and other conditions, such as spinal, cardiac anomalies and hematological diseases, like Immune Thrombocytopenic Purpura (ITP), with estimated incidence of 1.6-2.7 cases per 100,000 people. The report reveals the coexistence of these two rare conditions: SIT and ITP.

Objectives: VFB, male, 19 years old, with SIT accidentally identified on imaging tests, reported severe headache in frontal and occipital areas with photopsia and loss of senses, genital bleeding, presence of live blood in feces and urine, and routine exams showing lymphopenia and thrombocytopenia. Other reported complaints were dyspnea at rest with spontaneous improvement, pain and swelling in the lumbar region. He is a smoker (0.7 pack-years) and sedentary.

Methods: In the investigation, as complementary exams, blood counts and imaging tests were performed. The diagnosis of ITP was made based on the results of serial hemograms showing thrombocytopenia (approximately 70,000) and the patient's clinical manifestations. The computed tomography and magnetic resonance imaging of the lumbosacral spine showed inversion of the position of the abdominal and thoracic structures, confirming SIT, lumbar scoliosis of right convexity in decubitus, congenital deformity in the posterior arch of L5 and S1 (tapering and deformity) and edema of the spinal ligament of L4/L5. The total spine radiography showed thoracic-lumbar scoliosis with thoracic component to the left and lumbar to the right and morphological alteration of the left interaphysiary at L5-S1 and signs of incomplete fusion of the posterior L5 arch.

Results: Serial hemograms were made to conduct the case, which showed a variation of the platelet level (70,000 mm$^3$ up to normal range). Because it is a case of mild thrombocytopenia that tends to a benign course, we opted for an expectant conduct with mensal appointments with the hematologist doctor, as well as mensal blood tests with platelet count exams.

Discussion/Conclusion: We found in the literature 3 other cases of ITP 1,2 concomitant with situs inversus totalis. Therefore, this case report also suggests a rare association: STI coexistence with ITP and spinal anomalies. The causality and mechanisms of these associations are unknown and subsequent studies should be undertaken.
RETROSPECTIVE OBSERVATIONAL STUDY ABOUT THE USE OF ORAL ISOTRETINOIN IN THE TREATMENT OF ACNE IN PUBLIC HOSPITAL

Type of research: Clinics/Internal Medicine

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All co-authors names: Bagatin, E. - UNIFESP

Presenter name: Evaristo, L. S. B. F. - UNIFESP

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Department: Dermatology

Background/Introduction: Acne is a chronic inflammatory, immunomediated and multifactorial disease. Its treatment must be early and effective due to its negative psychosocial impact and risk of scars. In severe or moderate forms, which don't respond to conventional therapy and tend to leave scars, the oral isotretinoin (ISO) is first-line therapy and should be indicated as early as possible. However, exaggerated concern about its adverse events are, mainly in developed countries, limitations for its prescription, delaying effective treatment. In contrast, ISO is widely prescribed in Brazil for acne treatment.

Objectives: The purpose of this study it to describe the use of Oral Isotretinoin in the treatment of acne in a public hospital - Hospital São Paulo - HSP, São Paulo, Brasil, determining the prevalence of patients treated or in treatment at the General Ambulatory of the Department of Dermatology - EPM / UNIFESP, as well as their clinical-biographical data and characteristics of the therapy.

Methods: The project was approved by the Research Ethics Committee - CEP UNIFESP / HSP, and the Consent Form was signed by participants who could be contacted. The data analyzed were obtained from medical records of all patients treated or under treatment with ISO for acne in the General Ambulatory of the Department of Dermatology - EPM / UNIFESP in the last 7 years, since the implantation of the electronical system of medical records (PEP). Clinical and biographical data were collected, such as gender, age, weight, severity and location of lesions, presence of scars and / or hyper pigmented sequelae. It was gathered information on therapeutic scheme, such as initial and total daily dose, treatment time, age at the beginning of treatment, dose modification, symptomatic prescription, and also data of adverse events like cheilitis, xerosis, xerophthalmia, nasal dryness, increased liver enzymes, total cholesterol, LDL, HDL and triglycerides.

Results: The medical records of 1526 patients diagnosed with acne were analyzed. ISO was prescribed for 279 patients (18.28%). Most of patients were men (62.72%), between 10 and 30 years old (92.55%), with an early onset of the
disease during adolescence (91.39%). ISO was indicated for all severity levels of acne vulgaris: mild (1.19%), moderate (57.37%), severe (35.85%) and conglobata (5.57%). The face was the most affected site by typical lesions (97.51%), as well as scars and post-inflammatory hyperpigmentation. Acne sequelaes were presented at the start of treatment in 77.1% of patients. The initial daily dose of 20 mg per day was prescribed for 84% of patients, and the average of initial dose/weight ratio was 0.33 mg/kg/day. Most of treatments lasted between 9 and 12 months (57.4%). The average of total dose/weight ratio was 127.61 mg/kg. Mucocutaneous adverse events were the most common, and there were a few cases of laboratory abnormalities. Dose reduction by adverse events occurred only in 10.76% of the cases.

**Discussion/Conclusion:** This study showed low percentage of indication of ISO compared to the high number of prescriptions in private clinics (Seité 2015). The great presence of acne sequelaes at the onset of treatment reveals delayed indication of the drug, which can lead to scars and have a strong negative psychosocial impact in the quality of life. The wide indication for moderate forms of acne was an important measure to avoid this scenario. The therapeutic regimen used initial daily dose of 0.33 mg/kg, lower than the recommendation in the package insert, which shows the same efficacy with higher adherence according to some studies. The results are in agreement with the most recent literature: low daily dose, total dose according to bull recommendat ion, common side effects, mild, controllable and few laboratory alterations.

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**A SYMPTOMATIC WOMAN WITH MTM1 GENE MUTATION MIMICKING LIMB-GIRDLE MUSCULAR DYSTROPHY**

**Type of research:** Clinics/Internal Medicine

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**Presenter name:** LIMA FILHO, M. P.-Unifesp

**Mentor name:** Pinto, W.B.V.R - Unifesp

**Department:** Neuromuscular Diseases

**Background/Introduction:** X-linked myotubular myopathy (XLMTM) is a severe congenital muscle disorder caused by mutations in the myotubularin 1 (MTM1) gene. The affected individual, usually a male, manifests severe neonatal hypotonia and weakness, with the majority of them dying within days or weeks of birth. Individuals who start manifesting the disease in childhood or adulthood are
uncommon, but affected females, as manifesting carriers, are a very rare finding, they are often pauci-symptomatic and show non-specific symptoms, which often leads to an overlooked, but in many ways possible, diagnosis.

**Objectives:** A 52 yo woman presented with progressive gait disturbance with proximal lower limb worseness in the last 10 years. Proximal upper limb compromise started 3 years ago. Medical history disclosed childhood-onset pes cavus and calf pseudohypertrophy. Her cousin has a non-established muscular dystrophy since 35 years. On examination: bilateral pes cavus and calf pseudohypertrophy, asymmetric winged scapula, kiphoscoliosis, axial and appendicular hypotonia, normal tendon reflexes, and mild flaccid tetraparesis with proximal lower limb predominance and presence of Gowers sign.

**Methods:** As a high-index suspicion for Limb-girdle muscular dystrophy (mainly types 1B, 1E, 2A and 2I) was detected, basic lab exams were evaluated: normal serum creatine kinase and aldolase levels; electoneuromyography showing chronic myopathic findings. Whole-body muscle MR imaging studies showed diffuse paravertebral liposubstitution and marked compromise of anterior thigh muscle groups, highlighting vastus lateralis, adductors and posterior thigh groups.

Deltoid muscle group biopsy disclosed unspecific myopathic findings. A broad gene panel including limb-girdle muscular dystrophy genes and other proximal myopathic conditions was performed and disclosed the heterozygous pathogenic variant c.109C>T (p.Arg37*) in the MTM1 gene. A definite clinical and genetic diagnosis of late-onset X-linked myotubular myopathy was made in the female patient. The patient is undergoing a rehabilitation process, with good response to motor physiotherapy and hidrotherapy.

**Results:** The therapeutic focus consists mainly of continuous physiotherapy and quality of life improvements, since the patient couldn't perform basic actions like going up stairs or getting off the couch, due to muscular weakness.

**Discussion/Conclusion:** Myotubular myopathy is a congenital myopathy of the centronuclear group with recessive X-linked inheritance, which affects almost exclusively male patients with severe neonatal hypotonia and rapidly progressive respiratory failure with early neonatal death. Clinical presentation in female carriers of the MTM1 gene is extremely rare and sometimes symptomatic with a limb-girdle pattern of weakness, with less than 25 cases already described in the literature. Therefore, MTM1 gene mutations must be included in the differential diagnosis of limb-girdle pattern of muscle weakness with normal serum creatine kinase in late-onset female, especially with positive MTM1 mutation history on male family members.

**SELF-INDUCED GLAUCOMA BY OVERDOSE OF METHYLPHENIDATE**
Background/Introduction: According to Kanski (2016), glaucoma is an optic neuropathy with characteristic symptoms and specific visual defects, associated frequently with raised internal ocular pressure. This condition can be classified, based on the mechanism by which the aqueous outflow is impaired, in open-angle and angle-closure glaucoma. It's known that some drugs can induce an acute open-angled glaucoma, such as antidepressants, anticoagulants, and drugs such methylphenidate.

Objectives: A 34-year-old female patient, with a previous diagnosis of narcolepsy, presented at a private doctor’s office in Manaus - AM, complaining of pain, burning and ocular hyperemia of acute nature, as well a discrete photosensitivity and aberrations of image while looking at light bulbs. She also reported being in continuous usage of methylphenidate, in overdose, for treatment of the narcolepsy. She was diagnosed with narcolepsy, and so on started to continuously increase her methylphenidate dosage.

Methods: The patient was submitted to a series of ophthalmologic exams, presenting significant alterations in Visual Field Interpretation, Retinal Mapping and Optical Coherence Tomography (OCT). When the exams were compared to posterior exams, it was noticed a progression of the disease, noticing an increase in the Mean Deviation (MD) of -1.9 (LE), and -3.05 (RE) in the Visual Field in 4 years; an increase of the optic cup-to-disk ratio from 0.5x0.5 to 0.8x0.8 on both eyes in Retinal Mapping in 5 years; and there was a decrease of the Retinal Nerve Fibre Layer and an increase of the optic disk cupping noticed by the OCT. Stress curve and gonioscopy showed an increase of the intracocular pressure and a closed angle when the methylphenidate is given, determining Closed-angle Glaucoma. β-blockers and prostaglandin analogues were the chosen drugs to decrease the intraocular pressure, and then she was sent to a neurologist, who prescribed adjusted doses, and two types of methylphenidate.

Results: The patient was observed within periodicals appointments every 4 months for evaluation of the progression of the disease. As the time pass by, patient did the Tonometry’s Stress Curve of 5 measures in different times, stating
that the right usage of the B-blockers and Prostaglandin Analogues and the right dosage of neuroleptics drugs can control the pressure peaks.

**Discussion/Conclusion:** Neuroleptic drugs, as methylphenidate, when given in toxic doses, have an adrenergic effect, which induces mydriasis and increases the intraocular pressure, provoking Glaucoma (Gouveia, 2010). It can be conclude that narcoleptic patients, who use methylphenidate have a high risk, though a collateral effect by inadequate dosage of the dug, can have ophthalmological repercussion, as Glaucoma, needing regular medical appointment. In addition, these patients live in a dilemma of having your intraocular pressure stabilized, but not being able of doing daily basis activities, or live normally but with their vision being gradually damaged, that’s why, they need medical follow-up.

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**MOTOR NEURON DISEASE AS A PARANEOPLASTIC SYNDROME**

**Type of research:** Case Report

**Author name:** Marin, V. D. G. B. - Unifesp


**Presenter name:** Marin, V. D. G. B. - Unifesp

**Mentor name:** Oliveira, A.S.B.

**Department:** Neurologia e Neurocirurgia

**Background/Introduction:** Paraneoplastic neurological syndromes (PND) are the result of an abnormal autoimmune reaction launched against certain antigens found in the tumor and the nervous system. Several presentations have been described, the most common are cerebellar syndrome or sensory neuronopathy, which are thought to represent about half of all PNS. Paraneoplastic motor neuron disorders appear to be much rarer with estimated frequency of 2%.

**Objectives:** A 40-year-old woman with 7-month-history of progressive muscular weakness in the lower limbs associated with paresthesia and urinary incontinence. Unintentional loss of 40 kg in the last 12 months and hyperchromic macules in the trunk and limbs highly suggestive of malignant acanthosis nigricans. Global muscle hypotrophy, areflexia, tetraparesis with fasciculations, extensor plantar responses with Hoffmann and Trömner signs and distal hypoesthesia in the lower limbs.

**Methods:** Electroneuromyography disclosed chronic and acute denervation in bulbar, cervical, thoracic and lumbosacral myotomes with normal sensory
conduction studies. Brain MRI and CSF analysis were normal. Oncology investigation with PET-CT was negative. Pelvic MRI revealed suspected lesion in the urinary bladder with complete resection of a bullous and hyperemic lesion in the posterior wall of the urinary bladder, which anatomopathological revealed low grade urothelial carcinoma with papillary pattern. Panel of onconeural paraneoplastic antibodies revealed serum anti-Hu autoantibodies.

**Results:** The patient was submitted to human intravenous immunoglobulin, 0.4 g/kg/ day for 5 days, monthly, for 3 months with progressive cutaneous and neurological improvement. The final diagnosis of the patient was Paraneoplastic Motor Neuronopathy.

**Discussion/Conclusion:** ALS and motor neuron diseases do not constitute one of the classically established paraneoplastic syndromes. In patients with motor neuron syndrome, with considerable weight loss without bulbar dysfunction and systemic signs (like dermatological lesions) paraneoplastic forms of ALS or other motor neuron diseases should be considered.

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**VIRAL AND IMMUNOLOGICAL PROFILES IN HIV-INFECTED INDIVIDUALS AT THE FIRST MEDICAL EVALUATION**

**Type of research:** Clinics/Internal Medicine

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**All co-authors names:** Souza, L.R. - UNESP

**Presenter name:** Tamburrino, A.M. - UNESP

**Mentor name:** Souza, L.R. - UNESP

**Department:** Departamento de Doenças Tropicais e Diagnóstico por Imagem

**Background/Introduction:** HIV infection has a broad spectrum of clinical presentations, ranging from an acute infection to the advanced disease. It’s characterized by impairment of the immune responses and predisposition to opportunistic infections. Thus, the follow-up of HIV-infected patients includes the evaluation of their cellular immunocompetence, which is verified by CD4+ and CD8+ T lymphocyte counts in peripheral blood and by the plasmatic HIV viral load quantifications.

**Objectives:** This study's objective was to trace the viral and immunological profiles of the HIV-infected patients evaluated in the last 10 years by Serviço de Ambulatórios Especializados de Infectologia “Domingos Alves Meira” (SAEI-DAM), from the Botucatu Medical School of São Paulo State University (UNESP), in order to analyze whether there was an early or late diagnosis.
Methods: The laboratory data were collected online by the Ministry of Health’s Sistema de Controle de Laboratórios (SISCEL). Up to this moment, the variables gender and age, as well as the first quantifications of plasma HIV viral load and CD4+ T cell counts, performed in the patients’ first evaluation in the Service, have been collected for 101 people living with HIV/aids.

Patients already included in the study have been allocated in two groups, according to the date of HIV infection’s diagnosis: Group 1 (G1) - 15 patients assisted from 2008 to 2012; and Group 2 (G2) - 86 patients assisted from 2013 to 2017.

Results: With regard to the sociodemographic characteristics of the studied patients, 64 (63.4%) patients were male and 37 (36.6%) were female. In both groups, the highest rates of HIV diagnosis were detected among men: 73.3% in G1 and 61.6% in G2, and were greater in the age group 20-29 years, with 40% for G1 and 36.6% for G2.

It was observed that 27.7% of the patients had less than 200 CD4+ T cells/ mm³ at the time of first evaluation; 40.6% had 200 to 500 T cells/mm³; and 31.7%, above 500 T cells/mm³. Despite this, most studied patients (67.3%) had a moderate to low plasma viral load (<100,000 copies/ml).

Discussion/Conclusion: The data presented here are partial, and it was not possible to include the overall casuistry. The results obtained so far show that the diagnosis of a large proportion of the patients followed by the service was performed late, when there was already significant depletion of CD4+ T lymphocytes.

Considering the data presented, it is possible to conclude that almost one third of the patients had a late diagnosis. Low CD4+ T cell counts are often observed in late diagnoses of HIV infection, with advanced disease, and may reflect a poorer prognosis due to the association of the immune deficit with the clinical deterioration of the patient. Thus, an earlier diagnosis is associated with lower viral loads, higher CD4+ T counts, lower chances of progression to severe immunodeficiency, and higher survival rates. Therefore, conducting health campaigns to detect HIV infection is of the utmost importance.

HANSEN’S DISEASE: THE AVALIATION OF THE INCIDENCE OF MULTIBACILLARY AND PAUCIBACILLARY FORMS IN THE STATE OF RIO DE JANEIRO IN 2017

Type of research: Clinics/Internal Medicine

Author name: Moraes, A.D. - Unigranrio
Background/Introduction: Hansen's disease is a chronic and infectious disease caused by the agent Mycobacterium leprae, which affects peripheral nerves causing hypoesthesia or anesthesia. Clinically classified as Paucibacillary or Multibacillary.

Objectives: Analyze the incidence of new diagnosed cases of Hansen's disease in the year 2017 in the state of Rio de Janeiro, in order to compare incidence according to the age of the diagnosed patients and the clinical forms (paucibacillary and multibacillary) at the time of diagnosis, as well as the influence of each one in the epidemiological scope.

Methods: A descriptive and comparative epidemiological study, from statistics available on the DATASUS online portal, comprised in the year of 2017, referring to the estimate of new cases of Hansen's disease in the state of Rio de Janeiro. Age variants were used, and the values corresponding to the clinical forms: paucibacillary and multibacillary.

Results: In the year 2017, it was identified 933 new cases of Hansen's disease in the state of Rio de Janeiro, of which 306 (32.8%) are classified such as Paucibacilar and 627 (67.2%) as Multibacillary. Patients between 1 and 19 years corresponded to 65 (6.96%) of the new cases, of which 31 (47.7%) were Paucibacilar and 34 (52.3%) Multibacillary, with no more relevant clinical form to the other. Among the 20 to 34 year olds, 131 new cases, while between 35 and 49 years were identified 251, where in both ages cases the Multibacillary group was more prevalent, corresponding to 93 (71%) in the first group and 180 (71.7%) in the second group. The peak prevalence occurred between 50 and 64 years of age, for both clinical classifications, where there were a total of 312 (33.4%) new cases in this age group, of which 118 (37.8%) were classified as Paucibacilar and 194 (62.2%) as Multibacillary. The population above 80 years presented only the multibacillary form of the disease, corresponding to 29 (3.1%) of the total new cases.

Discussion/Conclusion: The data found indicate that the Multibacillary form is the more prevalent among the new cases identified in 2017, as well as it is also more prevalent among all age groups. It presents itself predominantly between 20 and 49 years, where the Multibacillary form corresponded more than 70% of new cases. Low values in individuals with over 80 years can be understood as an underdiagnosis, since the elderly in later ages have certain limitations in
leaving home and look for a medical assistance, being important the home visit and the active search in this population. Proper identification of the clinical form of the Hansen's disease is important for appropriate treatment and follow-up. All patients diagnosed with Hansen's disease are entitled to free treatment with multidrug therapy (PCT-WHO) available in any health unit, should be properly instituted to prevent the evolution and transmission of the disease.

MENTORING CONTRIBUTIONS: AN EXPERIENCE REPORT IN AN INTERNAL MEDICINE SEMIOLOGY COURSE

Type of research: Clinics/Internal Medicine

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Presenter name: Correa, B. I. C. - UNESP

Mentor name: do Valle, A. P. - UNESP

Department: Internal Medicine Department

Background/Introduction: In the academic setting, mentoring is related to the teaching-learning binary. Tutor activities promote development of skills that go beyond the initial educational environment, reaching into other dimensions.

Objectives: The present report has the purpose of describing the motivations and considerations concerning students’ experience as teacher assistant, or mentors, in semiology, at the School of Medicine of Botucatu (FMB).

Methods: Report: Mentoring in semiology is offered to students that have already attended the respective disciplines, and includes activities to aid those who are currently studying them. Mentors may assist students in history-taking and physical examination, and help the teachers by selecting, among the pool of in-patients, those who are capable of receiving visits from groups of students during practical activities led by the teacher.

Results: The mentors reported that the experience resulted in development in four dimensions: 1) Academic growth: “It was a rich experience, allowing us to enhance our ability to talk to patients”. “I began to have a more holistic view of the patient in front of me”. “I felt my propaedeutic abilities growing”. 2) Professional and multiprofessional growth: “I have learned how to communicate with the hospital’s crew (nurses, residents, teachers), how the hospital works, and how to navigate its different areas”. 3) Contribution to other’s formation: “We
have learned by correcting the anamneses that the students had done to practice.”. “We elaborated a guide of how to write anamneses and conduct physical examinations to give them a standardized reference and make their studies easier.” 4) Greater proximity to the teaching practice: “I had the opportunity to conduct a practical lesson in the hospital alone with a group of students, do an anamnesis and later discuss with them what we had seen”.

**Discussion/Conclusion:** We conclude that the mentor is a student inserted in the teaching and learning process that is willing to collaborate with the learning of his colleagues and also wants to improve his knowledge. This process is based on three points of interaction between mentors and mentee students. The first is the approximation of teaching activities to improve the process of multi-professional training, in which the mentors can refine their techniques of anamnesis and physical examination. The second is that smaller differences of academic background and age range between mentors and students allow the teaching-learning process to become more fluid and dynamic. The third point of approach is built between students, mentors and mentees, and the patients, which created a less formal relationship that contributed to the processes of learning and care. Therefore, mentoring in internal medicine was an excellent teaching-learning method that allowed the development of several competencies.

**ASSESSMENT ON RISEDRONATE SAFETY PROFILE FOR PATIENTS WITH LIVER CIRRHOSIS, ESOPHAGEAL VARICES AND OSTEOPOROSIS**

**Type of research:** Clinics/Internal Medicine

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**Presenter name:** Correa, B. I. C. - UNESP

**Mentor name:** Romeiro, F.G. - Universidade Estadual Paulista

**Department:** Internal Medicine Department (Hepatology)

**Background/Introduction:** Most patients with liver cirrhosis have esophageal varices and cirrhosis-related osteoporosis. Early diagnosis and proper treatment are essential to prevent fractures and to curb the bone loss. However, the use of oral bisphosphonates, an anti-reabsorptive agent, is related with upper gastrointestinal tract lesions, which are a special concern regarding patients with esophageal varices, making necessary the assessment of the treatment’s safety.

**Objectives:** This study’s purpose is to evaluate the risk of upper gastrointestinal tract lesions related to oral risedronate use by patients with liver cirrhosis, esophageal varices and cirrhosis-related osteoporosis. The incidence and
significance of endoscopic lesions associated with the drug were evaluated, identifying associated risk factors.

**Methods:** The open label, non-randomized, interventionist study, approved by the ethics committee, included adult patients with liver cirrhosis, esophageal varices with low risk of bleeding and cirrhosis-related osteoporosis or osteopenia who were able to ingest pills following instructions. The intervention was conducted in two groups, according to the bone condition (osteoporosis or osteopenia). The control group was composed of patients with osteopenia, which doesn’t require using an anti-reabsorptive agent. Both received calcium and vitamin D supplementation and the intervention group also received risedronate in weekly doses (35 mg). All patients were submitted to upper endoscopy (EGD) and blood count before and at 12 months of treatment. The EGD was also performed at 6 months of treatment. The data collection included demographics, liver cirrhosis exams, hemoglobin values and the presence of gastroesophageal lesions as well as systemic symptoms caused or aggravated by the medication.

**Results:** The study recruited 164 patients, 74 in the osteoporosis group (Group 1) and 90 in the osteopenia group (Group 2). Seventeen lost follow up and 19 discontinued the intervention (4 entered the exclusion criteria, 2 died for non related reasons, 5 didn’t want to continue the intervention and 1 stopped taking the medication due to myalgia as a side effect). Thus, 52 remained in Group 1 and 51 in Group 2 (25 are still in treatment and were not evaluated). Patients in group 1 were older (p=0.042) and this group had more female subjects (p=0.007). The score MELD (Model for end-stage liver disease) was higher in group 2 (p=0.047). The incidence of endoscopic lesions such as upper digestive hemorrhage, esophagitis, ulcers, gastritis and duodenitis were similar between the groups. Arthralgia and myalgia was more common in group 1, p=0.031 and p=0.006 respectively. Variation in hemoglobin values and portal hypertensive gastropathy severity before and after the intervention were not relevant.

**Discussion/Conclusion:** The age difference and the prevalence of women in the osteoporosis group is not relevant to the safety analysis, although it would be relevant to its effectiveness. The incidences of arthralgia and myalgia indicate that they were caused by the risedronate. However, both symptoms are known predicted as side effects and were controlled with painkillers. There were neither endoscopic lesions nor indications of bleeding caused by the use of the medication. Therefore, the study concluded that the use of risedronate by patients with liver cirrhosis and esophageal varices presents no safety hazard. Nonetheless it should be noted that the individuals in this study had compensated cirrhosis and esophageal varices with low risk of bleeding.
LONELINESS AND COGNITIVE DECLINE: CHALLENGES OF AGING

Type of research: Clinics/Internal Medicine

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Mentor name: Dorea, E.L.

Department: Internal Medicine

Background/Introduction: In the present reality, there’s a projection about longevity rise, with a significant increase of the old people population. On the other hand, it doesn’t mean a life without diseases or incapacities.

Objectives: To analyze the association between social isolation and loneliness with cognitive decline and dementia. And evaluate the effect of interventions toward them and the possible positive impacts on quality of life and healthy aging.

Methods: This study is based in literature article review, available in Portuguese and English. The basis used were: PubMed, Lilacs, MEDLINE, The New England Journal of Medicine, JAMA. The key-words used: “Loneliness”; “Dementia”; “Aging”; “Cognitive Aging”; “Longevity”; in the years between 2011-2018 having the main object aging and Longevity, using the limit as Humans. 2.484 articles were found, but only those with direct correlation to the key-words and available online were selected. We selected, 147 articles using these criteria excluding those which didn’t show correlation to our description participating to the final review 38.

Beyond the articles, demographic Brazilian data of were part of the research obtained from DATASUS and Instituto Brasileiro de Geografia e Estatística (IBGE) searching. The key-words used: “Proporção de idosos na população”; “Esperança de vida ao nascer”; “Índice de envelhecimento”; “Expectativa de vida aos 60 anos de idade”.

Results: Brazilian life expectation follows world projection. In 2050 it is expected an inversion of the demographic pyramid when the number of people over 60 will surpass the number of children below 15.

Discussion/Conclusion: Dementia and cognitive decline have showed to be correlated to loneliness and it’s needed to avoid and prevent risk factors to that, so we can interfere positively in people’s life providing aging with quality and pleasure of leaving looking for reducing the occurrence of this diseases.

THE ASCORBATE PARADOX: PRO-OXIDANT AT HIGH DOSE?
Type of research: Clinics/Internal Medicine

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Mentor name: González, J.; Sánchez, G.; Rodrigo, R.

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Background/Introduction: Ascorbate is a well-known and potent antioxidant, requiring reduced glutathione (GSH) for its regeneration. Despite having proven effectiveness in animal models, its clinical usefulness remains controversial. A paradoxical effect associated with the use of intravenous ascorbate in high doses has been described, which could be explained by the consumption of GSH as a cofactor. Additional studies are necessary to validate this effect in clinical models.

Objectives: To determine the pro-oxidant effect of the use of high doses of ascorbate in patients with acute myocardial infarction (AMI).

Methods: A retrospective analysis of the multicentre, double-blind, placebo-controlled, randomized clinical trial PREVEC (ISRCTN56034553) was conducted. 105 patients with AMI were divided into two groups, who were administered placebo (n = 56) or ascorbate (n = 49) in high doses until achieving plasma levels of 10 mM. Thiol redox state and concentration of F2-isoprostanes in peripheral blood were analyzed at time 0, at 30 minutes and at 6-8 hours post infusion. For statistical analysis, Mann-Whitney U-test was used and a p value <0.05 was considered significant.

Results: The ascorbate treated group showed a significantly higher concentration of F2-isoprostanes and a significantly lower thiol redox state at 30 minutes (p<0.0001 and p = 0.0003, respectively) and 6-8 hours (p<0.0001 and p = 0.0007, respectively) compared with the placebo group.

Discussion/Conclusion: This study increases the evidence supporting the paradoxical pro-oxidant effect of the use of ascorbate in high concentrations. The differences found in the thiol redox state and the concentrations of F2-isoprostanes between both groups make it possible to propose the concomitant use of GSH donors as a clinical strategy to counteract the pro-oxidant effect derived from use of intravenous ascorbate at high doses.

ACTIVE PROCESS OF LEARNING AS A FACTOR-CHANGER OF MULTIPLE MYELOMA PERCEPTIONS FROM THE STUDENTS

Type of research: Clinics/Internal Medicine
BRAINCOMS 2018

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Presenter name: Santaella, F. J.

Mentor name: Hokama, N.

Department: Department of Clinical Medicine, Sao Paulo State University

Background/Introduction: Medicine today presents a limited perspective during the learning process, in which there is a tendency to see pathological processes only in a scientific view. For this reason, some medical schools try to include new approaches in order for students to have a deeper immersion in the study of diseases such as Cancer.

Objectives: Our main objective was to promote changes in students' view of disease and health problems through an active learning process, as well as to put into practice the concept of integral care for the patient during the transition between mostly theoretical classes and the clinical environment.

Methods: During the Oncology course of the 4th year of Medical University at Sao Paulo State University, the students were divided in 3 groups and each of the groups received a motivational clinical case, news story or interview as a basis for further study. The main idea was for us to answer a question related to Multiple Myeloma. We were introduced to the case of the former Dean of Sao Paulo State University through a narrative about his experience with this form of cancer. After dividing tasks among group members, we elaborated three questionnaires: for patients living with Multiple Myeloma, for relatives of these patients, and for those who have lost a family member to this cancer. The questionnaires were made available in pre-existing online groups devoted to Multiple Myeloma in a social network. The group also interviewed the health professionals who deal with cancer directly, in order to study the doctor-patient relationship and communication, as well as personal difficulties.

Results: Surprisingly, in 5 days, our group received 51 answers from patients and 54 from family members. The complete questionnaire contained more than 13 pages, with mostly open-ended questions. We were able to speak with the best specialists available in our regional public health system. We also did a research in the online platforms available of articles related to health quality and multiple myeloma.

Discussion/Conclusion: Multiple Myeloma is a not curable cancer, a fact which brings a lot of suffering not only to the patients and family members, but also to the health care team. During the first years of medical study, the student deals with the physiopathology and the epidemiologic factors of disease, without its human aspect. Through working with people whose lives have been changed by
this cancer, we were able to see how a good doctor-patient relationship is important for the pursuit of a better prognosis and a higher quality of life for patients, family and health care professionals. With this active process of learning and interactions between the students, we have achieved a new perception of the disease, allowing us to consider not only the biological process, but also the full interactions between its economic, social and personal aspects.

ENDOSCOPIC TREATMENT FOR VESICOURETERAL REFLUX IN A PATIENT SUBMITTED TO LIVING-DONOR KIDNEY TRANSPLANTATION

Type of research: Case Report/Internal Medicine

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Department: Urology

Background/Introduction: Vesicoureteral reflux (VUR) is defined as the retrograde flow of urine from the bladder towards the ureters. It has more common incidence in pediatric patients, specially the infant group. VUR can be classified as primary or secondary, according to the disorder’s source. Primary VUR corresponds to a congenital anomaly in which a malformation in the longitudinal muscle layer causes the valve mechanism to fail. The secondary form is due to an increase in intravesical pressure, usually having anatomical origin, such as the obstruction caused by posterior urethral valve.

Objectives: Patient D.M, woman, brown, 34 years old, was submitted to kidney transplantation from unrelated living donor, receiving the left kidney from her sister in law. The patient had ureteral reimplantation by Lich- Gregoir technique. In the immediate postoperative period, she presented satisfactory diuresis and oscillating blood levels of urea and creatinine. The patient evolved with successive hospitalizations motivated by the suspicion of urinary tract infection, with positive urine culture for Escherichia coli. The treatment was realized by means of antibiotic therapy with Rocefin and Meronem. The diagnostic hypothesis was VUR, compatible with the previous complaint.

Methods: The laboratorial follow up enabled the diagnosis after an urethrocystography, which identified the presence of vesicoureteral reflux grade III, that is defined, according to the International Reflux Study Group, by the retrograde flow of urine causing ureteral tortuosity and overpassing the renal pelvis, originating moderate dilatation of the pelvicalyceal system.
VUR treatment is still the subject of many discussions and leads to variations, according to the grading and associated comorbidities. The patient’s clinical management is based on the administration of prophylactic antibiotics, monitoring of renal function and evaluation of a possible spontaneous resolution of the vesicoureteral reflux, by periodic examinations. The surgical treatment is performed according to some indications, such as urinary tract infection in the presence of antibiotic therapy and high grade reflux (IV and V), being subdivided in: open surgery by conventional techniques, laparoscopic surgery and minimally invasive endoscopic technique.

Results: Due to the moderate severity of this case, the endoscopic treatment was indicated to the patient, a procedure which is minimally invasive and alternative to convencional surgery, consisting of the injection of a synthetic polymer in the bladder’s submucosal layer, under the ureteral orifice, through a cystoscope, which lifts and narrows the submucous ureter, establishing conditions for the setting up of a valve mechanism.

The procedure was performed by intravesical therapy with injection of Vantris®, a non-absorbable and synthetic hydrogel, with low antigenicity. The polymer was injected in the amount of 2mL in the right ureteral orifice, with good final appearance. Antibiotic prophylaxis with nitrofurantoin was prescribed, and the patient was discharged on the first day after the procedure, signaling a good prognosis.

Discussion/Conclusion: The endoscopic therapeutics presents good prognosis, with a cure rate of 75% after one injection and of 90% after two or three injections for mild to moderate grades. A study carried out in patients after kidney transplantation, submitted to the injection of a hyaluronic acid copolymer and dextranomer, with an average age of 20 years, occurred without any complications in all cases, with reflux correction rate of approximately 82%, presenting one VUR recurrence case, corrected after a second injection. In another study, performed with pyrolytic carbon injection for the treatment of reflux associated to urinary infection, there was regression of VUR grades, with patients initially on IV-III grades regressing to grade II.

The importance of the case report consists in divulging a little explored technique that, however, is presented as a good option in order to minimize the occurrence of infections in post-transplant patients, replacing the traditional methods characterized by a more invasive approach. It also enables the procedure’s reinforcement by subsequent applications if there is no resolution at first attempt, increasing the chances of cure.
Type of research: Clinics/Internal Medicine

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Presenter name: Giubergia, F.

Mentor name: González, J. , Sanchez, G. , Rodrigo, R.

Department: Molecular and Clinical Pharmacology Program, Institute of Biomedical Sciences, Faculty of Medicine, University of Chile, Santiago, Chile.

Background/Introduction: Acute kidney injury secondary to contrast agents (AKI-CA) has a multifactorial etiology, yet not completely understood, difficulting its prevention and treatment. The development of AKI-CA involves greater morbimortality and hospital stay. Oxidative Stress (OS) is a key underlying mechanism of AKI-CA, therefore, antioxidant therapy should be considered. A potent, safe, and cost-effective antioxidant, such as ascorbate, is a plausible agent to prevent AKI-CA.

Objectives: To evaluate the estimated glomerular filtration rate (eGFR) in patients with Acute Myocardial Infarction (AMI) undergoing coronary angioplasty treated with ascorbate.

Methods: A multicentric, randomized, double-blind and placebo-controlled clinical trial (PREVEC, ISRCTN registry: 56034553) was performed. Forty one patients with ST segment elevation AMI undergoing coronary angioplasty were enrolled. They were randomized in 2 groups: control group (n=22) and treated group (n=19). Ascorbate was administered to the treated group reaching plasma levels of 10 mM, meanwhile the control group received placebo (isosmotic sodium chloride). Plasma creatinine was measured at the time of hospitalization, 24, 72 hours and at discharge. eGFR was determined using the Modification of Diet in Renal Disease (MDRD) formula. Statistical analysis was performed with GraphPrism 6.0 and Mann-Whitney U-test, considering significance of p<0.05.

Results: Patients treated with Ascorbate had an average decrease in eGFR of 12,68 mL/min and the control patients 15 mL/min, 72 hours after hospitalization. There was no statistical differences between the groups when comparing the creatinine levels (p=0.9223), change in eGFR (p=0.9344) and the percentage of change in eGFR (p=0.8239).

Discussion/Conclusion: Therapy with ascorbate at high doses in patients with AMI undergoing coronarography has no effect on kidney function when compared to placebo. It would be wise to recreate this study with more patients, in a bigger clinical trial. Also, these results can be explained by the suboptimal accuracy of creatinine values to determine kidney function in Acute Kidney Injury context.
CLINICAL EFFECTS OF INTRAVENOUS ASCORBATE IN ANGIOGRAPHIC REPERFUSION POST-ACUTE MYOCARDIAL INFARCTION: STRILINGTHE NO-REFLOW PHENOMENON

Type of research: Clinics/Internal Medicine

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Background/Introduction: Acute myocardial infarction (AMI) is the first cause of morbimortality globally. The gold standard treatment is percutaneous coronary angioplasty (PTCA), but reperfusion has been linked to oxidative stress (OS) damage. Insufficient perfusion restoration -i.e. no-reflow phenomenon (NRP)- has been linked to myocardial dysfunction. NRP can be measured with TIMI (thrombolysis in myocardial infarction) myocardial perfusion grade (TMPG), and could be mitigated with antioxidants like ascorbate.

Objectives: Determine the effect of ascorbate administered intravenously before myocardial reperfusion on the occurrence of NRP -measured with TMPG- in patients with AMI undergoing PTCA.

Methods: Randomized, multicenter, double blind and placebo-controlled clinical trial (PREVEC, ISRCTN registry: 56034553) was performed. From a total of 123 patients suffering from ST-segment elevation AMI, 105 were analyzed, divided into placebo group (n=56) and treated group (n=49). The treated group received ascorbate intravenously until plasmatic levels reached 10 nM previous to PTCA. Two observers blind to clinical information estimated the incidence of NRP with TMPG. t-Student was used (GraphPad Prism) and significance was considered with p<0.05.

Results: The treated group showed a significantly higher proportion of patients with an optimus TMPG (scores 0 to 1) compared to placebo group (p<0.02).

Discussion/Conclusion: TMPG is a validated marker for myocardial microvascular perfusion status after PTCA is performed, with a known positive correlation with mortality and shorter hospital stay, among others, supported by previous studies. Ascorbate, as a potent antioxidant agent, is capable of diminishing the ischemia-reperfusion damage, achieving greater TMPG scores when administered intravenously in high doses. Hence, this drug positionates as a therapeutic drug capable of reducing the mortality and morbidity associated with AMI, as systolic and diastolic dysfunction, and the associated economical
and political burden. Moreover, ascorbate also has a great safety profile, it is accessible and has low cost, making it very cost-effective. Therefore, the role of vitamin C in AMI should not be disregarded and should be considered in future clinical trials to generate further and greater evidence supporting its beneficial role.

VOGT-KOYANAGI-HARADA DISEASE: A RARE CASE REPORT

Type of research: Clinics/Internal Medicine

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Presenter name: Salva, K.K.

Mentor name: VARGINHA, N.M.A.S.

Department: UniFoa

Background/Introduction: Vogt-Koyanagi-Harada disease, also reported as a syndrome, is a rare disease of unknown and multisystemic etiology, characterized by bilateral panuveitis associated with other clinical manifestations related to central nervous system, inner ear and skin involvement. It has a higher incidence in women and in even rarer cases it affects the male sex.

Objectives: The aim of the study is to report a case of Vogt-Koyanagi-Harada Disease in a patient without family history of the disease and no other comorbidities.

Methods: A 36-year-old male patient with a history of visual acuity loss of the left eye three years ago on treatment with Meticorten, Sulfadiazine and Indocid without improvement of visual acuity in the right eye one month ago.

Results: He was referred to the Retinologist for retinal mapping, which showed underside exudative retinal detachment in both eyes with subretinal fibrosis in a bilateral just-macular region associated with slight pallor in the optic nerve. Hypothesis of Vogt Koyanagi Harada Disease was formulated. Clinical treatment with Meticorten was started and the patient returned in thirty days with worsening of the area of underside retinal detachment in both eyes. Pulse therapy with methylprednisolone was initiated, without improvement of visual acuity, new oral corticosteroid therapy with Meticorten.

Discussion/Conclusion: It was initiated and the requested return in two weeks, which presented unfavorable evolution to the medication, with an increase of the affected area; a new battery of exams was performed, all of which were normal, except for hyperproteinemia and CSF leukocytosis, which reinforced the
diagnosis of Vogt Koyanagi Harada Disease, with an unfavorable outcome of irreversible bilateral visual loss.

ERSPECTIVES FOR MESENCHYMAL STEM CELL THERAPY IN AMYOTROPHIC LATERAL SCLEROSIS: A SYSTEMATIC REVIEW

Type of research: Clinics/Internal Medicine

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Background/Introduction: Amyotrophic lateral sclerosis (ALS) is a lethal neurodegenerative disorder characterized by the loss of both upper and lower motor neurons. Sporadic and familial forms are clinically and pathologically indistinguishable and, in almost all cases, death occurs within 3–5 years of diagnosis when progressive motor neuron degeneration leads to respiratory failure. Few treatments are effective in extending patient survival in a few months, which highlights the need for new alternatives to treat ALS.

Objectives: The objective of the present paper is to conduct a systematic literature review to assess the efficacy and address perspectives of mesenchymal stem cell (MSC) therapy in patients with ALS. It aims to juxtapose the progress achieved with the improvement of survival in preclinical trials of stem cell-based therapies with the potential neuroprotective properties of therapy with one of its specific types (MSCs) in order to guide future research in the treatment of neurodegenerative diseases.

Methods: This systematic literature review was conducted in the following academic databases: PUBMED (National Library of Medicine and National Health Institute) and Web of Science. The first step was to define and insert specific Medical Subject Headings (MeSH) and Health Science Descriptors (HScDe) into the search field. Initially, “Amyotrophic Lateral Sclerosis” AND “stem cell” were used. “Amyotrophic Lateral Sclerosis” AND “mesenchymal stem cell” were after applied to provide basis for comparative analysis. Two authors independently evaluated the titles and abstracts of all studies identified in the search of the aforementioned databases. A total of 147 articles were obtained from the first input and 17 from the second. The following outcomes were assessed: comparison between different treatments; analysis of mean survival...
and absolute days of survival; mean duration of the disease until the start of the intervention; incidence of reactions and adverse effects of proposed treatments.

**Results:** Only 10.4% of all 164 results referred to MSCs applications despite the fact that their plasticity and ability to provide the host tissue with growth factors or modulate the host immune system were key factors in improving ALS treatment. No review studies of MSC approach in ALS were found. Also, results showed that no structural changes of the parenchyma, tumor formation or development of syringomyelia were detected either in the short or the long term after MSC treatment. In addition, transplanted human bone marrow mesenchymal stem cells (hMSCs) into the lumbar spinal cord outperformed for ALS cell therapy: they survived and migrated after transplantation in the lumbar spinal cord, where prevented astrogliosis and microglial activation and delayed ALS-related decrease in the number of motoneurons, thus improving motor performance. However, more prospective and controlled studies are needed to establish the effectiveness of clinical applications in improving survival.

**Discussion/Conclusion:** The results support stem cell therapy as a promising tool in the treatment of neurodegenerative diseases. Also, they suggest that the intraspinal transplantation is the most efficient way of delivering MSCs, which can be collected from the patient itself. MSC therapy could be exploited by inserting genes coding for specific neurotrophic factors or immunomodulatory molecules. The low level of proliferation represents an advantage on other stem cells applications, since the formation of teratomas are not observed. It its evident that protocols developed to date to administer MSCs to ALS patients require adjustments such as optimal timing for treatment, adjustment of cell dose, single or various infusions and cell delivery modality. In this subject, experimenting intravenous delivery, eventually after engineering MSCs with neural adhesion genes to exploit their extravasation and intraparenchimal migration into the nervous system, could allow a less invasive approach.

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**EFFECT OF ASCORBATE INFUSION ON VENTRICULAR FUNCTION IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION WHO UNDERWENT PERCUTANEOUS CORONARY ANGIOPLASTY**

**Type of research:** Clinics/Internal Medicine

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**Presenter name:** Gothe, M.J - Universidad de Chile

**Mentor name:** Rodrigo, R.

**Department:** Molecular and Clinical Pharmacology Program - Universidad de Chile
Background/Introduction: Acute Myocardial Infarction (AMI) is the leading cause of morbidity and mortality worldwide. Post-AMI ventricular function is an important predictor of associated complications. An ejection fraction (EF) of less than 50% is associated with higher rates of post-AMI complications.

Objectives: To evaluate if the infusion of ascorbate in AMI patients treated with percutaneous coronary angioplasty (PCA) is associated with improved ventricular function indexes.

Methods: A retrospective analysis of the multicentric double-blind, placebo controlled, randomized PREVEC clinical trial was conducted (ISRCTN56034553), in which an intravenous solution of ascorbate was administrated to AMI patients with ST segment elevation undergoing PCA, reaching plasmatic concentrations of 10 mM before myocardial reperfusion. This was realized in three different centers: University of Chile Clinical Hospital, San Borja Arriaran Clinical Hospital and San Juan de Dios hospital. Patients who completed follow up with magnetic resonance imaging 7-15 days (n=67) and 2-3 months (n=39) after AMI were analyzed. EF and infarct size were determined by cardiac magnetic resonance imaging (MRI) 7-15 days and 2 to 3 months post-AMI.

Results: 67 and 39 patients were analyzed (37 placebo, 30 ascorbate; 21 placebo and 18 ascorbate, respectively). Ascorbate administration was associated to a significant increase of the EF between MRI1 and MRI2, and also with a significantly higher number of patients with a preserved EF (more than 50%) at 2-3 months, compared with the placebo group.

Discussion/Conclusion: Antioxidants such as ascorbate could have an important protective role in post-AMI myocardial remodeling.

EPILEPSY

Type of research: Clinics/Internal Medicine

Author name: Nahum, N.C.B.

All co-authors names: Ruck, B.

Presenter name: Nahum, N.C.B. , Ruck, B.

Mentor name: Zetehaku, A.C.

Department: Neurology

Background/Introduction: Epilepsy may be characterized as a brain disorder with predisposition to generate persistent epileptic seizures and neurologic, cognitive and social consequences of disease. It can have as etiology many serious disorders, such as infections, tumors, structural, metabolic diseases and
Objectives: Epilepsy may be characterized as a brain disorder with predisposition to generate persistent epileptic seizures and neurologic, cognitive and social consequences of disease. It can have as etiology many serious disorders, such as infections, tumors, structural, metabolic diseases and other causes. The efficacy of treatment includes the drug, tolerability, patient characteristics and drug interactions. In addition, the patient should be advised about the disease, and the change in life habits.

Methods: The objective of this study is to perform a revises the bibliographic is to characterize epilepsy, which is a brain disorder with persistent predisposition to generate epileptic crises with cognitive, neurologic and social consequences, which is a frequent problems in emergency services.

Results: Epilepsy can be characterized as a cerebral disorder with persistent predisposition to generate epileptic seizures and with neurological, cognitive and social consequences of the disease. An epileptic seizure is the transient occurrence of signs and/or symptoms due to abnormal neuronal activity. It is characterized by sudden and transient alteration of behavior and/or motor and/or sensibility, and/or ANS, with or without altering the level of consciousness. Seizures can be classified as generalized and focal seizures. Generalized seizures start at some point in the CNS and rapidly involve and distribute bilaterally. They present impairment of the level of consciousness. Focal crises originate limited to one hemisphere. They may be discreet or fairly localized. Can be classified as having no motor or autonomic symptoms, or with attention deficit. The International League Against Epilepsy recently created a new classification by several factors. It is believed that some terms used in the old classification are not easy to understand, and it may be difficult for non-medical people to distinguish whether there is loss of consciousness during the crisis.

Discussion/Conclusion: In epilepsy related to genetic causes, with predisposition to abnormal neuronal activity, it is believed that there are mutations in the genes responsible for the decoding of ion channel proteins, mainly voltage-dependent sodium channels, allowing an increase of sodium current, with consequent depolarization and neuronal hyperexcitability. It can originate in virtually all serious diseases and disorders, such as infections, tumors, vascular, degenerative, congenital, structural and metabolic diseases. The main metabolic etiologies are electrolytic disturbances, changes in glycemia, hypoxemia, acute intoxications, or alcohol. They can also be caused by structural injuries such as subdural and epidural hematoma, subarachnoid hemorrhage, intraparenchymal hemorrhage, venous sinus thrombosis and neoplasia. Regarding the long-term treatment of epilepsy, the efficacy of the drug, tolerability, patient characteristics and drug interactions should be evaluated. In addition to medication treatment,
the patient should be advised about the disease, and about the possible change in life habits.

PROBIOTICS IN CROHN’S DISEASE: THE INFLUENCE OF INTESTINAL MICROBIOTA ON INFLAMMATORY BOWEL DISEASE

Type of research: Clinics/Internal Medicine

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All co-authors names: LIMA, M. F.

Presenter name: Paola Romani Nardi Ferreira

Mentor name: ASSIS, F. B.

Department: Gastroenterology

Background/Introduction: Crohn’s disease is a chronic inflammatory disease of the mucosa that extends through all layers of the intestinal wall, and can affect any part of the digestive tract, affecting it in a segmental and asymmetric way. Evidence has shown that the imbalance in the composition of the intestinal microbiota may be related to the onset of inflammatory bowel diseases such as Crohn’s disease, and for this reason an additional treatment for this disease has been proposed: probiotics.

Objectives: The objectives of this review are to present the role of probiotics in nutritional therapy in Crohn’s disease, relating the properties of these agents to the inflammatory condition of the disease and exposing the positive or negative results of the most current studies on treatment. In addition, we also aim to encourage discussion about this new therapeutic possibility.

Methods: Based on the selection and delimitation of a topic of current relevance, research was carried out in national and international databases (PUBMED, SCIELO, among others), selecting articles from case reports, clinical trials and bibliographic reviews on the proposed topic, with priority in recent articles (2016 onwards). After reading the articles, the most pertinent ones to the delimited topic were selected for better study and deepening on the subject in question. In view of this, a better understanding of the relationship between microbiota and Crohn’s Disease, as well as the new studies of the probiotic treatment, was possible. The bibliographic review was elaborated from the collected data.

Results: According to the articles studied, although probiotics have proven beneficial effects, there is still little evidence to support the efficacy of these agents in the treatment of Crohn's Disease. The main probiotics studied were Lactobacillus rhamnosus GG and Lactobacillus johnsonii, which did not clearly demonstrate many benefits, and Saccharomyces boulardii, which in some studies showed important benefits compared to the control group. As for the
activity of probiotics, the studies demonstrate: suppression of inflammation through the activation of innate immunity, production of short chain fatty acids, control of acute diarrhea and improvement of intestinal symptoms, improving the clinical activity of the disease and increasing its time of remission.

Discussion/Conclusion: Although studies show that there are benefits, as shown above, some still show that there were no differences between the control group and the use of probiotics. However, it is important to note that studies with small samples may compromise the results, making interpretation difficult and questionable. With all that has been presented, it is concluded that although there is still no consensus on the recommendation of probiotics, it is clear that they may play an important role in the treatment of inflammatory bowel diseases, including Crohn's disease, as adjuvant to conventional therapy, especially in patients who do not respond to this therapy or those who are intolerant to it. This demonstrates the importance of continuing to invest in more high quality studies focused on a greater diversity of probiotics as well as in their varied combinations.

XANTHOGRAVLUMATOUS PYELONEPHRITIS: A CASE REPORT

Type of research: Case Report

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Presenter name: Oliva R.S. - Medical Student at UNIGRANRIO

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Department: Assistant Professor at UNIGRANRIO

Background/Introduction: Xanthogranulomatous pyelonephritis is a rare complication result of chronic urinary infection due to an abnormal host response due to bacterial infection. The coralliform calculus occupying a generous part of the renal pelvis, diminished or absent unilateral renal function and renal diffuse increase characterize the classic triad.

The process is typically unilateral and can be focal, segmental or diffuse. It is capable of mimicking other inflammatory processes or neoplasms such as renal cell carcinoma, renal tuberculosis, renal or perinephric abscess and lithiasis. In most cases, the diagnosis is obtained by the macroscopic or histopathological examination of the surgical specimen.

Objectives: Provide knowledge concerning this disease to the general practitioner, to discuss the diagnostic difficulties and medical conduct used in the case.
Methods: The study is a case report from a Souza Aguiar Hospital’s patient. All the data were taken from the medical records of the patient who formally agreed to share the medical information in this case report.

Results: R.L.J.O., 39 years old, presents lower back pain started 12 hours ago, which worsened during urination and changes in decubitus. Also, she had fever with chills, anorexia, vomiting, strangury and hematuria. On physical examination, globose abdomen, diffusely painful to palpation and presence of movable mass of decubitus to percussion. CT evidences significant volume increase of the left kidney, showing an obstructive calculus of approximately 6cm. Total left transperitoneal nephrectomy was performed by subcostal incision, total splenectomy due to refractory splenic hemorrhage caused during lysis of adhesions for resection of the affected kidney and hemicolecction to Hartmann due to the follow-up of the left colon ischemia, with extravasation of feces in the abdominal cavity. Transferred to ICU, being maintained in MV and noradrenaline 16ml / H. He was discharged on the 26th day.

Discussion/Conclusion: The patient presented a severe and typical clinical picture of XGP whose suspicion was corroborated by CT and confirmed by the histopathological of the specimen.

Surgical approach was chosen with total nephrectomy and other repairs due to lesions secondary to the disease. The outcome was favorable and the patient was discharged without major sequelae. Although a rare, it has been described numerous times in the literature. XGP is a disease with potential lethality. Early diagnosis and treatment are essentials for good clinical outcome. Even after the advent of imaging, the differentiation of other diseases that PXG is capable of mimicking is still complex.
treatments for the cure of laryngeal cancer is the total withdrawal of the larynx, called a laryngectomy.

In some cases, the impact of disease can be devastating to the patient, with impaired speech and swallowing. In these cases, the patient will have to develop a sound source other than the vocal folds. The option is the vibration of the pharyngo-esophageal segment (PES), which becomes the new sound source for these patients. Excessive pressure in the PES or exaggerated reduction of this same pressure can make this process difficult. The absolute majority of these patients are submitted to radiotherapy as an associated treatment, which does not help the vibration of the PES.

High Resolution Manometry (HRM) is a recent equipment that allows the measurement of the PES pressure and the entire esophagus, allowing a better understanding of what occurs in the post laryngectomy region and its impact on phonation.

**Objectives:** This study aimed to measure PES pressure at rest and during phonation in total laryngectomy.

**Methods:** Four patients submitted to total laryngectomy, and classified as good esophageal speakers, according to the Wepman Scale, were evaluated according to type, production level and speech ability. All patients underwent HRM at rest and during phonation, which allowed measurement of pressure in the pharyngo-esophageal region of these patients. After this process, a descriptive analysis of the results was performed.

**Results:** The mean baseline upper esophageal sphincter (UES) pressure at rest was altered in all patients. We verified that all four patients presented low UES pressure at rest. The pressure ranged from 7.2 mmHg - Wepman IV to 13.5 mmHg - Wepman II, indicating a decrease in UES tonus.

During phonation of the sustained vowel "a", the UES pressure ranged from 9.7 to 20 mmHg; during phonation of "1 to 5", UES pressure ranged from 9.8 to 21 mmHg and during phonation of "pa ta ka", UES pressure ranged from 9.5 to 14.8 mmHg, patients.

**Discussion/Conclusion:** After total laryngectomy, the fibers of the cricopharyngeal muscle are approximated due to suture, altering the size and length of the UES, which may explain the occurrence of changes in this region. The involvement of the UES function can also occur as a result of the section of the vagal branches, reducing the cricopharyngeal muscle tone and causing uncoordinated contractions of the constrictor muscle.

It is important that the PES presents sufficient resistance to the passage of air to generate sound. However, this resistance can not be so great that it generates excessively tense sound or prevents it from being produced. It is seen in the
literature that the occurrence of spasms and differences in tone in PES is common in patients submitted to total laryngectomy.

This study has several limitations which will be the focus of future investigations. The implications of a better understanding of the physiology of phonation in total laryngectomized patients are vast. The use of the HRM, for the measurement of pressure in the PES, can give us this understanding and provide better data for therapeutic and surgical intervention. With this, unnecessary procedures can be avoided and therapeutic behaviors with better prognoses can be selected.

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**CHALLENGES ASSOCIATED TO RESPIRATORY CAPACITY ON AMYOTROPHIC LATERAL SCLEROSIS: CASE REPORT**

**Type of research:** Clinics/Internal Medicine

**Author name:** Bosse, T.S.


**Presenter name:** Bosse, T.S.

**Mentor name:** Souza, L.K.M.

**Department:** Neurology

**Background/Introduction:** Amyotrophic Lateral Sclerosis (ALS) is a neurodegenerative progressive and disease that affects the motor neurons in the spinal cord, brain stem and motor cortex. ALS is a rapidly evolving pathology that faces difficulties in early diagnosis. It also presents systemic complications, which makes it dependent on a multidisciplinary attention. Muscle atrophy, fasciculation and bulbar palsy confer a complicated prognosis to ALS, which presents a survival rate of three years after the diagnosis.

**Objectives:** In 2009, T.F.S., 29 y.o, female, reported an arthralgia on the right shoulder, followed by a paresthesia in the fifth finger on the right hand, and cramps in the lower right limb. At the beginning of 2011, the patient presented muscle fasciculation and complained of paresthesia in the first and second fingers in the previously affected hand. Laboratory tests were performed in order to analyze diagnostic hypotheses such as HIV infection, Vitamin B12 deficiency and thyroid diseases.

**Methods:** There was no confirmation of any of the aforesaid suspicions. Therefore, the hypothesis of a neuropathy was listed and, to confirm it, an Electroneuromyography (ENMG) was requested. The ENMG confirmed the ALS. After the diagnosis, the patient presented a significant loss of muscle strength, reporting difficulty in respiratory capacity as a consequence of diaphragmatic paresis. A multidisciplinary team – composed of physicians, speech therapists
and physiotherapists – chose a therapeutic approach that associates the drug treatment (Riluzole) with non-invasive mechanical ventilation and respiratory muscle training, in order to strengthen it. The respiratory capacity is periodically tested by spirometry. The patient was submitted to two autologous stem cell transplants, which allowed a substantial improvement in speech and muscle strength. However, this improvement lasted only six months.

Results: The respiratory failure resulted in a marked decrease in Forced Vital Capacity (FVC) and Forced Expiratory Volume in the First Second (FEV1). It was observed that the performance of respiratory therapy, alone, no longer had the same efficacy. Therefore, the multidisciplinary team evaluated that the patient would need a Diaphragm Pacing System (DPS) and, in 2011, a surgery was performed to implant it. The association of DPS with the constant work of physiotherapists and speech therapists remained efficacious for 4 years. However, in 2017, the nocturnal use of BIPAP / Non-invasive Positive Pressure Ventilation (NIPPV), at progressively higher levels, has become essential as palliative care to seek an improvement in her quality of life. Nowadays, besides the respiratory failure, the patient presents a loss of the hand movements, associated with the progression of muscular atrophy – with complaints of "weak neck and torso" – and of a definitive gastrostomy.

Discussion/Conclusion: This case report points out the respiratory complications of a young female patient with ALS, where her restrictive breathing directly affected FVC and FEV1. Aiming an improvement in the quality of life, palliative care should also be considered, since ALS is a chronic disease, which has no prospect of cure. The mean survival time of patients with ALS is 30–37 months after the onset of symptoms, which is lower from the case reported. Contrary to the literature, the patient did not required an emergency intubation; however, she did implant a DPS, when she needed mechanical ventilation due to a chronic respiratory insufficiency. Knowing this data is important to aid in early diagnosis as well as help in the search for new treatments for ALS. Meanwhile, this disease remains a major health challenge worldwide.

NEUROFIBROMATOSIS TYPE 1: THE ASSOCIATION BETWEEN SHORT STATURE AND MACROCEPHALY WITH THE DIAGNOSIS

Type of research: Clinics/Internal Medicine

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Presenter name: Ribeiro, T. T. - Unigranrio

Mentor name: Ribeiro, N. R.
Department: Hospital Cardoso Fontes

Background/Introduction: Neurofibromatosis type 1 (NF-1) is an autosomal dominant genetic disorder with a worldwide incidence of approximately 1 per 2500 to 3000 individuals, caused by a mutation in the NF1 gene on chromosome 17. The diagnosis includes two of the following characteristics: coffee-with-milk spots, ephelides, Lisch's nodules, neurofibromas, optic glioma, bone alterations and family history of neurofibromatosis. Other disorders are typically accompanied by learning difficulties, in addition to short stature and macrocephaly, all these without precise pathophysiology.

Objectives: S.S.F, 5 years old, female, from Duque de Caxias - Rio de Janeiro, was referred by pediatric endocrinology to the genetics department of Unigranrio University, for investigation of short stature. Patient with previous diagnosis of hypothyroidism one year ago, on treatment with levothyroxine, with normalization of the serum levels of the thyroid hormones. Other laboratory tests without changes. For general inspection, eight coffee-with-milk spots on the back and abdomen, greater than 5 mm, in addition to axillary ephelides. Family history of neurofibromatosis type 1 (mother).

Methods: To the clinical examination, patient presenting the following criteria for neurofibromatosis: eight coffee-with-milk spots, axillary ephelides and a family history, concluding its diagnosis. Other disorders commonly associated are short stature and macrocephaly, characteristics found in the patient, one of them being the reason for the medical appointment. There are no specific therapeutic measures for neurofibromatosis, being recommended the clinical follow-up for prevention and early detection of complications.

Results: The patient returned two months after, with results of the requested tests (abdominal ultrasonography and skull tomography) without changes and the ophthalmological evaluation within normality, thus discarding tumors, bone lesions, optic glioma and lisch nodules, characteristics of the disease. In addition, the patient was still under periodic monitoring by endocrinology for the treatment of hypothyroidism, thus following with a multidisciplinary support. Stands out the result of a normal karyotype (46, XX), discarding Turner Syndrome, a frequent cause of short stature in girls. Thus, through the correct treatment of hypothyroidism and excluding other endocrine-metabolic disorders or genetic syndromes, it can be concluded that the short stature of the patient is a condition associated with neurofibromatosis. This association is often described in the medical literature, although its pathophysiology has not yet been well understood, as well as macrocephaly, a correlated characteristic also found in the patient.

Discussion/Conclusion: Neurofibromatosis type 1 is a hereditary disease that involves primarily the skin and nervous system. Some manifestations may be noted at birth, but most appear during childhood and youth, being very important the early diagnosis, to minimize the risk of potentially complications. The cases
resulting from vertical transmission (when one of the parents is also affected by NF-1) can be identified during the first year of life, since the diagnosis requires only one additional characteristic besides the positive family history. Therefore, a significant delay in the diagnosis of the patient was concluded, since she already had a family history, as well as important characteristics of the disease, such as coffee-with-milk spots and ephelides, determining an essentially clinical and simple diagnosis. It’s important to emphasize the other two commonly characteristics found in pediatric patients related to neurofibromatosis: short stature and macrocephaly, all those reported by the patient, which were key points for the diagnosis, since it prompted a more focused clinical evaluation and established an association between the diagnostic criteria of the disease.

PYOGENIC GRANULOMA: A BENIGN TUMOR WITH MULTIPLE DIFFERENTIAL DIAGNOSIS

Type of research: Clinics/Internal Medicine

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Presenter name: Mallmann, T.Y.

Mentor name: Jalkh, A. P. - Fundação de Medicina Tropical Doutor Heitor Vieira Dourado (FMT-HVD)

Department: Clínica médica

Background/Introduction: Pyogenic granuloma is a vegetative, sessile or pedunculated lesion, moist, friable surface that causes repetitive bleeding. It appears in areas of anterior trauma and it consists of quick proliferation of small vessels in loose and edematous stroma, intense mixed inflammatory infiltrate. It is usually unique, small, located preferably at extremities related to nail making trauma. Important differential diagnosis are melanoma, Kaposis sarcoma and other neoplasms such as espine cells carcinoma.

Objectives: A 48 years old female patient was refered to the hospital Fundação de Medicina Tropical Doutor Heitor Vieira Dourado (FMT-HVD) due to a small lesion in the right fourth pododactile. The lesion appeared after a blunt trauma and evolved rapidly. The patient also claimed continuos bleenging in the lesion. The treatment was exeresis and the removed tissue was sent to histopathological analysis.

Methods: On clinical examination, it was observed a white and blood red color exophytic lesion with about one centimeter in diameter in the right fourth pododactile suggesting pyogenic granuloma as first and principal hypothesis and
escamous cells carcinoma as second hypothesis. The possibility of amelanotic melanoma was also considered. It was schedule a surgery to the excision of the lesion with histopathological analysis to put away the possibility of malignant lesion and it was prescribed analgesics to the period before the procedure.

**Results:** The removed tissue was sent to histopathological analysis. On macroscopy, it was described an irregular piece of tissue, white, with granulous external surface and measuring 1.5 x 1.0 x 1.0. On microscopy, it was observed an ulcerated skin covered by a crust along with paraceratosis and irregular acanthosis. In the subjacent dermis there was granulation tissue, inflammatory infiltrate cells, sclerosis and edema. After histopathological analysis the results suggest the pyogenic granuloma with a second possibility for a cherry angioma.

**Discussion/Conclusion:** In the patient's story, she didn't claim the use of medications such as contraceptives or retinoids and there were no evidences of pregnancy, signs frequently associated with this angioma, on the other hand, the histopathological analysis showed inflammatory infiltrate cells and edema. Moreover, the rapidly growth to more than one centimeter and the clinical manifestations, as the location near the edge of the nail, points to a definitive diagnosis: Pyogenic granuloma, otherwise known Capillary angioma. The surgical treatment of the pyogenic granuloma is only a complete exeresis of the lesion, which would be different if it was a malignant tumor. Therefore, it is essential to send the removed tissue to the histopathological analysis to confirm the diagnosis because the clinical examination does not delete the chance to be a malignant tumor. Only the microscopy analysis can confirm the absence of neoplastic cells such as amelanotic escinen cells carcinoma and melanoma.
THE FIRST THOUSAND DAYS: THE ROLE OF THE PEDIATRICIAN IN THE SUPPORT FOR CHILDHOOD DEVELOPMENT AND ADULT HEALTH

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Mentor name: LESSA, D. R.

Background: The first thousand days go from conception to the end of the second year of life. It is an important period for interventions that ensure nutrition and development, which will bring benefits throughout the life cycle. Emphasizing this concept, the pediatrician, along with other professionals, can act in the promotion of actions that may increase the chances of a healthy and productive life in the future and even strengthen family ties and communities.

Objectives: The objectives of this review include presenting the new concept of the first 1000 days and discussing relevant and necessary actions to be taken from conception to the end of the child's 2nd year of life. With this, we aim to expose the importance of the performance of the pediatrician in front of this period that have a big influence in the development of the child.

Methods: Based on the selection and delimitation of a topic of current relevance, research was carried out in national and international databases (PUBMED, SCIELO, among others), selecting articles from case reports, clinical trials and bibliographic reviews on the proposed topic, with priority in recent articles (2016 onwards). After reading the articles, the most pertinent ones to the delimited topic were selected for better study and deepening on the subject in question.

Results: Using the research and scientific evidence that we have studied we have identified a set of actions for good nutrition in the first 1,000 days: a nutritious diet for mothers during pregnancy; good care for all mothers during pregnancy; exclusive breastfeeding for the first 6 months; the right foods introduced to babies at the right times, water and other healthy beverages with no added sugars for toddlers, consistent access to enough nutritious food for families of young children; nurturing, responsive care and feeding of babies and toddlers; a healthy and nutritious diet for babies and toddlers; the right knowledge and skills for parents and caregivers to properly nourish young children; and societal investments in the wellbeing of every baby and toddler. All of these actions will determine the child's proper development, mental health and health during adult life.

Discussion/Conclusion: Maternal and child nutrition in the first 2 years of life (1000 days) are crucial factors in children's development and mental health. Obesity, heart disease and psychological problems are health risks to children, and can be determined by nutritional status during this period. Children should
receive adequate nutrition through prenatal nutrition, exclusive breastfeeding in the first six months, addition of indicated complementary foods and continued breastfeeding up to two years. Children who go through toxic stress, emotional deprivation, infections and recurrent inflammations have impaired brain development and a poor diet can worsen this. It is vital that they have a supportive environment for a healthy and full development. The pediatrician has a fundamental role in the 1000 days, both in the education of those responsible for the child and in the implementation of curative, preventive and health promoting interventions through their professional practice.

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**RASMUSSEN ENCEPHALITIS**

**Author name:** Oliveira G.B.

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**Mentor name:** Santos S.A.

**Background:** Rasmussen encephalitis, also known as Rasmussen syndrome, is a rare and severe brain disorder associated with unilateral hemispheric atrophy, manifesting partial drug-resistant seizures and progressive neurological and cognitive impairment.

**Objectives:** This study aims to report the case of Rasmussen encephalitis, a disease of rare prevalence and arduous diagnosis.

**Methods:** The study is a case report from a Pedro Ernesto Hospital’s patient. The case report was prepared through a medical consultation (anamnesis and physical examination). Concomitantly, a review of the medical record was carried out, aiming at the analysis of the results of the complementary exams of the patient who formally agreed to share the medical information in this case report.

**Results:** E.T.S.S, 13 years of age, previously healthy, with no relevant personal or family history, had the first convulsive tonic-clonic generalized seizure at the age of 6 years old. The crises became frequent and, a year later, reached the right leg, in the form of myoclonias, with post-critical paresis, at a frequency of 3-4 times a day. It was accompanied by dysarthria, deviation from the labial commissure to the right side without loss of consciousness. In this context, he performed the first MRI, which revealed atrophy in the left frontal region and an EEG, which revealed base slowing and left frontotemporal focus. He started antiepileptic therapy with Valproate Sodium, but evolved with thrombocytopenia and worsening of seizures occurring at a frequency of 5-6 per day. In this way, Oxycarbamazepine was chosen, without success in the control of the crises.
The patient evolved with right hemiparesis, recurrent pneumonia and pulmonary sepsis until he was able to perform the left functional hemispherectomy in 2013 at the IHC in Ribeirão Preto.

**Discussion/ Conclusion:** Patients with Rasmussen's encephalitis tend to develop severe neurological deficit, often including epileptic encephalopathy with severe cognitive impairment and hemiparesis. As it is a disease with catastrophic evolution, a decisive intervention, such as the functional hemispherotomy is indicated, especially in those of pediatric age. That is the best therapeutic option, especially when used as early as possible in the course of the disease, in order to minimize deterioration neurological. It is a useful method for controlling seizures in patients with Rasmussen encephalitis, and when performed early, may offer great results. In our patient the early surgery intervention had positive repercussions on his quality of life and cognitive-intellectual function. Currently, the patient has improved dysarthria, has normal reading, and cessation of epileptic seizures.

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**ATYPICAL GENITALIA: CASE REPORT IN A UNIVERSITY HOSPITAL IN THE SOUTH OF THE COUNTRY**

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**All co-authors names:** Eduarda Mascarenhas Mardini, Francielle Laise Schmidt, Leticia Paludo, Luiza Esteves Petzhold, Rafael Brunstein Genovese

**Mentor name:** Maria Teresa Vieira Sanseverino

**Background:** Ambiguous genitalia is an important example of altered sexual development, in which the external genitalia does not have the typical appearance of either sex. This paper aims to report the case of a neonate in which the evidence of ambiguous genitalia was found through an evaluation by the ECLAMC (Latin American Collaborative Study of Congenital Malformations) at the São Lucas Hospital of PUCRS.

**Objectives:** Newborn with general female appearance, spontaneous labor, cephalic, gestational age of 40 weeks. Weight 3580g and length 48.5 cm - suitable for gestational age. Apgar 9/10 and cephalic perimeter of 33.5cm. Genitalia with ambiguous semblance, hyperpigmented, normal texture, absence of hairs, 2cm phallus, normal urinary meatus, 2cm vaginal orifice present, 2cm anogenital distance, open large lips with edema and hyperemia; absence of palpable gonads.
Methods: Physical examination: bilaterally nonpalpable testicles, microphallus, scrotal or perineal hypospadias, clitoromegaly, posterior labial fusion (anogenital ratio >0.5), gonads palpable in the labioscrotal folds and hypospadias and unilateral non palpable gonad. Further tests: pelvic ultrasonography, evaluation of adrenal and gonadal functions and karyotype test (including a probe for SRY); Management depends on type and degree of atypia. Hormonal treatment is used for (except for CAH cases): pubertal induction in hypogonadism and hormone replacement therapy.

Results: Neonate hospitalized for 3 days (04/10/2018 to 04/13/2018). Consultancy for pediatrics as ambiguous genitalia and referral to the service of endocrinology. Cavernous body not palpable. Pelvic ultrasound: presence of 22mm formation suggestive of uterus, non-individualized ovaries. Serological test: Na (145 mEq / L), K (4.7mEq / L) and testosterone (122.9 mg / dl). Medical release and guidelines for the patient to return to the service of endocrinology with new pelvic ultrasound.

Discussion/ Conclusion: Although the birth of a child with ambiguous genitalia is rare, the emerging nature of the issue requires that health professionals are at least familiar with the underlying etiologies, problems, and the initial approach to diagnosis and management. The main cause of genital ambiguity is congenital adrenal hyperplasia with virilization of the external genitalia in children with 46XX karyotype, and the features that distinguish the anomaly may range from mild hypospadia to an enlarge clitoris. The complex nature of this alteration of sexual development is made explicit in its numerous subclassifications. To diagnose a specific etiology, the basic principles of anamnesis, physical examination, and laboratory investigations are critical. The medical conduct of a child with ambiguous genitalia will be unique and, in order for it to receive the best care, a multidisciplinary health team is needed.
diagnoses is usually overrated. The implementation of a protocol on the basis of symptoms and the evolution of the newborn (NB) was effective in reducing its frequency and the use of antimicrobials.

**Objectives:** To demonstrate the impact of a protocol based on the symptoms of the NB in the incidence of ENS and the use of antibiotics in a neonatal intensive care unit (NICU).

**Methods:** The records of the NB admitted in 2016 and 2017 were evaluated in the NICU, excluding the external NB and the obits. It was considered ENS confirmed whether the use of antimicrobial was more than 5 days. The incidence of sepsis was calculated in under 28 weeks, between 28 and 32 weeks and above 32 weeks.

**Results:** New sepsis protocol was deployed in September 2016 and is based on the use of antibiotic based on the symptoms of NB. NB with risk factors and/or laboratory alterations isolated, but without symptoms are subjected to blood and rigorous clinical observation. If there is an initial clinical question and antibiotics start, but the evolution of the RN is satisfactory and the blood is negative, SNP is discarded and the antibiotics suspended. In 2016 were evaluated 315 RN and in 2017, 313. The incidence of sepsis fell from 42.5% to 36.5% between RN with IG < 28 weeks, from 35% to 14.8% between Rn with IG ≥ 28 weeks to < 32 weeks and from 25.7% to 12.6% in the larger of 32 weeks, in the two respective years.

**Discussion/Conclusion:** After the implementation of the protocol based on the symptoms of the NB, the frequency of sepsis decreased and the use of antimicrobials was more rational, even impacting on lower hospital costs, lower risk of bacterial resistance, no increase in general mortality rates and sepsis in the NICU.

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**EVALUATION OF THE STRATEGY COMMUNICATION OF HARD NEWS IN A NEONATAL INTENSIVE THERAPY UNIT OF THE PUBLIC NETWORK**

**Author name:** Ramos, H. K.

**All co-authors names:** Faria, B. L., Silva, L. M., Herculano, V. F. A., Rezende, F. V., Soares, M. L. C., Viana, F. J. M., Silva, S. A. B.

**Mentor name:** Silva, S. A. B.

**Background:** In a Neonatal Intensive Care Unit (NICU), communication between the Neonatology team and parents of newborns (NB) consists of hard news that can produce significant damage to the child and family.
Objectives: To evaluate if the communication strategies of hard news, which data collection occurred during six months in an NICU.

Methods: It was decided to draw up a questionnaire composed of open and closed questions. We included parents of NB admitted during the proposed period for data collection and whose length of staying in the NICU was greater than or equal to seven days.

Results: 62 questionnaires were applied. The mother's ages were between 15 and 44 years and only 53% said that the pregnancy was planned. The RN under 32 weeks totaled 72.5% and prematurity accounted for 71% of hospitalizations. 97% of the mothers performed prenatal care, with an average of 6.1. In relation to General satisfaction index, 53.9% was above 90%, 20.6% between 81 and 90%, 14.2% between 71 and 80%. At 7.9% of questionnaires, found satisfaction index was lower/equal to 70%. In The open questions, the answer about the hardest news was related to the diagnosis of the child. What bothered the parents during the news in the NICU, the highest frequency response was "NOTHING". The way the news was given was the main bright spot lifted. The majority of responses about what could have been different was "NOTHING". On suggestions for improvement of the news, the two main responses were "NOTHING" and "the place and the time available for news". The main feelings that interfered and hampered the receipt of news were nervousness and anxiety.

Discussion/ Conclusion: Most of the parents interviewed reported "satisfaction" regarding the communication of difficult news in the NICU. One of the suggestions for improving the approach was the creation of a specific space for communication and more time available for parental contact with the doctors. The aim is to finalize the analysis and evaluate new strategies, such as the multidisciplinary team training and institution of a specific protocol for this purpose.

FIBROUS DYSPLASIA: A CASE REPORT

Author name: Isabella Gonçalves Carneiro Spera de Andrade

All co-authors names: Telma Gonçalves Carneiro Spera de Andrade and Jesselina Francisco dos Santos Haber

Mentor name: Jesselina Francisco dos Santos Haber

Background: Fibrous Dysplastic (FD) is an uncommon disorder of unknown etiology, characterized by abnormal development of a bone or part of it, resulting from a defect in osteoblastic differentiation and maturation. It has been described
that such condition is the result of a post-zygotic gene GNAS1 mutation (guanine nucleotide-linked protein, α-stimulant of activity of the polypeptide 1). Possibly, the clinical severity of the condition depends on the time during fetal life or postnatal in which GNAS1 mutation happens. In FD the effects of the mutation in the bone’s mesenchymal cells include the increased production of c-fos protein and interleukin-6. The histological examination of the bone lesions shows spindle cells that were recently identified as osteoblasts halfway differentiated, which produce a matrix of collagen fibers randomly distributed, and islands of bone tissue. There are also evidence of increased activity of bone reabsorption. Probably the osteoclasts are part of the mechanism responsible for the dissemination of lesions through the normal adjacent bone. In General, the organization of the bone tissue is disturbed in the FD and the marrow space is filled with fibrotic tissue containing abnormal cells, described above.

The DF is usually identified at puberty, due to occurrence of spontaneous or traumatic fractures, and also to the emergence of noticeable bone deformities. The early diagnosis of FD is important, in order to identify early morphological changes in the bone affected during the process of growth, which in the case of boys occurs more easily, once the growth rate almost doubles in phase of the pubertal growth spurt, reaching the same rate in the second year of life (15 cm/year). Depending on the bone site affected by FD may occur commitment of bone elongation, or repeated fractures, impairing the quality of life of the teenager. Hence the importance of the early diagnosis so there is rigorous and cautious monitoring, considering also that the Dysplastic lesions can, albeit rarely, evolve into osteosarcoma. The regions typically affected by FD are the long bones and skull bones and usually occurs unilaterally. There are two primary categories of disease: FD Monostotic, which involves only a bone and represents 70% of the cases; and FD Polyostotic, which features the involvement of several bones. The x-ray examinations show that the lesions become more calcified with increasing of age of the patient. It can be observed since unilocular or multilocular radiolucent image until a radiopaque image. The margins of the lesion are ill-defined and little precise, joining the healthy bone tissue. The classic aspect of the radiographic image of FD is a frosted glass.

Objectives: Considering the scarcity of information regarding the etiology, diagnosis and especially in relation to the treatment, and as a result, the impact of the diagnosis for the child / adolescent and the family, in order to discuss and elucidate some clinical aspects, a recent case of Fibrous Dysplasia involving the femoral bone and the acetabulum was described.

Methods: It was made an interview with the mother and the analyses of the exams of the case.

Results: A 12-year-old male patient with good general condition, with good eating habits, with frequent pratice of physical exercise but presenting overweight, reported pain in the left thigh which intensified to the point that was
interfering in ambulation. It was at the beginning of Puberty (G2 phase). The mother’s story showed that he was the third son, born at age 43, after two consecutive miscarriages. In the third month of pregnancy there was a bleeding and she remained in rest for 1 month medicated with duphaston (progesterone - dydrogesterone) until the end of gestation. The birth occurred prematurely, 21 days before the probable date of delivery, with the rupture of the pouch. Despite having the cord around his neck and with initial Apgar below 7, the normal respiratory pattern was quickly reestablished and there were never any problems, except around his 6 years that there was change in cardiac rhythmicity, being verified electrical sinus immaturity. Based on such aspects, it is assumed that problems may have occurred during organogenesis that have caused the change in the GNAS1 gene. At this point of analysis we wonder if this FD was present from birth or if there was any factor that could have triggered this alteration at the beginning of puberty. The radiographs showed a simple fracture in the subtrochanteric region, cause of the complaint that initiated the entire search, and FD along almost the entire left femur diaphysis. These evidences were confirmed with tomography and MRI. The body scintigraphy showed no lesions in other bones of the body but indicated a commitment of the acetabulum and the entire proximal epiphysis. No significant endocrinological and immunological changes were identified, only a slight increase in LDL levels and a suppression of vitamin D. Although bone scintigraphy showed involvement of the acetabulum, the diagnosis made by two orthopedists (one oncological and the other pediatric) was of a monostotic FD. It was decided to not perform a biopsy, due to the clarity obtained through the images that showed no type of amplification of the lesion externally to the bone, and also by the compatibility of the images with others already performed in similar situations, including with deformity associated with a "Shepherd's staff". After the diagnosis was recommended resting and the use of Canadian crutches, due to the fracture. After the consolidation of the fracture, the sports activities with greater impact and contact were banned in order to avoid any type of torsion movements of the left thigh that would allow other fractures, especially the fracture of the femoral neck which would trigger a series of consequences that would compromise the condition of the bone and the patient. Exercises such as swimming and cycling and / or similar have been released since assisted to avoid falls and or other traumas. The insertion of an intramedullary stem was planned after cessation of growth at 16/17 years.

Discussion/Conclusion: FD is a relevant condition in pediatric orthopedics that has as a differential diagnosis bone neoplasms. Its early identification allows the necessary intervention in the activities performed by the child avoiding traumatic fractures. It also allows to monitor growth, minimizing sequels, and to plan possible surgical intervention for intramedullary insertion.
INVESTIGATION OF METABOLIC BONE DISEASE OF THE PREMATURITY IN HIGH RISK NEWBORN FROM A PUBLIC MATERNITY

Author name: Faria, Bianca Lisa de

All co-authors names: Terra, Lais Gomes Lopes; Terra, Dalton Lopes; Malheiros, Dorotéa Starling.

Mentor name: Silva, Síura Aparecida Borges

Background: Most of the preterm newborns (NB) have a higher incidence of metabolic bone disease of the prematurity (MBD). Its early recognition is important in order to avoid severe complications, for instance, fractures of long bones.

Objectives: To investigate the incidence of lab and radiological signs of MBD in high risk NB and to propose a protocol for its early diagnosis.

Methods: We have performed a cohort study on a public reference maternity hospital for high-risk pregnancies from Minas Gerais. Our sample was composed by NB with born weight of less than 1500 grams and born before 2015. We have excluded from analysis NB with osteopenic bone disease. The investigation was performed with x-rays of long bones at birth and two and four weeks later and measurement of circulating blood levels of calcium, phosphorus and alkaline phosphatase level test with two and four weeks of life. Our diagnostic criteria was radiological bone abnormalities such as enlargement of the epiphysis, osteopenia, periosteal tears and fractures and, at least, one lab abnormality such as normal or high levels of calcium, low levels of phosphorus and elevation of alkaline phosphatase.

Results: We have enrolled forty-nine NB in this study. There were seven cases of MBD (14%) with our criteria, being three cases diagnosed until the fourth week of life and four cases were diagnosed until the forty weeks of corrected gestational age (GA). About 71% of this seven patients were female, the average GA was 26 weeks and the average born weight was 677,14 grams. Most of the cases presented with high alkaline phosphatase and low levels of phosphorus. The left humerus was the most recurrent site of radiological abnormalities. Both of the findings were seen in the first two weeks of follow-up in about 30% of the patients. Isolated osteopenia was seen in about 35% of the patients.

Discussion/Conclusion: The lab and radiological findings compatible with the diagnosis of MBD were found in the first two weeks of life of the NB. On the other hand, some bone findings not diagnosed until four weeks of follow-up were found until the fortieth week of GA. Therefore, we suggest performing an investigation of MBD with NB with two, four and forty weeks of GA in order to achieve the best diagnostic performance.
THERAPEUTIC HYPOTHERMIA IN PATIENTS WITH HYPOXIC-ISCHEMIC ENCEPHALOPATHY

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Mentor name: Síura Aparecida Borges Silva

Background: The hypoxic-ischemic encephalopathy is a brain dysfunction caused by the reduction of oxygen supply to the brain, associated with reduced blood supply. This condition is one of the major causes of neurological mortality and morbidity in newborns. The controlled therapeutic hypothermia has been studied in the last years aiming the reduction of those rates, since the time of oxygen deprivation relates to the level of injury to the brain, neurological delays, and also to the number of deaths.

Objectives: This literature review article has as objectives to evaluate the efficacy and benefits of controlled therapeutic hypothermia in remission of future neurological morbidities and prevention of deaths in newborns with perinatal asphyxia or hypoxia. It also aims to observe the possible complications from using this procedure instead of the other possible ones.

Methods: A bibliographic review was made through several scientific articles found in the databases Scielo and PubMed. Nine articles were selected, using as an inclusion and exclusion criteria the analysis of the objectives and methods of the studies, and the year of publication (selecting those from 2014 to 2017).

Results: When 1°C was reduced in the body temperature it was possible to decrease the cerebral tissue metabolism in about 5%, that is, by controlled hypothermia we can delay anoxic cellular depolarization, once the brain will need less oxygen and glucose offer. In addition, the therapeutic hypothermia can block the pro-inflammatory route, reducing the cytokines and adhesion molecules action, which when in a hypoxic state, have neurotoxic effects. In experimental models using rodents, the prolonged hypothermia was able to decrease the apoptosis and hypoxia in neuronal tissue, and in children with hypoxic-ischemic encephalopathy, it could reduce the morbimortality, mainly when associated with other neuroprotector factors, as quick evaluation and treatment of endocrine and coagulation disorders.

Discussion/Conclusion: The use of therapeutic hypothermia as a protocol in patients with perinatal asphyxia is associated with long-term prognosis improvement in most patients. This technique has been extremely effective in the
reduction of neurological sequels, especially when it comes to full-term newborns who have suffered from hypoxic-ischemic encephalopathy, and it should be applied during the first hours, with monitoring and advanced support.

THE FIRST 1000 DAYS OF LIFE AND ITS LIFELONG IMPACT IN HUMAN DEVELOPMENT: A LITERATURE REVIEW

Author name: Bartholo, M.R.
All co-authors names: Rezende, L.B.; Garcez, F.H.R.
Mentor name: Liubiana Arantes de Araújo

Background: The first 1000 days refers to the early childhood period ranging from conception to up to 2 years of age. It is a critical time in which the infant’s brain and biological regulatory systems, such as metabolic, immune and endocrine systems, are in a sensitive development stage. Interventions in this specific time frame have the potential to exert lifelong positive or negative influence in a person’s development and, ultimately, determine future health conditions and social prospects.

Objectives: To write a non-systematic review based on the most recent scientific evidence concerning the importance of children welfare and proper neuropsychomotor development in the first 1000 days of life. Quality of infant care in early childhood impacts the child’s lifelong perspectives, with a proeminent role played by health professionals, especially pediatricians, in enabling optimal development and implementing timely interventions to prevent early childhood adversity.

Methods: A search in the MEDLINE/PubMed database using the terms “1000 days”, “pediatrics”, “child development”, “toxic stress”, “nutrition”, “neuropsychomotor development” and “sensitive period” was conducted and the most relevant papers since 1990 were chosen by consensus by the authors to write this non-systematic review. Only were articles written in English or Portuguese were included.

Results: Human and animal studies suggest that the central nervous system intensely develops during the first 1000 days of life, with this time period also being regarded as the one with the greatest neural plasticity. This plasticity is regulated through complex biological phenomena such as epigenetic modification of DNA, neuronal apoptosis and formation of new synapses (around 700 per second in the early postnatal months) and circuits, leading to cerebral modifications that can be long-lasting. Stressfull stimuli can be beneficial when
brief and mild to moderate in intensity, with an adult, who offers coping support, helping the child create adaptive brain responses. Toxic stress occurs in the absence of the buffering protection of an adult or when stimuli are too great, laying ground-work for brain circuitry that triggers maladaptive responses.

**Discussion/ Conclusion:** It is postulated that early childhood exposure to toxic adversities makes the developing brain more susceptible to maladaptive responses by triggering neurobiological processes that modulate lifelong reactivity to stress.

Many adult diseases, for example obesity and anxiety-depression, are now perceived as developmental disorders that begin early in life. Accordingly, intervening and investing in early childhood welfare, instead of waiting and treating sick adults, is a potential cost-effective manner of raising healthier and more productive citizens for our society.

Pediatricians are, therefore, privileged to work as both frontline guardians of healthy child development through active surveillance of their young patients in their critical first 1000 days and as community advocates and leaders capable of implementing evidence-based strategies to optimize children well-being and, consequently, full development.

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**INTERACTION BETWEEN ENVIRONMENTAL AND GENETIC COMPONENTS IN CONCORDANT MONOZYGOTIC TWINS FOR AUTISM: A CASE STUDY**

**Author name:** Linhares, R. C.

**All co-authors names:** Santos, P. E.; Silva, P. S.; Costa, A. T.

**Mentor name:** Portela, L. A.

**Background:** Autism Spectrum Disorder (ASD), described for the first time in 1943 for Leo Kanner, is one of the most common childhood neurodevelopmental disorders and is diagnosed in 12 of every 100 children. ASD is clinically heterogeneous, however can be characterized by impaired social interaction and restrictive interests. Although its pathogenesis remains unknown, family studies suggest a strong genetic contribution to autism, with increased risk of recurrence in a family with an autistic child.

**Objectives:** R.S.1 and R.S.2, male, 10 years old are monozygotic twins. Preterm delivery at 8 months, with R.S.1 weighing 2.9 kg and R.S.2, 3.5 kg. R.S.1 and R.S.2 presented convulsive seizures without fever, respectively at 6 and 8 months. Gestation occurred after treatment for infertility, at age 19, presenting
complications, with two hospitalizations at 3 and 6 months of pregnancy due to urinary tract infection. No family history for ASD.

**Methods:** R.S.2 spoke at 1 year, while his brother only at 7, both without speech therapist. Neither of them crawled, however, at the age of three they started to tiptoe. In addition, they used diaper up to 7 years old. They exhibit aggressive behavior in the school environment, as well as marked irritability and low frustration tolerance. Both R.S.1 and R.S.2 received the diagnosis of ASD in 2017. Since then, they have used risperidone 2 ml twice a day. During the clinical examination, R.S.1 was hyperactive, non-cooperative with cognitive tests - mini mental state examination - did not accept the touch, did not answer or look directly at the interviewer when he was called. R.S.2 was hyperactive, cooperative with cognitive tests – mini mental state examination –, partially accepted the touch, answered the call, but did not look directly at the interviewer’s eyes. None of the twins spoke sentences with more than 5 words.

**Results:** Nowadays, neurologist, psychologist and psycho-pedagogue accompany the twins. The medication and its dosage remain the same. Both were referred for occupational therapist, but their parents do not have economic conditions and the Unified Health Service (UHS) does not have vacancies for such. R.S.1 and R.S.2 continue to go to school, but in the last year they began to present divergent behaviors in the school environment - R.S.1 demonstrated a decline in his performance, with a marked cognitive delay and depressive behavior, while R.S.2 shows an explosive behavior.

**Discussion/ Conclusion:** Through studies monozygotic twins, it was concluded that ASD has a high heritability with 73% to 90% concordance in this group. In this context, this case report can corroborate to this understanding, since they are monozygotic twins, exposed to the same environmental factors, diagnosed in the same period and in use of the same medication, but with different clinical presentations. Gestational complications, prematurity and weight difference at birth may suggest gestational interference in the way ASD manifests in each sibling. There is no association in the literature between the infertility treatment and autism. Therefore, cases autistic monozygotic twins may help professionals, parents and teachers in the understanding of possible causes of this condition and its clinical variables.
All co-authors names: Silva, S.A.B - Maternidade Odete Valadares/Universidade de Itaúna / Ramos, H.K - Universidade de Itaúna/ Teixeira, A.P.A. - Maternidade Odete Valadares/ Barbosa, M.H.D. - Universidade de Itaúna

Mentor name: Silva, S.A.B.

Background: Continuous positive air way pressure (CPAP) in premature infants is associated with fewer complications related to invasive ventilation and promotes lung growth. However, there weaning is not a consensus yet and causes anxiety in lots of parents.

Objectives: Study the corrected and chronological gestational age (GA) of suspension of CPAP in newborns (NB) under 34 weeks.

Methods: NB with GA <28 weeks, between 28 and 31 + 6 weeks and between 32 and 34 weeks who used CPAP were selected from January 2016 to December 2017. The corrected and chronological time course of CPAP suspensión was checked in each group, calculating the respective average and it was analyzed the necessity for ventilatory support of the newborn after this suspension. In this unit, weaning from CPAP is attempted after 32 weeks if the NB has stable respiratory condition, fraction of inspired suplemental oxygen (FiO2) of 21% and PEEP of 5. In case of failure, CPAP is restarted and further attempts are proposed every 48 hours for stable NB. It was considered the weaning success, respiratory stability, and absence of oxygen requirement after weaning.

Results: 30 NBs<28 weeks, 139 between 28 and 31 + 6 weeks and 108 between 32 and 34 weeks were analyzed. The corrected GA of CPAP suspension average was 36 + 4, 33 + 2 and 33 + 6 weeks, in the 3 groups, respectively. The chronological age of suspensión average was 67, 22 and 5 days, respectively. Did not require oxygen therapy after CPAP weaning70%, 84% and 99% of the NB, respectively. In NB under 28 weeks, it was posible to success fully discontinue CPAP, with less than 34 weeks of corrected IG, in 23.3% of patients and in those over 28 weeks in more than 70% of patients. In 23.3% of NB under 28 weeks, it was posible to successfully remove CPAP before 34 weeks of corrected GA. In NB older than 28 weeks, this happend in more than 70% of cases.

Discussion/ Conclusion: The corrected GA and chronological time course of CPAP suspensión are higher in the extrem premature infants. However, even in these cases, it is possible to try it before 34 weeks, according to protocol of the unit. The knowledge of the corrected GA and chronological weaning from CPAP can tranquilize parents about the timing of the suspension in their children.
EVALUATION OF THE ENTERAL NUTRITION PROTOCOL FOR PREMATURE INFANTS UNDER 34 WEEKS OF A NEONATAL INTENSIVE CARE UNIT OF BH

Author name: Coutinho, F.B

All co-authors names: Silva, S.A.B - Maternidade Odete Valadares/Universidade de Itaúna / Pinto, B.P.B.C - Universidade de Itaúna / Ramos, H.K - Universidade de Itaúna / Rezende, T.C. - Universidade de Itaúna

Mentor name: Silva, S.A.B.

Background: An enteral nutrition (EN) protocol for premature infants must prioritize human milk as a food base and enable the proper growth. An early and adequate EN contributes to better survival and lower morbidity among premature infants.

Objectives: Evaluate the enteral nutrition protocol for premature infants of a Neonatal intensive care unit.

Methods: It was analyzed the medical records of newborns (NB) with gestational age (GA) <28 weeks and between 28 and 34 weeks in 2016 and 2017. It was evaluated: milk type, age of introduction into the diet, recovery of birth weight (BW), age at full diet (150ml/kg/day) and parenteral nutrition (PN) time. Frequency and average data were calculated, comparing with the proposals of the protocol. For prematures <28 weeks, it is recommended to start the diet between 24-48 hours and increase 10 to 15 ml/kg/day and reach full diet by the end of the second week. For NB between 28 and 34 weeks, it is recommended to start the diet on the first day, increase from 20 to 30 ml/kg/day and reach full diet until the beginning of the second week. The adequate milk is the colostrum from the mother or pasteurized milk.

Results: It was evaluated 147 NB, 20 of them with GA <28 weeks and 127 NW between 28 and 34 weeks. This number stands for 50% of the surviving NBs in each GA range.

For all, the administered milk in the first week of life was colostrum. 75% of the NB <28 weeks started the diet between 24 and 48 hours, on average with 2.25 days.

They reached a full diet with 16.85 days, recovered BW with 13.30 days and used PN for 12.75 days.

70% of the NB> 28 weeks got into the diet in the first 24 hours of life, 2.43 days on average, they achieve a full diet with 13.15 days, they reach de full diet with 13.15 days, recovered de BW with 11.15 days and used de PN for 9.12 days.

Discussion/ Conclusion: The evaluation of the protocol was positive regarding the beginning of EN and the priority of colostrum as base in premature infants.
diet. The age of BW recovery, PN duration, and full diet time were, as expected, higher in the extreme premature infants.

**EVALUATION OF THE ENTERAL NUTRITION PROTOCOL FOR PREMATURE INFANTS UNDER 34 WEEKS OF A NEONATAL INTENSIVE CARE UNIT OF BH**

**Author name:** Coutinho, F.B

**All co-authors names:** Silva, S.A.B - Maternidade Odete Valadares/Universidade de Itaúna / Pinto, B.P.B.C - Universidade de Itaúna / Ramos, H.K - Universidade de Itaúna / Rezende, T.C. - Universidade de Itaúna

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**Discussion/ Conclusion:** The evaluation of the protocol was positive regarding the beginning of EN and the priority of colostrum as base in premature infants diet. The age of BW recovery, PN duration, and full diet time were, as expected, higher in the extreme premature infants.

**PERCEPTION OF STIGMA, RESILIENCE, SATISFACTION WITH LIFE AND QUALITY OF LIFE OF YOUNG PEOPLE LIVING WITH HIV/AIDS**

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**All co-authors names:** Machado, D. M. - Unifesp; Galeano, E. - Unifesp; Ferreira, P. A. - Unifesp; Tenore, S. B. – Unifesp

**Mentor name:** Daisy Maria Machado

**Background:** In view of the strong influence of stigma at various points in the life of a patient living with HIV, it is necessary to deepen our knowledge about the possible factors that influence the way an individual faces these adversities, and how they reflect in their quality and satisfaction with life.

**Objectives:** The present study aims to compare HIV positive patients who acquired the virus by vertical transmission and by horizontal transmission, having as a parameter the individual's perception of the stigma he suffered, his resilience capacity, and how much this influences his satisfaction with life and his quality of life.

**Methods:** The study will be observational and cross-sectional, carried out with patients of both sexes, who are between 16 and 24 years of age, accompanied at two outpatient clinics of the Escola Paulista de Medicina, Federal University of São Paulo. The Pediatric Infectology Discipline Center (CEADIPe) serves children, adolescents and young adults (ages 0 to 24 years) infected with HIV, mostly by vertical transmission. The Center for the Control of Immune Deficiencies (CCDI) serves patients older than 18 years infected with HIV, most of them being sexually transmitted. As instruments of the study, a questionnaire with sociodemographic characteristics and 4 scales will be used, one for each subject already mentioned - in order to evaluate and compare the two groups of patients: 1) Scale of stigmatization built by Berger, Ferrans and Lashley 2) Scale of Resilience of Wagnild and Young 3) Quality of Life ((WHOQOL - abbreviated) 4) Scale of satisfaction with life.
Results: To date, 37 patients were interviewed, 26 who were infected vertically and 11 were infected horizontally (two of them due to blood transmission). All patients obey the inclusion criterion of age (between 16 and 24 years), the median age being 21 years.

Patients were interviewed so far exclusively in CCDI (5 patients) and in CEADIPe (32 patients). All of them signed a free and informed consent form (TCLE).

The questionnaires were answered in full, although there was a greater difficulty in answering them on the part of some less educated candidates. In most cases, it was necessary to help the interviewer to better understand the questions and define the answer. More details will be addressed in the final report.

Failure to comply with the initially proposed schedule (which foresaw the end of the interview of all the candidates during the first three months of research) is largely due to the difficulty of accessing Horizontal Group patients who meet the inclusion criteria for age. Most of these patients were expected to be at CCDI, but many of them, being on sporadic or on discharge (referred to another service), did not respond to contact attempts to mark the interview. This highlights the need to seek out a new location where patients in this group can be interviewed, which is part of the planning for the project from now on.

After the interview of the remaining candidates (planned to be completed by the end of October, which will occur concurrently with the completion of the data), there will be a statistical analysis of the data. Following this, in the final months of the project realization period, the final report will be written and the literature will be updated.

Discussion/ Conclusion: No final conclusions were made until now because there are something like a third of the patients yet to be interviewed. There are some clear differences between some isolated answers that are quiet interesting at a first sight, but need better analysis with the help of a psychologist. One example is sentence 5 from the scale of satisfaction with life that says: "If I could live a second time, I wouldn’t change almost anything in my life". The horizontal group (9 patients) were more inclined to disagree (78%) with that affirmative than the vertical group (31%). In general we still have to wait for the complete study for final conclusions.
POSTER SECTION

PREVENTIVE MEDICINE
INCIDENCE OF DIAGNOSED CANCER IN THE PUBLIC SYSTEM OF THE COQUIMBO REGION, 2009 TO 2013

Author name: Zaffiri, V. R.

All co-authors names: Lancellotti, D. A.; Araya, A. B.

Mentor name: Lancellotti, D. A.

Background: Cancer is the second leading cause of death in Chile, accounting for 25.6% of all deaths. There is currently no national cancer registry that includes the entire population.

Objectives: Analyze the incidence of different cancers diagnosed in the public system of the Region of Coquimbo between 2009 and 2013.

Methods: Research of the descriptive, retrospective kind. We used the 6841 reports of biopsies with cancer diagnoses registered in the computer program of the Hospital of Coquimbo from 2009 to 2013. The study was approved by the Thesis Evaluating Commission of Public Health. Excel was used for data tabulation; t-student and Chi-squared as statistical tests.

Results: The highest incidence was recorded in the Urinary and Male Genital System, with 37.9% of the cases. These were followed by cancers of the Digestive, Skin and Subcutaneous Tissue, Breast and Female Genital systems, with the remaining systems being represented at frequencies lower than 4%. By organ, the highest incidence was observed in Prostate, with 26.1% of cases, followed by Skin, Female Breast, Stomach and Large Intestine. Incidence and mortality were not necessarily related.

Discussion/ Conclusion: The results of this study correspond to the public system and represent approximately 80% of the population of the Coquimbo Region, so that the observed incidences can be considered values extrapolable to the whole of the Region being an excellent basis for the development of studies later.

AN ANALYSIS OF THE LIFE MEDICALIZATION IN THE PRESENT

Author name: Schollmeier, S.E.

All co-authors names: Oliveira, R.W., Mantuano, M.S., Raymundo, J.H., Romero, G.T., Machado, F.B., Krauser, I.A., Pedroso, B.T.L, Pereira, J.X.

Mentor name: Pereira, J.X.
Background: Medicalization refers to the increasing use of drugs and their impact on psychosocial, economic, and cultural relations. Since 1970, when this term was proposed, the question asked is about the loss of the individual's autonomy, the ethical aspects of prescription and the modification of non-medical situations in medical problems. With this in mind, an analysis of this process, in times of globalization and large media, is relevant for possible future interventions.

Objectives: The present study aims to understand the current population dynamics of drug use and its relations with the various social aspects, including the doctor-patient relationship.

Methods: For the study of the medicalization process, an online form with objective and discursive questions was applied, approaching the possible factors of interference in this dynamic. The questionnaires were distributed through social networks, aiming a greater collection of responses and in a randomized way. At the end of the period, 700 questionnaires were obtained in 5 days and were evaluated quantitatively and qualitatively about the following points of interest: 1) Permanent use of drugs; 2) Presence of pathologies or other comorbidities; 3) Most used drugs; 4) Impressions/feelings related to pharmacological therapy; 5) Use of non-prescription drugs.

Results: The results provided a better understanding about the increased number of prescription and non-prescription drugs use in the context of globalization. Regarding continuous or permanent use, 48% affirm that they use at least one drug in a continuous/permanent way. About pathologies or comorbidities, we can note among the reports: allergies, depression, ADHD, anxiety, allergic rhinitis, asthma, hypertension, migraine, among others. It is possible to highlight the presence of anxiolytics, antidepressants, psychostimulants and contraceptives among the drugs most used. By analyzing the impressions/feelings about pharmacological therapy, 8.4% said they feel excellent considering the amount of drugs used, while 21.9% say they feel indifferent, but 21.6% report bad feelings due to pharmacological necessity. When it comes to the use of non-prescription drugs, 84.3% affirmed their previous use and 55.9% that they have already indicated it for others.

Discussion/Conclusion: Therefore, it is important to understand the reception and attendance of patients' needs regarding the life medicalization process. In addition, diagnosis and individualization of care, through the approximation of the patient and a shared decision of the treatment, considering the possible advantages and disadvantages. Thus, there will be an optimization of individualized therapy, differentiating medical problems and respecting the limits of the life medicalization.
AN ANALYSIS OF CURRENT DOCTOR-PATIENT RELATIONSHIP

Author name: Schollmeier, S.E.

All co-authors names: Oliveira, R.W., Mantuano, M.S., Menezes, G.M., Pereira, J.X.

Mentor name: Pereira, J.X.

Background: The doctor-patient relationship is seen as a determinant in medical care and in the success of the therapy. It is an interaction that involves trust and mutual responsibility, which reinforces its role in the health-disease process. However, this relationship is being weakened by several factors, such as greater access to information, dehumanization of medicine and unavailability of resources. Therefore, it is necessary to understand the impact of these aspects on the current medical reality.

Objectives: This paper aims to evaluate the impressions about medical care in Brazil, focusing on the doctor-patient relationship, the interference of the reality of the Unified Health System (SUS) in this process and what would be the ideal profile of a doctor for the population.

Methods: For the study of the doctor-patient relationship, an online form with objective and discursive questions was applied, approaching the possible interference factors in this process. The questionnaires were distributed through social networks, aiming a collection of responses in a randomized way. At the end, 90 questionnaires were obtained and evaluated quantitatively and qualitatively about the following points of interest: 1) Current medical care; 2) The role of the Unified Health System (SUS); 3) The vision regarding the doctor; 4) The judicialization of medicine; 5) Other relationships in health.

Results: The results allowed us to understand that in the medical care, 69% affirm that they felt treated only as a disease and 64% considered the physical exam important to determine their confidence in the professional. About the SUS, 73% stated that they use the private system for the most part, however, 69% see no relationship between the quality of the professional and their place of performance. However, 72% believe that the positive and negative factors of the SUS interfere in their relationship. Regarding the doctor's view today, 43% agree and 13.3% disagree on the doctor's ability to hear their complaints and history. 29% agree and 33% disagree on the professional's ability to encourage the patient to ask questions. 35% agree and 23% disagree about receiving all the desired information. 20% agree and 35% disagree about having been involved in decisions made. Approaching the topic of judicialization of medicine, only 2 of the 90 participants had filed a lawsuit against the physician.

Discussion/Conclusion: Therefore, it is important to understand the patient's need to be part of their health-disease process, whether through the reception or the active participation in decisions. There is a demand for improvements in the relationship,
which must be considered by the caregiver and the person who receives the care. With this in view, the medical care will meet its goal of providing no harm and offering benefits. Thus, diagnosis and individualization of care, as well as the sharing of improvements in health infrastructure, will allow, in a long-term, that this relationship between the physician and the patient truly meets what is proposed to be, which is to see the sick as a sick and not only as an illness.

SOLIDARITY HEART: A SOCIAL ACTION FOR THE HEALTH PROMOTION PROCESS - EXPERIENCE REPORT

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Mentor name: MONTEIRO, M.B

Background: The increase of the elderly population is reflected in the increase in life expectancy, as well as the reduction of the birth rate and generate concern with the quality of life of the elderly. The Health promotion has been a very used approach to protect and regain the health of the elderly aiming its autonomy, integration and effective participation in society. That way, the Solidarity Heart project, it has aim developing health education, corroborating for a healthier aging.

Objectives: This study aims at reporting the medical student experience in the activities developed by the “Solidarity Heart” project.

Methods: It’s about an observational study, transverse and analytical that consists of an experienced report based on a Social Action denominated "Solidarity Heart", performed in June of 2018, by the students of electrocardic discipline of the Instituto de Educação Superior do Vale do Parnaíba (FAHESP/IESVAP). This action has had as purpose to promote health Education actions, conducting an electrocardiogram, glycemic tests and blood pressure enforcement for 53 low-income senior belonging to the Raul Bacellar Foundation, situated in the neighborhood are São José, from the Parnaíba-PI. The action was divided into three steps: The first constisest was on triage (weight, height, corporeal mass index, blood pressure measurement, glycemic test, as well as to fill a questionnaire on life habits), in sequence the elderly have been conducted to realize electrocardiogram by students and subsequently were diagnosed by the professor of discipline.

Results: It can be observed the participation of the elderly between ages 60 to 87 years and noticed a non - elderly population; less than one third of them were older than 75 years. Furthermore, almost two-thirds of sample were composed for female. It was
found that 90% of the patients presented high fasting glycaemia. Confirmed it on 23% of the sample the prevalence of left bundle branch block (LBBB) and first-degree atrioventricular block (AV block), however, these data were contemplated only in male sex. During the project, can be analyze the contentment of participants with the initiative, claiming to find difficulties in the accomplishment of examination as the electrocardiogram (EKG). In addition, through this action, the students could witness reports about the difficulties of the population in access to the Public Health Service.

**Discussion/ Conclusion:** This experience helped the medical students understand, even more, the importance of health education in the promotion of a healthier aging. Besides, determination of prevalence rates of Electrocardiographic abnormalities is decisive to implement preventative measures, based on primary care.

ASSOCIATION BETWEEN DEPRESSIVE SYMPTOMS AND HEMATOLOGICAL ALTERATIONS IN PATIENTS SUBMITTED TO ROUTINE MEDICAL EVALUATION

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**Mentor name:** Katz, M.

**Background:** Depressive disorders are associated with a higher incidence of cardiovascular diseases. The mechanisms suggested for association would be the activation of the sympathetic nervous system and the inflammatory cascade. This pro-inflammatory environment would also explain hematological changes in platelet volume and red cell distribution (RDW).

**Objectives:** Test the association between depressive symptoms and platelet volume and RDW in individuals undergoing routine medical evaluation.

**Methods:** A retrospective observational study, which included data from 22,361 individuals (71.8% men, 41.8 ± 9.9 years) who underwent routine medical evaluation in a tertiary hospital in São Paulo. Demographic and laboratory data were analyzed. All patients have responded to the Beck Depression Inventory (BDI) questionnaire for the evaluation of depressive symptoms. Patients were grouped according to the BDI in: absent / minimal symptoms, mild symptoms and moderate / severe symptoms. Clinical and laboratory variables were compared between the groups using the ANOVA or Chi-square test. Multivariate regression analyzes were used to test the association between depressive symptoms and platelet volume (model 1) and between depressive symptoms
and RDW (model 2), adjusted for relevant clinical and laboratory variables. The p value <0.05 was considered statistically significant.

**Results:** Of the 22,361 individuals, 82.2% had absent or minimal symptoms of depression, 10.4% had mild symptoms and 7.4% had moderate/severe symptoms. Age was similar between the groups, but the frequency of women was higher according to the severity of the depressive symptoms: 28.2%; 45.3%; 58.8%, p <0.001, respectively. In the adjusted multivariate analysis (model 1) there was an independent association and a gradient between depressive symptoms and platelet volume (reference absent/minimal symptoms): mild symptoms (β = 0.112; p <0.001) and moderate/severe symptoms (β = 0.192; p <0.001). In the adjusted model 2, there was an association between depressive symptoms and RDW, also with gradient, although statistically significant only in the most severe group (reference absent/minimal symptoms): mild symptoms (β = 0.015, p = 0.388) and moderate/severe symptoms (β = 0.048, p = 0.021).

**Discussion/Conclusion:** In a population of patients undergoing routine medical evaluation, there was an independent association between severity of depressive symptoms and increase in platelet volume and RDW. The mechanisms by which this association occurs, as well as possible prognostic implications, should be tested in subsequent studies.

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**MEDICAL STUDENTS PERCEPTIONS ON PRIMARY HEALTH CARE**

**Author name:** de Oliveira, A. A.

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**Mentor name:** Dutra, M. M.

**Background:** Thirty years ago the Brazilian sanitary movement emerged and established the importance of Primary Health Care (PHC) for promotion, prevention, and recovery of health. Since then, the medical formation has been discussed in order to prepare professionals to ensure the public health necessities. Strategies to insert undergraduate students on the PHC services of the Brazilian Unified National Health System (SUS) have been proved to be the most efficient and attainable way of reaching real education on the Public Service.

**Objectives:** To report personal experiences of early medical students in PHC services.

**Methods:** Observation of the relations between community health members and family health teams, discussion of the health perceptions and the patients necessities. Visiting a Basic Health Unit (UBS) on northern district of Ribeirão Preto, São Paulo, where the
application of a EQ05D questionnaire was done, oriented by a community health agent and a professor.

**Results:** During the visit it was possible to observe a peripheral territory and establish communication with the users of the PHC service. Therefore, the theory presented during the classes was practiced and became reality perceptions of the students. They could understand the importance of interdisciplinary actions on health promotion such as the resolution of drug traffic effects on the community, conducted by the UBS and the policy department. It was also observed that most of the interviewed users, who had conditions like hypertension and diabetes, didn’t recognize themselves as unhealthy when submitted to the EQ05D standard questionnaire. In addition, the front part of the UBS was considered by the users as a place to hold meetings on weekends because there are not many places for leisure in the neighborhood. This conducts to the understanding of how psycho social conditions are involved in the process of health care.

**Discussion/ Conclusion:** The experience provided a practical insertion of the students on the community during the application of a TBL activity. The territory of the UBS was explored by the students, some demands of the users were identified and linked to the theory, the students understood and acknowledged the users culture and had a projection of the reality they will deal when graduated. Furthermore, it was possible to acquaint the necessities of a peripheral community where the UBS is the main and almost only health service, observed by medical students. Finally, the gap between private medical students and SUS users in Ribeirão Preto is a challenge, since the purpose of medical education is to instruct medical students to provide a suitable and humanized health care.

**AN EDUCATIONAL CAMPAIGN ON STROKE AWARENESS IN SÃO PAULO**

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**Mentor name:** GAGLIARDI, R. J

**Background:** Stroke and other cerebrovascular diseases are among the main causes of death and disability worldwide. Knowledge of the lay population about the disease and its warning signals are crucial to preventing the worst prognosis, often related to late arrival on emergency health systems. At 2017 Stroke Campaign in Brazil, a study was conducted with the user population of parks and subways of São Paulo to verify this knowledge of the population about the stroke, to identify the best points to be strengthened in primary care and instruct about the procedures.
Objectives: The study aims to disseminate information about the stroke to the population and to collect data through open questions about the level of knowledge about the disease. The main signs and symptoms, risk factors and what to do about the disease in emergency cases are the principal topics addressed during the campaign through posters and informational pamphlets offered.

Methods: This is a retrospective, cross-sectional study and was held in São Paulo. The campaign was conducted by students of eight medical schools under the guidance of neurologists (residents and professors). The students traveled to various public areas in São Paulo, where information about stroke was distributed and a specific questionnaire was administered.

Results: A total of 842 people answered the questionnaire: 45.2% claimed to know what a stroke was and 70.45% knew someone who has had the disease being that 35.7% lived with that person. 17.4% was able to list at least 3 signs or symptoms of a stroke and 33.5% knew more than 3 risk factors for stroke. Besides 53.4% was aware that they should activate the emergency service and only 3.25% would have checked the time at which the signs and symptoms had developed.

Discussion/ Conclusion: Despite an improvement was able to be detected when compared to the same survey carried out in 2011, the knowledge of the population about stroke still remains unsatisfactory. The number of publicity campaigns since then has increased and it can be attributed to this that people know how to define the disease better and how to act before it. The way of acting against the stroke, however, still remains deficient, proposing the possibility of change in the approach of the campaigns reinforcing more the action against the disease.

HIGH BLOOD PRESSURE IN A PRIMARY HEALTHCARE CLINIC IN RIO DE JANEIRO

Author name: Louro M.H

All co-authors names: Oliveira G.B

Mentor name: Espasandin V.L.

Background: Currently, regardless of gender, age, socioeconomic stratum, and geographical region, overweight and obesity have become a global epidemic, which definitively contributes to the onset of hypertension risk factors. Excess body weight (overweight and obesity) has been considered the key modifiable risk factor for hypertension and represents a major public health concern both in terms of individual quality of life and cost to health care systems all over the world.
Objectives: This study aims to map the patients of the Unigranrio’s clinic regarding the risk factors for developing cardiovascular events, evidencing, mainly, the relationship between obesity and overweight with arterial hypertension and its consequences in increasing cardiovascular risk. Identifying and guiding patients about measures that must be taken to modify this framework.

Methods: This study was developed by the descriptive, transversal method, performed in November 2016, in the Unigranrio’s clinic. 47 patients aged 19-87 years were analyzed. Cardiovascular risk was estimated according to FRAMINGHAM SCORE and blood pressure measurement. Having analyzed variables such as: HDL, cholesterol, age, sex, BMI, waist circumference, if the patient was smoker and diabetic.

Results: From a database of 47 people, 74% were women and 26% men. A prevalence of high and medium risk was observed in patients over 60 years of age. Another significant factor was the relationship with BMI in which 50% of patients who were obese or overweight had a medium to high cardiovascular risk. In addition, it was evidenced that among these patients, 72% had altered blood pressure during the consultation.

Discussion/Conclusion: From a database of 47 people, 74% were women and 26% men. A prevalence of high and medium risk was observed in patients over 60 years of age. Another significant factor was the relationship with BMI in which 50% of patients who were obese or overweight had a medium to high cardiovascular risk. In addition, it was evidenced that among these patients, 72% had altered blood pressure during the consultation. In conclusion, it is observed that the risk of developing cardiovascular events increased in a manner directly proportional to age and BMI.

TYPE 2 DIABETES IN A PRIMARY HEALTHCARE CLINIC IN RIO DE JANEIRO

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All co-authors names: No co-authors

Mentor name: Espasandin V.L.

Background: Over the past decade it has been obvious that the prevalence of type 2 diabetes is increasing rapidly. Unless appropriate action is taken, it is predicted that there will be about double of the current number of people in the world with type 2 diabetes by the year 2030. Equally alarming and less well known is the fact that just a small percentage, around one half, are known to have the condition.

Objectives: This study aims to make a screening in the population of patients from the University of Grande Rio’s clinic and to raise public awareness of the importance of
diabetes and obesity. Therefore, the goal of this study is to search for patient with risks factors to have type 2 diabetes in 10 years in order to prevent this disease and its consequences.

**Methods:** This was a descriptive cross-sectional study conducted from January of 2017 to January of 2018 in the primary care clinic of the University of Grande Rio in Rio de Janeiro, Brazil. Overall, 588 women and 151 men, aged 6 to 99 years, were assessed. The risk of developing type 2 diabetes was searched using the Finnish Risk Score (FINDRISC) questionnaire risk scores and the patients` blood glucose levels. The following variables were assessed by the FINDRISC questionnaire: age, sex, body mass index (BMI in kg/m2), weight, height, and random blood glucose level. At the end of the consult all the patients were well-informed how to keep on a good life quality based on good nutrition and exercising habits.

**Results:** Data from 739 patients (79.5% female) were analyzed. The risk of developing type 2 diabetes increased with age. 259 of the patients were overweight and 258 were obese. In general, 69.8% were overweight and obese. The prevalence of participants at high or very high risk was of 29.8% in men and 33% in women. 11.3% of all patients presented high levels of glucose. From the population over 65 years, 17.3% presented hyperglycemia. A considerable number of patients had dysglycaemia or was at risk for developing type 2 diabetes. Overall, men and women tended to present similar risk of type 2 diabetes.

**Discussion/ Conclusion:** Southern and Southeast regions of Brazil epidemiologically have a high prevalence of diabetes, due to bad lifestyle and diet habits. It is known that the population do not have the essential knowledge concerning their health quality, such as blood glucose levels (BGL’s). Studies have not yet been proven that earlier detection will improve the outcome of people with type 2 diabetes, but it seems logical to suggest that it may help. The implication of this is that people need to be screened for diabetes on a regular basis. Thus, the Finnish Diabetes Risk Score (FINDRISC) questionnaire is a reasonable, reliable and easy screening source to estimate risk of type 2 diabetes in primary healthcare surveillance. It evaluates patient’s health status and various potential risk factors. Evaluation of the process and costs of this study are currently contributing to University of Grande Rio’s effort to shift diabetes prevention and management out of hospitals and into primary care.
All co-authors names: Louro. M. H.

Mentor name: Espasandin V.L.

Background: Currently, regardless of gender, age, socioeconomic stratum, and geographical region, overweight and obesity have become a global epidemic, which definitively contributes to the onset of diabetes risk factors. Excess body weight (overweight and obesity) has been considered the key modifiable risk factor for type 2 diabetes mellitus and represents a major public health concern both in terms of individual quality of life and cost to health care systems all over the world. Relatively recent data (2017) suggests that about half of the adults in Latin America are overweight or obese, up from 33.9% a decade earlier.

Objectives: This study aims to make a screening in the population of a specific group of patients, obeses and overweights, from the University of Grande Rio’s clinic and to raise public awareness of the importance of diabetes and obesity. Therefore, the goal of this study is to search for patient’s blood glucose levels and type 2 diabetes risks factors in order to prevent diseases and direct target patients to proper changes in their lifestyle.

Methods: This was a descriptive cross-sectional study conducted since January of 2017 until June of 2018 in the primary care clinic of the University of Grande Rio in Rio de Janeiro, Brazil. Overall, 411 women and 106 men, aged 11 to 92 years, were assessed. The risk of developing type 2 diabetes was searched using the Finnish Risk Score (FINDRISC) questionnaire risk scores and the patients` blood glucose levels. The following variables were assessed by the FINDRISC questionnaire: age, sex, body mass index (BMI in kg/m2), weight, height, and random blood glucose level. At the end of the consult all the patients were well-informed how to keep on a good life quality based on good nutrition and exercising habits.

Results: Data from 517 patients (79,4% female) were analyzed. All patients had BMI ≥ 25, 259 of the patients were overweight and 258 were obese. The prevalence of participants at high or very high risk was of 42,4% in men and 43,3% in women. 57% of the patients with BMI ≥ 30 were at very high risk to develop diabetes in 10 years even in low ages. 87,2% of patients presented high levels of glucose. Overall, men and women tended to present similar risk of type 2 diabetes.

Discussion/ Conclusion: In summary, overweight and obesity are extremely prevalent in high and very high-risk patients with type 2 diabetes. Furthermore, body mass index and weight circumference are related to major risk factors. An important number of patients do not have the essential knowledge concerning their health status, due to the
lack of information regarding healthy lifestyle habits. Studies have not yet been proven that earlier detection will improve the outcome of type 2 diabetes patients or even reduce the incidence of obesity, but it seems logical to suggest that it may help. Then, people need to be screened for diabetes on a regular basis. Raising awareness for public health markers should be one of the main strategies to be achieved. Thus, the Finnish Diabetes Risk Score questionnaire is a reasonable, reliable and easy screening source to estimate risk of type 2 diabetes in primary healthcare surveillance. It evaluates patient’s health status and various potential risk factors, such as weight.

SUN PROTECTION AMONG ADOLESCENTES: HOW MUCH DO WE STILL NEED TO IMPROVE?

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All co-authors names: Oliveira, A.C.C.

Mentor name: Silva, S.A.B.

Background: The incidence of skin cancer is increasing over the years, even though its prevention is possible through the use of sunscreen, clothes, hats, and by the reduction of the time of sun exposure. The adolescence and infancy are the most critical ages for the development of skin cancer in adults, but the adolescents have the lowest rates of sun protection of all ages.

Objectives: To describe the habits of sun protection among adolescent students.

Methods: We have applied a form, which was based upon the Sun Exposure and Protection Index, in order to perform a quantitative analysis. The sample was composed by 156 randomly selected students, from the 9th grade of primary school and 2nd grade of secondary school. The students were from public schools from a small town in Minas Gerais.

Results: The average age of the students was 15.6 years and 53% were female. About 71% of the students didn’t use sunscreen in the last 30 days. 52% of them never tanned, but 14.1% did it on a regular basis and 21% don’t consider stopping the habit. When directly exposed to the sun, 31% of the students don’t use sunscreen, 49% use sunscreen sometimes and 22% use it regularly. The strategy of clothing as a protection measure is used only by 11% and 44% of the total never thought about using it as a protection method. Similarly, 62% of the interviewee never used even a hat or a cap and 46% of them never thought about this kind of protective measure. Taking into account of other habits, 40% of them stay at home or wait in the shade in order to avoid the sunlight. About 45% of the adolescents had any kind of sunburn over the last year.
Discussion/ Conclusion: The exposure to ultraviolet radiation is higher in the infancy and adolescence compared to the other ages. There is a strict relation between the excessive and early sun exposure and the development of melanoma in the future. Most of the participants don’t recognize clothes, hats, and glasses as a way of sun protection and most of them don’t use sunscreen in a regular basis. So, it is noted that most of the adolescents don’t try to protect against the sunlight and this behaviour is a risk for the development of skin diseases. Therefore, the adolescents must be considered a priority for interventions to reduce sun exposure.

INTERVENTION OF ALCOHOL CONSUMPTION IN BOARDING SCHOOL STUDENTS

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Mentor name: Guidoreni, C. S.

Background: According to the Brazilian Center for Information on Psychotropic Drugs (CEBRID), alcohol use by young people aged 12-17 years and 18-24 years was 54.3% and 78.6%, respectively. Indices of dependence of this substance in those same age groups were of 7.0% and 19.2%, respectively. In the academic environment logic is maintained, excessive alcohol consumption is a recurring pattern among college students. The great autonomy that is inserted in the life of the young student, often promoter of insecurity and vulnerability, is enhanced by the easy and indiscriminate access to ethylic beverages, leading to the beginning and maintenance of their consumption.

Objectives: This study aims to evaluate the patterns of alcohol use in students of the medical school of a university located in Volta Redonda (Rio de Janeiro, Brazil). It is justified by the relevance of the subject and contemporaneity of the same in the medical literature, something evident when observing the high prevalence of academics who use ethyl alcohol. Therefore, it is fundamental to increase the understanding of this behavioral phenomenon, contributing to the construction of the scientific base of the students of the medical course and other areas of health.

Methods: This is a cross-sectional, quantitative and comparative study approved by COEPS, with CAAE number 60494816.0.0000.5237. The studied population was of the medical students of the University Center of Volta Redonda (UniFOA), from the 9th to the 12th periods. The Alcohol Use Disorders Identification Test (AUDIT) was used, a questionnaire composed of ten questions elaborated in liaison with the World Health Organization (WHO), considered a specific tracking instrument to verify people with the harmful consumption and dependence of alcohol, in the last 12 months. Scores vary from 0 to 40, and can be grouped into four risk zones at different levels: zone I - identify
low risk or abstainers (score between 0 and 7); zone II-appropriate consumption of risk (score between 8 and 15); zone III - refer to harmful use (score between 16 and 19) or high-risk consumption; zone IV - indicate a probable dependence (score between 20 and 40).

Results: A total of 106 students participated in the study, corresponding to approximately 67.5% of the students enrolled in the four periods analyzed. It was obtained that 68.9% of the inmates of medicine occupy the Zone I, with index of abstemios of 13.2%. However, 22.6% of the interviewees occupied Zone II, a zone of transition of consumption of risk and low risk. A minority occupied zones III and IV, 4.7% and 3.8%. The majority of the students stated that they had never stopped fulfilling their obligations because of drinking (71.7%). About 66% of students reported never feeling guilty or remorse after drinking, and 86.8% of students did not receive recommendations from relatives, friends, doctors or other health professionals to stop drinking.

Discussion/Conclusion: We found that most medical board students are in the risk zone I for alcohol abuse, that is, they use low-risk alcohol or are abstemious. Generally, they are people who drink less than two doses per day or do not exceed five doses on a single occasion. Since it is known that the consumption of alcohol among physicians is high, when we realize that in boarding school these people are still in the zone of risk I found a critical point where we have easy access to this population and we can take preventive measures before this problem grows and demands more attention and effort to be reversed. Such measures can be adopted by the educational institution itself, as advocated by the AUDIT, and have primary care. The increasing aspect in the consumption of alcoholic beverages during the graduation, reinforces this necessity, evidencing a potentially debilitating factor in the quality of life of these students and future professionals of the medical area.

THE PREVENTION OF HANSEN'S DISEASE THROUGH THE ANALYSIS OF ELEMENTARY LESIONS IN SCHOOLCHILDREN

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Mentor name: MENDES, C.M.M

Background: Hansen's Disease (HD) is a chronic communicable disease, whose etiologic agent is Mycobacterium leprae - high infectivity and low pathogenicity. Therefore, the identification of HD in children and adolescents indicates an active and recent transmission of the infection in the community. In some microregions of Teresina – PI
still have a high prevalence of HD and to prevent new cases, it is highly necessary to articulate strategies of health education.

**Objectives:** The present study aims to analyze cutaneous lesions in elementary students of Escola Municipal Lea Leal, in Teresina – PI.

**Methods:** This is a cross-sectional study regarding an educational community action with schoolchildren of Escola Municipal Leá Leal, in Teresina – PI. The action was organized and carried out by medical students and the multidisciplinary team of Satélite’s Family Health Strategy (FHS), in May of 2018. They conducted the analysis and the written mapping of schoolchildren elementary lesions, as well as the development of health education strategies, aiming the HD prevention.

**Results:** Twenty children (14 boys and 6 girls) of the 60 students presented dermatological lesions, which were evaluated by the medical students. Ten of them were referred to HD’s verification tests. Meanwhile, the others were discharged, since their cutaneous alteration belonged to several different etiologies, such as scars and ringworm skin infection. A week after the event, the doctor of Satélite’s FHS received all the children that had the suspicion of HD. In a quiet and peaceful environment, each of the 10 children underwent a clinical examination and sensitivity assessments - thermal, tactile and painful. Despite all the suspicion, none of them were diagnosed with HD. Among the lesions, macules of birth, pityriasis versicolor and superficial mycoses were identified and treated when necessary.

**Discussion/ Conclusion:** There is a necessity to actively search new cases in children and adolescents under 15 years old, since the Brazilian Health Ministry listed this age group as one of the epidemiological indicators that contributes to the HD endemic behavioral. Therefore, the non-detection of new cases in the Satélite Community highlights a highly effective FHS action in health promotion, diagnosis and treatment of the disease.

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**BRAINCOMS 2018**

**SCREENING OF MILD COGNITIVE IMPAIRMENT IN ELDERLY FROM THE PROGRAM OF INTREGALITY ATTENTION TO ELDERLY OF UNIVERSITY OF TAUBATÉ**

**Author name:** Hoshino, HSR

**All co-authors names:** Junior, MF

**Mentor name:** Junior, MF

**Background:** With the increasing expectancy of life, even more the population is experiencing diseases related to ageing, which is a progressive physiologic decline of the organism. One of the diseases associated is the dementia, which is related to damages in the central nervous system and its incidence and prevalence exponentially increase
with age. Therefore, the neuropsychological screening in elder people seems extremely important, as the early diagnosis of a Mild Cognitive Impairment (MCI) makes possible interventions to avoid the disease’s progress.

**Objectives:** The goal of this study is to analyze the elders’ assessment with Montreal Cognitive Assessment (MoCA test – Brazilian version), which is a screening test to MCI, aiming to relate age, years of study and comorbidities associated with the elders’ assessment in the test.

**Methods:** It is a quantitative study, descriptive, analytic and cross-sectional, with the aim of describing elders’ assessment through the MoCA test – Brazilian version. The sample is constituted by a group of 33 elders living in Taubaté and part of the Program of Integrality Attention to Elderly from the University of Taubaté, which offers multiple activities. As criteria for inclusion were accepted individuals with 55 to 85 years old, who agreed to participate in the research. As criteria for exclusion were removed people with visual or hearing deficiency without method for correction and people with motor alterations enough to change the cognitive assessment. The data were collected by medical students and a training was previously carried out. To compare the assessment with the variables age, education level and comorbidities, chi-square test was used for categorical variables and T-student test for continuous variables. All statistical analyses were performed in Microsoft Excel (2016).

**Results:** The MoCA test – Brazilian version was applied in the group and 57,57% of them were positive for MCI and 42,42% were negative, using 24 as a cut-off point. That was the number with the best sensibility (70%) and specificity (62,5%) in the study performed by Federal University of São Paulo. In the sample, the majority were women (96,96%), and the larger frequency of age was between 65 and 70 years corresponding to 15 individuals (the minimum age was 56 years and the maximum was 83 years). Regarding to education level, the majority have a higher education (54,54%), and the others declared that they studied for less than 12 years, with no illiteracy. Relating to comorbidities, 10 participants have High Blood Pressure (HBP) (30,30%).

**Discussion/ Conclusion:** This study shows the presence of MCI in the majority of the elderly part of the program, despite the group of study has distinct multidisciplinary activities. In addition, the education level and age did not show statistically significant relationship with the test results. Moreover, the presence of HBP appeared to be a relevant factor in the assessment of the elderly, and the number of positive MCI and HBP had p < 0.05, which is considered statistically significant. Therefore, this research shows that the regular visits to the doctor is important to control the comorbidities and the application of the screening test in the primary care attention is important to identify early cognitive deterioration. In this way, it is possible to refer the patient for follow-up and for more specific evaluations, allowing treatments that will delay the progression of the disease, and this helps in the reduction of expenses for public health.
KPC INFECTIONS IN PATIENTS IN TREATMENT IN HOSPITALS IN BRAZIL AND IN THE WORLD, A LITERATURE REVIEW

Author name: LOPES, R.R.S.

All co-authors names: PESTANA, J.O.M.; LOVIZIO, T.; FELIPE, C.R.; FORESTO, R.D.

Mentor name: DR. MEDINA

Background: In the last years, multi-resistant bacteria has become a health public problem. The Center For Disease Control and Prevention (CDC) published in 2013 an evaluation of the severity and perspective about the development of multi-resistant bacteria in the USA. In this literature review.

Objectives: We aim to describe publications available in State of São Paulo, Brazil, and World, to evaluate the extension of dissemination of Klebsiella pneumoniae cabapenem resistant.

Methods: In this article, we search the keywords 'KPC', 'CARBAPENEM RESISTANCE', 'KLEBSIELLA', 'SAO PAULO', 'BRAZIL', 'WORLD' in sites that index article from online magazines and journals like BVS, Scielo, And Pubmed. Then we exclude that articles that didn't show the city or hospital the infection of KPC belongs. We exclude also the articles that were using the same strain to different research and was exclude the articles that study molecular patterns about KPC because was unclear if had an infection.

Results: INFECTIONS IN SÃO PAULO

In the State of São Paulo, 12 articles were relevant to the study, until that moment, Ribeirão Preto, São José dos Campos, and São Paulo had show KPC bacteria infections or colonization.

INFECTIONS IN BRAZIL

To evaluate the epidemiological data of Klebsiella infections KPC-producing in Brasil, the COVISA (heath vigilant coordinating) present each semester data about bloodstream infections of KPC. Beyond this, 24 articles were founded. This could show that 17 of 24 Brazilian States published data about infection or colonizing of KPC bacteria producing.

INFECTIONS IN WORLD

Objectivating to understand the dissemination of bacterias carbapenem-resistant in the world, we collected articles published in a plenty of countries. Some articles will be exposed because they had cited a large number of countries with cases of KPC infection.
The “Global Spread of Carbapenemase - producing Enterobacteriaceae” of 2011 of Center for Disease Control and Prevention (CDC), “Clinical epidemiology of the global expansion of Klebsiella pneumoniae carbapenemases”, Lancet 2013; “Dissemination of Carbapenemase-Producing Klebsiella pneumoniae: Epidemiology, Genetic Context, Treatment Options, and Detection Methods” of 2016, of Frontier in Microbiology, and more articles, they together demonstrate at least 59 countries of around 200 countries in the world had cases of KPC infection until the time of this study.

**Discussion/ Conclusion:** Infections by Klebsiella pneumoniae carbapenemase producing has an important clinical and epidemiological impact on infections related to health assistance. Most of this infections are associated with patients with long period hospitalized that require the use of antibiotics and medical appliance. The literature demonstrates high levels of mortality they going up to 88%.

Infections by bacterias carbapenem resistents had spread throw countries and continents for at least 21 years, since the first registration in EUA in 1996. In this literature review, we could find infections caused by this resistant bacterias in many countries over the world.

Particularly in Brazil, compared to other developed countries, has no program to control these hospital infections and they are not good notified. Have a few numbers of laboratory specialized in identify the resistance mechanism and in Brazil, we have problems with public fundings to research. So probably the number of cases described in this literature review doesn't show the real epidemiological situation.

Based on this review, we note the importance of the epidemiological impact of Klebsiella pneumoniae carbapenem resistance infections not only in a national context but also on a global scale. These infections cause an impact on prognosis, are related to high mortality, raise the costs and put in risk the individual and collective health. Control measures should be hardly followed and monitored to reduce the risk of spread these infections.

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**BASIC ATTENTION IN SIGN LANGUAGE: BREAKING BARRIERS IN THE COMMUNICATION BETWEEN DOCTOR AND THE DEAF - EXPERIENCE REPORT**

**Author name:** ARAGÃO, L.M.M - IESVAP

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**Mentor name:** CAMPELO, Y. D.M

**Background:** According to law 8080/90, Health is a fundamental right to human. However, there are still many barriers that prevented the deaf the right to use a care of
health care. Therefore, communication with deaf surges as challenge to the professionals of health, because the lack of interaction is inviable to make a quality care and Humanized.

**Objectives:** This study aims at reporting the medical student experience in the activities developed by the "Basic Attention to deaf people" project.

**Methods:** It's about an observational study, transverse and analytical that consists of an experience report, based on a social action, called "Basic Attention to deaf people", which occurred at the institute of Educação Superior do Vale do Parnaíba - FAHESP/IESVAP, in June 2017, developed by the students of Brazilian Sign Language (Libras) discipline, under the teacher's supervision. Which had as the target public the deaf community in the municipality of Parnaíba-Piauí. It was conducted primary attention to deaf people through anamnese's collection, blood typing, blood pressure measurement, capillary blood glucose testing, body mass index calculation (BMI), electrocardiogram and guidance on the care of health. The aim of this project was to awaken in students an interest in better service to people with deafness, through a approach from the reality of the deaf community, thereby stimulating human actions of clinical service to people with deafness based on decree No. 5.626.

**Results:** During the project, participated fifteen deaf and they showed them happy with the initiative, claiming they never participated in similar activity. Through this action, the students could experience the real use of the sign language and witnessed the deaf reports about his difficulty in access to the health services. So the students could visualize the reality that surrounds the deaf community of the municipality, as well as stimulated a greater interest for a better care at people with deafness.

**Discussion/Conclusion:** This experience helped the medical students understand the importance of sign language, since it was possible to experience and to know the universe of the deaf, observing its difficulties and needs during the service. In addition, communication is the primary means of interaction patient-physician relationship, because allowing a exchange of information, providing to your patients a quality customer service, giving them the possibility of relating their problems and their pains, without the need for an interpreter, thereby ensuring an even more humanized medical care.

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**CHALA HEAD CHALA: USING THE MUSIC AS A ADJUVANT TREATMENT FOR CHILDREN WITH AUTISM SPECTRUM DISORDER**

**Author name:** Silva, P. S.
All co-authors names: Santos, P. E.; Lima, L. S.; Ferreira, M. L.; Linhares, R. C.; Castro, J. A. M.

Mentor name: Júnior, F. S.

Background: The Autism Spectrum Disorder (ASD) is a developmental disorder that manifests initially in childhood and persists throughout life. Therapeutic measures (drug and non-drug) have been proposed in order to improve the behavioral responses of children with this disorder. Drug therapy may lead to several adverse effects, therefore alternative options, such as music therapy, have arisen to complement the ASD’s treatment.

Objectives: The Extension Project “Music and Therapy in Autism Spectrum Disorder Patients” propose the use of music therapy as adjuvant in the treatment of ASD, aiming to create potential spaces for the development of cultural and artistic abilities, as well as the stimulation of their greater social interaction and expression of feelings.

Methods: It is an observational study with a descriptive approach regarding the activities of the Extension Program “Music and Therapy in Autism Spectrum Disorder Patients”, which was developed by medical students of the Liga Acadêmica Piauiense de Neurociências (Lineupi) in association with Associação de Mães de Autistas de Parnaíba-PI (AMA). The interventions happened from January to December of 2017. Forty children previously diagnosed with ASD (classical autism, Asperger’s syndrome, global developmental disorder without further specification) by a psychiatrist, based on DSM-V criteria, participated in the project. The participants were divided in two groups, where each one was assisted for a period of three months with periodic medical appointments and weekly sessions of music therapy. A music therapy session attended four groups of three participants, with an average duration of forty minutes for each group. The patients where distributed into the groups according to their age, musical preferences and parental time availability.

Results: Before the interventions, the patients received psychiatric follow-up for diagnostic confirmation and therapeutic adjustment, in order to ensure a holistic access to health care. The selected songs for the project aimed at improving the communication, verbalization and emotional expressiveness of participants. Children’s songs were chosen for the public from 4 to 12 years, in order to encourage their social interaction. Furthermore, they were invited to experience musical instruments, knowing their sound and rhythm, followed by choreographed songs. At onset, a resistance was observed, but with persistence, a good part of the patients began to perform the choreography. Meanwhile, the older were stimulated to choose their musics, in order to develop their independency. The cartoon themes were the most requested, where the most striking was the Dragon Ball theme, ”Chala Head Chala”. At the end of each song, there was a celebration with greetings and hugs.
Discussion/ Conclusion: The earlier the stimulus is given to children with ASD, the greater the chance of a more independent life, with fewer communication problems and better social interaction. Consequently, the treatment of this condition – which is still so misunderstood by society, schools, parents, and even health professionals – will be more effective. For a child with ASD, the stimulus to the collaborative movement and the recognition of parts of its body, space and attitudes of others can make a significant difference in social interaction. Therefore, it is important to emphasize that music as an adjuvant therapy can be a powerful tool for the behavioral development of ASD patients, acting as a factor to improve their quality of life.
CERVIX SARCOMA: A CASE REPORT

Type of research: GO/case report

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Presenter name: Heringer, D.L. - FMRP - USP

Mentor name: Sommacal, L.F.

Department: Gynecology

Background/Introduction: Uterine sarcomas are rare tumors of mesodermal origin, corresponding to about 3% of malignant neoplasms of the uterus. The most common histological types are leiomyosarcoma (LMS) and endometrial stromal sarcoma (ESS), followed by other, rarer types such as adenosarcomas and undifferentiated sarcomas. ESS is currently classified as high grade or low grade, although high-grade ESS are rare tumors.

Objectives: Case presentation

A 52-year-old woman presented with intermenstrual uterine bleeding for 3 months, as her sole complaint. She was attended in the primary care, where the initial gynecological evaluation showed a uterine cervix with altered dimensions and an irregular surface, however, the physical examination of the abdomen was painless and showed no signs of masses. A biopsy of the cervix was performed, whose histopathological study proved to be a poorly differentiated and invasive carcinoma.

Methods: Diagnostic and therapeutic focus and assessment

The patient was then referred to the HU-UFS service, where the slides were submitted to analysis. After review, the given diagnosis was of cervical stromal sarcoma. Staging model IB2, macroscopic tumor restricted to the cervix with more than 4 centimeters of diameter in its greatest extension - Staging FIGO. The patient was submitted to a clinical treatment with hysterectomy, anesectomy, and paranetrectomy.

Results: Follow–up and outcomes

The prognosis is relatively unknown and depends mainly on the following factors: staging, histological type, age and existence of residual disease after surgery. The treatment used predominantly is surgery alone or in combination with chemotherapy or radiotherapy, although there is no evidence to support the efficacy of any adjuvant treatment.

Discussion/Conclusion: Because of the relative rarity of this type of neoplasia, most of the data from the natural history of uterine sarcomas are derived from case reports and small series of cases. The largest series of cases to date has
identified 323 cases, which represents approximately 1% of all patients with cervical cancer. Nevertheless, this series includes cases of carcinosarcoma, which are now considered a type of metaplastic carcinoma rather than sarcoma, which implies that sarcomas represent even less than 1% of cervix malignancies.

Epidemiologically they are more frequent in women of 40 to 60 years. Usually, the symptoms in cases of sarcoma are abnormal uterine bleeding, fetid leukorrhea, pelvic pain and abdominal distension. At physical examination, the most common signs are the uterus increased in volume and the presence of pelvic mass. The diagnosis can be corroborated by ultrasonography and electromagnetic resonance, although the histological type is difficult to determine.

QUALITY OF LIFE AND PSYCHOLOGICAL ASPECTS EVALUATION IN PATIENTS WITH GESTATIONAL TROPHOBLASTIC DISEASE

Type of research: GO

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All co-authors names: -

Presenter name: Dittmer, F. P.

Mentor name: Sun, S. Y.

Department: Obstetrícia Patológica - EPM/Unifesp

Background/Introduction: Gestational trophoblastic disease (GTD) encompasses a benign form represented by molar pregnancies, complete hydatidiform mole (CHM) and partial hydatidiform mole (PHM), and a malignant form, the gestational trophoblastic neoplasia (GTN). PHM and CHM have clinical features similar to miscarriage and transformation to GTN in 20% and 5% of cases, respectively. After molar uterine evacuation, the hCG level should be measured weekly. Post molar neoplasia diagnosis is made when occurs a plateau or rising of hCG values. Molar spontaneous remission is characterized by hCG level within the normal range (<5mUI/mL) for 6 months. Besides the suffering of pregnancy loss, GTD patients need to deal with the chance of malignant transformation. It affects their lives, physical and emotionally. There are few studies about the psychological aspects of GTD patients leading us to study this aspects.

Objectives: To evaluate the quality of life, depression, state and trait of anxiety in patients with hydatidiform mole (before the remission) and in patients with gestational trophoblastic neoplasia. To analyze differences between the two groups.

Methods: Transversal and prospective study, multicentric, done in Centro de Referência em Doença Trofoblástica Gestacional do Hospital São Paulo/
UNIFESP and Centro de Doença Trofoblástica Gestacional de Botucatu/UNESP. The participants were women interviewed between August 2017 and March 2018, separated into two groups: HM group, during the post-molar surveillance and before the remission; and GTN group, during chemotherapy treatment. The interview and the WHOQOL-bref assessment, the Beck’s Depression Inventory and the State-Trait Anxiety Inventory (STAI) were applied by the researcher in a private room, during about 40 minutes, after the participant consent. The scores were analysed by the SPSS/Windows version 21.0 program. For the statistics analysis, a p-value ≤ 0.05 was considered.

**Results:** From 38 patients interviewed, 20 were of the HM group and 18 of the GTN group.

The quality of life related to the physical, psychological and environment domains was regular for both groups, with no statistically significant difference between them. However, on the social domain, the patients of the HM group presented a better quality (13/20, average 4.2) than the GTN patients (8/18, average 3.6) (p-value=0.026 t-Student test).

The Beck’s Depression Inventory result has shown that 78% of the patients (29/37) presented with dysphoria or depression, with no difference between the HM (15/19) and GTN (14/18) groups (p-value=1.00 Fisher test).

The State-Trait Anxiety Inventory result has shown that 68% (26/38) of the patients had high Anxiety state and 63% (24/38) had high anxiety trait, with no statistically significant difference between the two groups.

**Discussion/Conclusion:** Patients in both groups, HM and GTN, presented at interview, with positive hCG. It meant, for the HM patients, that they had the possibility of malignant transformation. On the other hand, for the GTN patients, the increasing of hCG levels meant the need of chemotherapeutic treatment. Then, it was possible to conclude that the possibility of a neoplasia diagnosis had the same impact in the quality of life compared to confirmed neoplasia diagnostic.

The social domain of the WHOQOL assessment includes questions about family, friends and husband support. The fact that HM patients had better quality of life than GTN patients in this domain can be explained by the fact that people may scary and distance when they face someone with a cancer diagnosis, because they do not know how to deal with it. Besides that, patients with GTN demand more because they need a longer treatment. This may exhaust not only the patient, but also people around her.

We also conclude that a lower quality of life was associated with higher rates of depression and anxiety. This suggests that improvements in the quality of life may reduce the depression and anxiety rates in this patients.
This results show that psychological assessment to GTD patients is indispensable to help improve their quality of life and decrease the depression and anxiety rates.
Medical students learning of reporting guidelines based on the EQUATOR Network

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Mentor name: Riera R. - Unifesp/EPM.

Background: In 2013, a group of medical students from Universidade Federal de São Paulo conceived the first Brazilian Evidence-based Medicine (EBM) League to provide a setting for long-term EBM discussion and training. The group has several collaborators who encourage them to keep pursuing their main goal: to learn and spread the EBM culture to other colleagues. A key element of the League is the analysis of the most important EQUATOR (Enhancing the QUALity and Transparency Of health Research) guidelines, which is an international leadership to enhance the authenticity and value of medical research literature by promoting transparent and accurate reporting of research studies.

Objectives: To describe an experience of EQUATOR guidelines dissemination among medical students.

Methods: A journalist who attended the EQUATOR Network Course and EBM professors periodically provide lectures and assignments to the League participants regarding the reporting guidelines topic. The most important statements, as CONSORT (CONsolidated Standards of Reporting Trials), STROBE (STrengthening the Reporting of OBservational studies in Epidemiology), PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), CARE (CAse REporting), and AGREE (Appraisal of Guidelines for REsearch and Evaluation), are extensively discussed with the students.

Results: The students learned how to apply the reporting guidelines and how to prepare scientific articles for publishing case reports, observational studies and systematic reviews. The long-term application of the knowledge is greatly seen among former League students, who are practicing theoretical concepts acquired by the elaboration of articles to disseminate studies produced locally.

Discussion: Along the process of learning and applying those statements in detail, the medical students learn how to report scientific information properly and they can apply the knowledge on their own articles. Well-grounded knowledge in the clinical practice is essential for the adequate conducting of patients, specially with the ever-mounting available literature. Aiming to arm students with tools to write articles and to critically analyze them, the League works towards guaranteeing that patients will be offered the best care by helping students understand and employ the guidelines in their day-to-day activities.
Ten years of “Trote Solidário”

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Mentor name: André Wajner

Background: It’s traditional to welcome new students on universities with admission pranks and rituals, which aims to bring senior students closer to the new ones. Unfortunately, over the time, those pranks resulted in hostile acts and had its meaning distorted. The “Trote Solidário” was proposed in order to change this reality: all proposed activities to welcome the new students have a solidarity meaning. The program has been carried out for 10 years bringing veterans and freshmen closer together, with a positive reception and social returns while increasing social engaging and citizenship.

Objectives: We aim to report the results from the 10 years of project experience, from the beginning until the first half of 2018, emphasizing the importance of the “Trote Solidário” project in improving reception and social integration of medical students, and the positive impacts on the community.

Methods: The experience began in 2008 through the Academic Core of the Rio Grande do Sul Medical Union, the biggest medical union of Latin America and the only one with a core of medical students. Since then, the activity has been held twice a year with medical students from public and private Medicine Schools in Rio Grande do Sul. In the first half of 2018, the “Trote Solidário” was performed in two days: in the first one, students, mostly freshmen, were invited to collective blood donation and bone marrow registering in local blood centers; in the second, they performed activities as donations collection and distribution to charity institutions.

Results/Discussion: The 15th edition of the “Trote Solidário” had 17 schools from 13 cities participating. In the first half of 2018, more than 700 students collaborated with the action, collecting more than 32.9 tons of donations and 703 bags of blood together with bone marrow registrations. There was an increase of 35% in blood donations and 59% in food collection compared to the first half of the previous year. Considering 1 ton of food benefits up to 2,000 people and 1 bag of blood can save up to 4 lives, the amount collected from the program could feed more than 65,000 people and help reached more than 2,800 lives with blood donation. During the 10 years of the “Trote Solidário” more than 192 tons of donations were collected and more than 4,200 donors participated, which corresponds to more than 380 thousand people fed and more than 17 thousand lives benefited by the blood donations. Thanks to that, the initiative has already been recognized with municipal, state and national awards.

Promotion of educational activity with training in first aid for initial care in trauma and emergency
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Mentor name: Campos, J. F. - EEAN/UFRJ.

Background: In Brazil, accidents and violence represent the first place in children and adolescents morbidity and mortality of children and between 5 and 19 years of age (BRASIL, 2001). It is known that the knowledge of fundamental first-aid notions are decisive in survival in cases of emergency (ANDRADE, 2007), since studies report a morbidity and mortality in pre-hospital reduction, if the first aid is provided by lay people with training in this area (WESTON et al., 1994). In view of the importance of teaching and training the population in the concepts of First Aid, the Academic League of Trauma, Emergencies and Simulation developed the First Aid Course for Freshmen, a theoretical / practical course aimed at students of the first period of the Dance, Physical Education, Nursing and Medicine courses.

Objectives: A descriptive quantitative study was carried out to analyze the impact of the activities offered during the first aid course for freshmen from health, physical education and dance area, in the first semester of 2018.

Methods: The program was divided into two phases, the first of which was composed of two short theoretical classes: Basic Life Support (SBV) and Hemorrhages, which sought to bring participants closer to first aid subjects, and the second focused on practice, held in the Simulation Laboratory, where students were divided into groups to participate in practical seasons in order to obtain hands-on training for better fixation of learned content. The stations studied were: SBV, Hemorrhages and Wounds, Immobilization of fractures, Obstruction of Airways by Foreign Bodies (OVACE) and Transportation of Casualties. Before the beginning of the course, a pre-test was applied, containing 20 questions (True or False) about the topics that would be approached throughout the course and, after the end of the activities, a post-test was applied.

Results: A total of 86 participants attended the course. The average accuracy in the pre-tests was 12.70 (63.53%), while in the post-tests it was 17 (85%) questions. In the statistical evaluation, 12 of the 20 questions presented progress on the level of correct answers in a statistically significant way.

Discussion/Conclusion: The present study evidences the importance and the necessity of the extension of training in first aid for students and for general population, since this knowledge, is little diffused.

The use of realistic simulation as a methodology of education and training to comprehensive attenuation to polytuumatized

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Mentor name: Campos, J. F. - EEAN/UFRJ.

Background: High fidelity simulation is an educational tool capable of mimicking real situations in a safe environment, and it allows that students develop cognitive and psychomotor competences. The implementation of the simulation allows students to practice and correct their mistakes, without risks to patients and with minimal risk to themselves. It is recommended for student assessment, development, exchange of ideas, teamwork, team leadership, creative thinking and problem solving.

Objectives: To report the experience of using realistic simulation as way of teaching and training medical students on the polytraumatized care.

Methods: The simulation ambience consisted on a scenery with multiple victims in a collision of a car crash versus car versus obstacle. The students performed functions that are compatible with their knowledge (first aid, prehospital care or intrahospital care). The realistic scenery was assembled with clinical cases, makeup and appropriate material. For each victim there was a monitor who filled checklists containing the main points that should be addressed by the students. Afterwards a questionnaire was applied to evaluate the learning process.

Results: Among the 55 students that participated, 32 answered the questionnaire. 97.75% of them are medical students and 6.25%, nursing students. Concerning the content of the simulation, 53.1% of the students reported they were exposed to new topics and 96.9% believe the simulation helped to fix the content learned during the course.

Discussion/Conclusion: The use of realistic simulation as a teaching methodology provides positive impact, once it is an early insertion on the clinic-surgical practices, diagnostic induction and development of trauma care.

Breaking the boundaries of knowledge: An overview of the last 10 years of Portal de Vídeo Aulas UFF.

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Mentor names: Ismar Araújo de Moraes – UFF

Background: Nowadays, students face great challenges in dealing with the great flow of information daily available on the internet. Consequently, medical students end up accessing not reliable and superficial data which many times present mistakes or are not provided by a scientific source. Considering this, in 2007 it was created the Portal de Vídeo Aulas UFF, a platform in which the UFF professors provide free and high quality video classes for UFF’s students and students from all over the world.
Objectives: The aim of this work is to analyze the data referring to the last 10 years of the Portal de Video Aulas UFF, in order to evaluate the relevance of the Portal to the academic community. We have searched for cross-reference information to trace the portal's user profile, the location of the access in order to verify if the website develops the extension purpose that is to cross the limits of the university and to reach students from various places in Brazil and in the world.

Methods: The website bring together video classes, produced by the professors of Universidade Federal Fluminense and the medical students are the main group of users. The website offers an extensive content of different disciplines, like Anatomy, Neuroanatomy, Medical Emergencies, Cardiology, Family medicine, among others.

Results: During the observed period, 946,787 accesses were registered, which generated an approximate monthly average of 7900 accesses. There was a fluctuation in the amount of access that was repeated periodically, coinciding with events in the academic calendar of Brazilian most institutions. There was a peak of accesses in the middle and end of regular semesters, and a decrease in the number of accesses during the regular vacation periods. Website rejection rate was 51.89%, which means that 49.31% of users who visit the site remain and view some content.

Discussion/Conclusion: Through our results, we can see the relevance of the Portal de Video aulas UFF extension project. The data show that is very important to the students have the opportunity to access a good material provided by a reliable source. Furthermore, it becomes clear that many students employ the website as a source of information to study for their evaluations in university, since most accesses are concentrated in periods when Brazilian universities generally apply their exams.

PREVALENCE OF THE ABUSIVE USE OF psychotropic AGENTS BY MEDICAL STUDENTS IN COLLEGES FROM MIDWEST OF MINAS GERAIS

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All co-authors name: Faria, B. L.;

Mentor name: Guidine, P.A.M

Background: Methylphenidate is a central nervous system stimulant, which belongs to the amphetamines group, acting as a sympathomimetic drug. Despite having well-defined clinical indications such as Attention Deficit Hyperactivity Disorder (ADHD), it has been used indiscriminately in recent years to improve cognitive performance in healthy subjects undergoing a stressful routine, as in the case of medicinal students.

Objectives: To investigate the use of methylphenidate by medical students in order to improve academic performance by evaluating frequency, dosage and adverse effects.
**Methods**: In the first semester of 2015 and 2017, a sample of 240 academics from 2 medical schools in the midwest of Minas Gerais were randomly selected from the 1st to 8th period (15 students per period) and invited to answer a validated questionnaire developed by Carneiro et al. (2013). The questionnaire contains questions regarding the use of methylphenidate, its adverse reactions, addiction and its use for cognitive enhancement or for other purposes. During the study the identity of each participant was preserved.

**Results**: Of those interviewed, 12% used the drug without prescription. Of these, 69% believe that the drug increases their concentration and contributes to improving their academic performance; 54% had adverse effects, which are: tachycardia (42%), anxiety (62%), loss of appetite (65%), and behavioral changes (50%). Despite of the adverse effects, 64% continued to use the drug, 45% continuously. Of these, 40% noticed a necessity to increase the dose to maintain their effects and 60% said they had improved their school performance. Those who discontinued the use of methylphenidate, 20% reported having tried other types of drugs to increase school performance. About those who didn’t present side effects, none used the drug for more than 15 days and only 25% increased the dose of the medicine. Among students who switched methylphenidate to another drug to treat their base disease, 25% continue to use methylphenidate during the period of tests in college even without medical advice.

**Discussion/Conclusion**: There is an elevated prevalence of clandestine use of methylphenidate by healthy people as a cognitive performance enhancing agent, despite the short and long term health damages of using this substance. Most students believe that the drug improves their academic performance, although there is no recent evidence corroborating cognitive improvement in healthy subjects using methylphenidate. In addition, most maintain constant use of this drug despite the presence of significant adverse effects related to prolonged use of the drug (tachycardia) and even short-term use (anxiety, loss of appetite, tremors). Even those who abandoned the use of methylphenidate as a result of adverse effects reported that they had sought other drugs to replace it in the function of improving academic performance, which could indicate an emotional dependence of the drug as described in the literature.

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**Increasing awareness about breast cancer and skin cancer in a underprivileged community in the state of Acre**

**Author name**: Porto, L. S. C. – UFAC

**All co-authors names**: Gomes, A. Z. A. – UFAC

**Mentor name**: Gisele Nogueira

**Background**: One of the most serious cancers in the Brazilian population is skin cancer in men and women and breast cancer in women. However, they can be avoided or controlled when alerted about risk factors and exposure as well as diagnosis and early treatment.
**Objectives:** Raise awareness of the community in the Cidade do Povo neighborhood (an underprivileged community) on the prevention of skin cancer and breast cancer.

**Methods:** In order to carry out the project, bibliographical research on the subject and preparation of visual materials were made for easy identification of signs and symptoms suggestive of diseases, compatible with the level of education of the community.

**Results:** During the realization of the project visual materials on the diseases were exposed in the community health unit. In addition, dynamics were performed with community health agents and patients in the waiting room. The receptivity of the community allowed a good use of the information presented, providing practical knowledge about diseases and assisting in the process of autonomy and responsibility of the patient about their own health.

**Discussion/Conclusion:** The lack of information and access of the poor community to health is a widespread problem in the country. University extension actions like this prove that in addition to scarce resources, information is also lacking for this population. The possibility of suspecting serious diseases from reliable information and having knowledge of the risk factors for serious diseases such as breast cancer and skin cancer is an important result in the process of autonomy of the population.

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**CLINICAL SIMULATION ON BASIC CYCLE DEVELOPMENT**

**Author name:** SALVATO, S. S

**All co-authors names:** Leticia Vilela Portugal Monteiro - Lucas Ferreira Gomes Pereira - Mariana Oliveira Fernandes - Gabriella Guerra Magalhães - Mayara Andríne do Nascimento - Silvia Souza Salvato - Lia Marçal meslin - Isabelle Darbello Torres - Ana Beatriz Barbosa Costa - Maria Gabriela Tirelli de Freitas - Gabriele Alves dos Anjos - João Victor Muniz Silvestre de Lima - Paula Sayuri Rabello Oyadomari - Tainá Aimé Emerenciano Lourenço - Tassio de Faria Huguenin - Maria Leopoldina Chaves Duque Pitanga Marques da Silva

**Mentor name:** SONIA CARDOSO MOREIRA GARCIA

**Background:** Clinical simulation provides the medical student teamwork, sharpens clinical reasoning, and simulates medical practice in the academic setting. As long as a new tool of learning it allows to retain the acquired knowledge for longer, since it is a more pleasant way of sharing and receiving information. By taking such initiative to the Basic Cycle - 1st to 4th period -, the intention is to take students from the traditional and massive content and lead them to learn in a more interactive and interdisciplinary way.

**Objectives:** Provide students of the Basic Cycle, through clinical simulations and new teaching methods. They will be able to learn more quickly and easily, integrating the whole group. This method helps to sharpen the reasoning and clinical skills of the students even before the clinical phase of the course, so that they are already more accustomed to the scenario that they will be exposed soon.
Methods: First, we observe the curricular grid of the periods involved in the clinical simulation. From this, a script is formulated from it, based on a clinical case that will cover topics covered in each of the periods of the Basic Cycle, so that all of them integrate in this case. Thus, the greater the interdisciplinarity between the content chosen by period for the case, the greater the integration of the group of students in the resolution of the case when exposing their knowledge regarding their area of study at the time. The clinical case creates problematizations so that they are deepened by the academics, either through physical examinations or by proposing clinical exams, so that, together, they arrive at a possible diagnosis. Finally, it will be possible to learn new techniques, exams and contents and, for this, student-student interaction was used through exchanges of knowledge.

Results: Based on the above expectations, the clinical simulation for the Basic Cycle proved to be quite effective as a new teaching method for the initial periods of medical school. The balance is positive, both in the number of students participating and in the final income of the same compared to the expected result. The integration between the periods happens in a fluid and spontaneous way. We observe the construction of clinical thinking in academics, even if it is still premature. The teaching is mutual and learning is fast and enjoyable for all participants.

Discussion/Conclusion: The development of activities that provide students with real simulation experiences affects the teaching-learning relationship, essential in the standardization and quality of the medical service. Thus, the valuation of this model of education tends to promote the formation of attentive, reflective, confident and prepared professionals for the real experience. Since the challenge of medical graduation is exemplified in the Meirieu paradox; learning by doing what we do not know how to do, clinical simulation provides the academic building of medical competence. In the protected environment of the simulation, the students learn from their own mistakes, which enables the formation of critical thinking; in view of its own gaps, the students has the ability to recognize and complement their cognitive foundations by improving their intervention techniques.

Prevalence of self-medication in a community bordering the Amazon

Author: Brenda Pereira Lima da Silva

All co-authors names: Igor Nascimento Alves

Mentor name: Wilson Roberto Malfara

Background: Drugs play an important role in the health system. However, the use of drugs irrationally and without medical prescription reveals a recurrent practice in Brazil: self-medication. This may cause health hazards such as adverse reactions, decreased efficacy and drug dependence. Therefore, self-medication is a difficulty faced by the health system, especially in population whose professional access is limited, such as the Reserva Extrativista do Lago do Cuniã - RO.
Objectives: Analyzing the prevalence of self-medication in the population of Reserva Extrativista do Lago do Cuniã- RO.

Methods: This is a cross-sectional quantitative study comprising a population of 97 riparian people. The study was carried out with questions about self-medication such as: reasons for irrational practice, frequency of uncontrolled use of drugs, symptoms that led the community to self-medicate, which medications were used without a prescription and possible adverse reactions. The data was collected through a questionnaire following the requirements of Resolution 466/2012, and was approved by the Research Ethics Committee.

Results: 97 community members were consulted, 44 men and 53 women, whose age are between 18 and 70 years: 62% of these people were schooled only until incomplete elementary school; 94% had already used non-prescription medicines - 26.5% of this medicine were analgesics, 22.3% antipyretics, 15.3% anti-inflammatories, 12.5% antibiotic, 2.9% vitamins, 1.5% antacids, 2.2% muscle relaxants, 1.8% anti-influenza, 2.2% sex hormones, 5.9% antihypertensive, 1.8% antiglycemic agents, 0.4% Vermifuge and 4.8% others. Among the reasons that led to self-medication: 31.8% custom or habit, 7.2% advertisements, 1.1% suggestion, 0.0% lack of time to go to the doctor, 6.1% ease of "softening" the discomfort, 1.6% convenience, 16.7% financial conditions, 8% difficulty of locomotion and 16.7% claimed the absence of doctors. The symptoms alleged for self-medication were: 84.8% Headache, 48.8% Fever, 45.3% Muscle pain, 16.2% Stomach pain, 8.1% Menstrual or intestinal cramps, 5.8% Allergies, 2.3% Anxiety and 1.1% Diarrhea.

Discussion/Conclusion: Considering the facts above, there was a need to improve the access of the riparian population to essential services, such as regular and continuous care, since about 94% of the population self-medicated. The project made possible the collection of data and, from this, it was observed the need for a future intervention, leading more health professionals to the region and effective public measures.

The academics' perception of the simulation ambience and the application in real life

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Mentor name: Walter Luiz Moraes Sampaio da Fonseca

Background: The today's globalized world, medicine surprises us by using the most diverse Technologies. This scenario could not be diferente in education. The use of clinical simulations in medical learning is increasingly used, addressing cognitive, behavioral and psycho-motor spheres, promoting the reflective development of the academic and increasing their learning capacity.
**Objectives:** The objective of the present work is prepared the academic to the real doctor’s life using this new methodology of learning as a coadjuvant of theoretical classes allowing him to expose his opinions and analyzes about his experience in the simulation ambience.

**Methods:** The TAPA project promoted realistic weekly simulations of daily routine, previous prepared by the members and applied in a controlled environment within the university. Rooms similar to clinics, mannequins, actors and sound and visual resources were used, making the simulation as close as possible to reality. In the end of the activity, a feedback was given to the students, correcting their weaknesses and praising their positive points, in order to don’t discourage the academic. A questionnaire was prepared and filled in the first and last week of activity by the 60 participating students, through which each one analyzed their resourcefulness, personal confidence, ability to work in teams and solve problems.

**Results:** After the feedback of the first week of activity, 50% of the students described themselves disable during the physical exam and in the doctor-patient relationship, while only 5% considered themselves good resourcefulness during the activity. Regarding the confidence to perform maneuvers and conduct the consultation, 37% of the students felt weak, 15% confident and 48% more or less confident. Concerning the ability to work in a team, 15% reported good teamwork, while 75% reported difficulties in distributing functions and disorganization during the simulation. 56% of the students felt they had poor problem-solving skills. After the last week of activity, 95% of the students felt good about the physical exam and the doctor-patient relationship and with confidence to conduct the consultation, 80% of the students reported improvement in dealing with teamwork and 75% felt capable and better at solving problems.

**Discussion/Conclusion:** The importance of conducting realistic simulations in medical education is remarkable, because it prepares students for the work environment they will came across as they graduate. The simulations performed support the student to learn how to act in situations of everyday life, teaching him to control the emotional and teamwork for problem solving. The simulations have been improve the medical skills of the academics and their self-confidence. During the development of play activities, it was noticed the change of behavior of the students. Initially they were shy to expose their clinical reasoning before the others, afraid to err and be judged. As the weeks passed, there was an evolution of the academics, who were more relaxed and confident, favoring the exchange of knowledge in the team.

**TAPA: Clinical simulation analysis of Yellow Fever**

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**Mentor name:** Walter Luiz Moraes Sampaio da Fonseca

**Background:** According to the government data, Brazil confirmed 1,098 cases and 340 deaths in the period of eight months. In the same period last year, 632 cases and 201 deaths were confirmed. Faced with the increasing number of cases in a year, the importance of the medical training stands out. So, the extension project TAPA (Trabalho de Acadêmico para Acadêmico), created a realistic clinical simulation on a case of yellow fever, applied to students in the third and fourth year of medical school.

**Objective:** The main objective of this simulation case was to improve clinical reasoning of the medical students, and to optimize the process of learning by promoting a dynamic activity that assists the sedimentation and fixation of knowledge.

**Methods:** The simulation case presented a patient with fever and a sudden throbbing headache for 3 days, with nausea, vomiting and myalgia, representing a typical case of yellow fever. The case was arranged in several rooms, for 3 groups of 4 students, corroborating for the group work in the medical service. Questions included items related to a doctor's conduct: asking for key parts of anamnesis such as a vaccination card and traveling to endemic areas of yellow fever, taking the physical examination, giving diagnostic assumptions, asking for additional tests to elucidate the case, treating and guiding the prophylaxis. As the students went through these stages, the results were presented by the evaluators, creating an interactive environment with the active methodologies.

**Results:** The results presented themselves according to the case, since all groups had yellow fever as the main diagnostic hypothesis, also citing differential diagnoses like dengue, zika and chikungunya. All performed the requested items except one group that did not ask if the patient traveled to the endemic area. After the simulation, a questionnaire was applied to the students about the simulation in order to evaluate themselves. This quiz contained questions such as "what did you learn most important in the simulation?", "after the simulation, do you think you can identify a yellow fever case?" and "what did you like the most?". All groups responded that after the simulation they are much more confident to look at a yellow fever case and look more cautiously at patients coming with such complaints.

**Discussion/Conclusion:** In this way, the clinical simulation achieved its main objective, which was to make the student to make his clinical reasoning towards yellow fever, an endemic disease, which is growing in Brazil today. In addition, it was fundamental in enabling the college student to detect cases.

**The using of realistics simulation methodology associated to scenic make-up in a clinical case of measles**

**Author:** Monteiro, L. V. P. – UniFOA

Mentor name: Walter Luiz Moraes Sampaio da Fonseca

Background: Brazil have been eliminated the measles virus circulation since 2016. However, owing to the increase of confirmed disease’s cases numbers in the country the TAPA project carried out a realistic simulation using scenic makeup in order to improve the clinical view in a realistic way. Realistic simulation allows training of clinical reasoning, technical skills, and management of teamwork. Scenic makeup enables students to immerse in the attendance scenario, facilitating the process of learning.

Objectives: To stimulate the teaching-learning process with a more realistic view of clinical reasoning focused on medical practice stimulating the critical-reflexive thinking of the academic.

Methods: Academics were organized into 5 groups. Each one composed by 5 students from diferente graduation’s levels, who reported on a medical chart, the anamnesis, physical examination and proposed a conduct for the patient; and two TAPA’s project organizers, one who was responsible for supervising and directing the group’s reasoning and one as a patient. To simulate the case of measles, the actor student reported the symptoms according to the questions of the examining group. He made use of scenic makeup as an instrument to bring the case closer to reality, with the rashes simulated by makeup and Koplik stains on shredded paper. To stage the fever, a thermal bag attached to the body of the student actor was used. The skills laboratory’s rooms were used to create an environment analogous to the doctor’s office, bringing a close-up view of reality to academics. After the consultation’s ending, the topic was discussed with the academics and the corrected medical records, mending their doubts.

Results: After the discussion about the fictitious case and the correction of the medical records, some failures were observed in the anamneses of the groups. In these 2 groups did not perform the oropharyngeal physical examination, making it impossible to visualize the koplik spots, 1 group did not measure the patient's temperature during the physical examination and 1 group did not fully investigate how the rash evolved.

Discussion/Conclusion: The methodology of realistic simulation combined with scenic makeup provided veracity to the case of measles, approaching the simulated consultation of medical practice and aiding the learning process through visual memory. The discussion of the clinical case after the simulation allowed to solve the doubts of the academics and the greater fixation of the content. The application of these associated methodologies generate a similar ambiance to the reality, thus conceiving to the students greater security and confidence in the medical care.

Simulation-based learning (SBL) in medical training: use of realistic simulation as a way of learning arterial blood gases
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Mentor name: Walter Luiz Moraes Sampaio da Fonseca

Background: In medical training, there are the exposure of patients to refine the skills of students. On the other hand, there is a need to ensure patients well-being. These two situations can establish a deadlock in medical education. The Simulation-based learning can solve this conflict by developing skills, while protecting patients. Considering this, the members of our extension project, experienced the Simulation of clinical cases and the use of manikins to practice arterial punction of radial artery.

Objectives: In this simulation, our objective was to assist medical students that never had contact with this procedure, and provide a better experience on learning, while guarantee the safety of real patients.

Methods: This study is an experience report of a realistic simulation given by the members of TAPA extension project (Trabalho de Acadêmico para Acadêmico) from UniFOA - University Centre of Volta Redonda, to fifty students in the fourth year of the medicine school. First the students were shown in theory how to punction the radial artery, in this part we used available videos on internet and the correct technique exposed in slide show. Then, the participants were conducted to the abilities lab, and practice on ten manikins’ arms. The activity were ministered by five members of our project and a graduated doctor. After this practice, some realistic cases of interpretation of arterial blood gases were discussed, such as acid-base disorders, lactate changes and how to conduct this cases after the identification of the disorder.

Results: After performing this practical activity developed with the students closest to the medical internship, it showed how this students were not prepared to perform this procedure, since they had studied in theory the correct technique of the arterial puncture and the parameters evaluated in the arterial blood gas, but they did not have practical experience on this topic, which is customarily performed during the hospital activities of the medical internship.

Discussion/Conclusion: This simulation proved to be important both for the participating students and for the TAPA members, helping to develop a leadership spirit, promoting the interaction and exchange of visions among the students, as well as for the participants of the activity, elucidating their doubts and bringing greater confidence and security to the accomplishment of the activity during their daily life.

Teaching based on simulation: from Academic to Academic

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Mentor name: Garcia, S. C. M. – UniFOA

Background: The use of problem-based simulations in medical learning is frequent. Unlike Cartesian models of content storage and transfer, this methodology allows students to develop a critical view of their qualities and the limits of their practice, increasing their confidence in medical practice. Despite being a new teaching tool that is being implemented in universities, the tradicional model is still imperative, often generating insecurity on the part of students for fear of making mistakes.

Objectives: The objective of this work is to report on the experience of students who are members of the project TAPA (Trabalho de Acadêmico para Acadêmico) with teaching-based simulation of problems, which becomes interesting due to the fact of the novelty, since this is a Project involving a new approach and is developed by academics for academics.

Methods: The activities took place in UniFOA and they include from the first to the eighth modules and are subdivided into 3 axes, each axis having a team responsible for the organization of the simulations, being composed of members that have already passed through the modules by which are responsible. The simulation starts with a briefing explaining what the students should do, then they are divided into groups of five to seven people from different modules and are referred to the labs. There are instructions about the case, an actor and a member of the project, who stays with them throughout the activity, evaluating and facilitating the development of the case. After the role play, the assessment team discusses the students’ performance, strengths and weaknesses of the service, teaching if necessary procedures that have been performed incorrectly. The activity closes with a briefing, in which the participants tell how was the activity and what they found of the experience.

Results: Both the assessment team and the participants presented positive reports regarding the simulations. The evaluating students reported having reviewed contents and better established the past contents, while the participants ended up doing a self-analysis about their knowledge and limits of their practice, in addition to training in group work, work on their leadership skills.

Discussion/Conclusion: Simulation-based teaching activities are being well accepted by students, as many simulation participants as by Project members. Practical teaching in a situation in which the student can err without causing harm to the patient or losing a grade creates a much less stressful scenario. The students of the different modules end up exchanging information, and thus building a collective knowledge from the individual theory. This methodology allows a patient-centered learning, ensuring better interpersonal relationships.
and the recognition by the student of the gaps of his knowledge, providing the improvement of his intervention capacities.

**Using flipped classroom as a teaching method: TAPA Project**

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**Mentor name:** Fonseca, W. L. M. S. – UniFOA

**Background:** The training of medical students has been guided by the use of traditional methodologies; in this way, the learning process ends up being only a reproduction of the content, without analysis by the students. With a view to building an academic profile more dynamic, the, which are tools that aim to conceive learning in an integrated way for the student; are now employed, so that the teacher takes on not only a role of transmitter of information, but a mediator of discussions.

**Objectives:** The use of the Flipped Classroom in order to approach theoretical and practical content in a more dynamic way, besides allowing the interaction between younger students and teachers, which, in the final analysis, will improve the learning process.

**Methods:** Thus, in order to integrate first year students to the modular curriculum, the TAPA (trabalho de acadêmico para acadêmico) has been working the Flipped Classroom method with students. In this tool, the focus is taken of the unidirectional transference of knowledge; so the student is guided to study the theme of the lesson previously at home, through interactive games, scientific articles or other sources. In this way, the TAPA project elaborated an activity with the theme "The cell". The activity begins with the provision of didactic material such as: podcasts, flowcharts and questions to be solved by students. After the study of this material, a class was marked, and these concepts were already developed, together with the direction of TAPA, led the students to solve, in an efficient way, all the questions proposed. Thus, what would, traditionally, an expositive lecture on the subject, it becomes a joint and reflexive discussion for part of the students.

**Results:** This methodology was introduced in early 2018 to evaluate the first module’s class by extension project TAPA. To continue the project, another activity will be realized as a evaluation, will still be made in the end of the period to compare and analyse the results. Although the preparation of this article was done before the end of the period, that comparison will be made for the data calculation be sufficient for the analysis of the evolution in the performance of academic.

**Discussion/Conclusion:** Therefore, the use of active methodologies allows better accuracy in the teaching process. The Flipped Classroom model goes into
this context to corroborate the need for multidisciplinary thinking and problem solving skills. In addition, the activity instigates them to have a more flexible relationship with teacher, favoring the understanding of content and engagement in learning.

The use of the Free Open Access to Medical Education as a new tool to the best knowledge formation.

Author name: Lima, J.V.M.S – UniFOA


Mentor name: Garcia, S.C.M.

Background: Since 2012 the term Free Open Access to Medical Education (FOA MED) has been discussed, as a source of information and knowledge distributed on web in an open platform or media. Currently, with the advance of social media, our extension project, named TAPA (Trabalho de Acadêmico Para Acadêmico) has seen the need to change its approach. In addition to the weekly discussions of cases, TAPA has been using other platforms to innovate and share medical knowledge.

Objective: The objective of the FOA MED project is to encourage the study process, facilitating and accelerating access to information, in a more dynamic and informal way. Thus, disseminate and facilitate the teaching of topics of medical relevance.

Methods: Weekly, project members post in the social media (Instagram™ and Facebook™) of the TAPA Project, polls, videos, flowcharts and photos about some medical case, for example a differential diagnosis of diaphragmatic hernia, among others. This type of platform depends on the interaction of the followers of the social media as it answers and interact in the following weeks. So, through previous knowledge about the subject in question, students from different courses and universities can interact with the platform, in order to change experiences and provide exchange of knowledge.

Results: Through a qualitative and quantitative analysis of interest across a questionnaire provided in the social networks of the project, it was possible to observe a significant increase, on the participation and efficiency from proposed activities in our social networks. Demonstrating the need for modernization of the learning process, especially in the medical school, due to its large teaching hours and the effectiveness in the dissemination of content through a channel that facilitates access to the target audience.

Discussion/Conclusion: The objectives were achieved, however we faced difficulties in the technical execution of the contents, taking into account that we do not have intimate contact with the management of social networks and marketing during our formation. Currently presenting itself as a point of
Teaching Based on Realistic Simulation and Axis I Integration: Experience Report from the UniFOA T.A.P.A Project

Author name: Lima, J.V.M.S – UniFOA


Mentor name: Garcia, S.C.M.

Background: In institutions where integrated modular curricula are used, the adaptation of incoming students becomes even more complex since several disciplines present their content simultaneously and integrated, seeking a broad understanding on the part of the academics. In this way, the TAPA Project does make use of a realistic language with the students of the first three modules to apply the elements studied by them in the classroom.

Objectives: The TAPA extension project aimed to stimulate the teaching-learning process of academics from the first three modules of the UniFOA medical course through the application of realistic simulation covering the content taught in the classroom, stimulating reasoning, cooperation and interactivity among students.

Methods: The students in modules 1, 2 and 3 were divided into groups of 4 people, and within each, students of the three different periods. At the simulation room, the project organizers presented the clinical case. After examining the case the students should identify the patient’s main complaint and initiate the physical examinations they deemed necessary. For this, we used manikins, which were used to perform the cardiac and pulmonary auscultation semi-technical. At the same time, the project applicators simulated the sounds of the auscultation by reproducing them in stereo. Other elements of realistic simulation were also added in the environment, like results of the requested complementary tests.

Results: It was observed that the students of module 1, who had little contact with the semiotics and the anamnesis could apply in a dynamic way the knowledge already acquired until then, besides knowing and learning with more advanced students the more complex semiotechnique. Students of modules 2 and 3, in addition to building new knowledge, were able to review the content already seen, interacting with the other students in the simulation environment.

Discussion/Conclusion: This activity allowed us to observe the importance of co-participation that promotes the construction of knowledge by students in teamwork. In this way, there is a paradigm shift, transforming the student from passive to active status with conditions to solve problems in cooperation with his or her peers, a situation that approaches the reality and context lived by them.
outside the academic walls, evidencing horizontalization and diversification in the multiple forms of learning.

**MedArt: the use of art to develop empathy in medical students**

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**Mentor name:** Almeida, A.B. – Unirio

**Background:** Several studies prove the levels of empathy in medical students decline over the years. This reveals a problem in the training of qualified physicians, concerning the need for understanding that there are no illnesses but rather ill individuals, since empathy feels connection with others. In order to promote the acknowledgment of empathic emotions, many universities have performed artistic forms of observation in addition to curricular subjects, which have an impact on medical education.

**Objectives:** To review the literature using the keywords empathy, medical student and art, in order to ground the theory that art can perform an excellent resource in the development of empathy in medical students, considering that empathic connection is related to the scientific concept of spirituality, which results from the personal seek to comprehend ultimate queries about life, meaning and relationship with others, with oneself and with the sacred or transcendent.

**Methods:** As part of the research activities of the Academic League of Health and Spirituality (LASE) of the Federal University of the State of Rio de Janeiro (UNIRIO), a literature review was conducted using the databases PubMed, SciELO, LILACS and MEDLINE. The keywords used were empathy, medical student and art. A total amount of 84 articles were identified in the first selection: 58 from PubMed, 12 from SciELO, 1 from LILACS and 13 from MEDLINE. Among the articles found, only those that answered the question from the study were chosen. After the second selection, 24 articles were included, which corresponded to 17 articles from PubMed, 4 from SciELO, 1 from LILACS and 2 from MEDLINE.

**Results:** By studying the included articles, it was possible to highlight several forms of art applied in the development of empathy in medical students, some with very similar methods. From the use of narrative approach, of medical appointment simulations, of interaction with adult patients through the figure of clown doctors, of Visual Thinking Strategies and other visual arts methodologies to the performance of medical humanities workshops (the theatre of the oppressed, art, literature, reflexive narrative approach, films, history of medicine, graphic medicine, poetry and music) the results found were meaningful and in favor of the theory under study. Nevertheless, some articles addressed the statement of students who do not appreciate the embodiment of art in medical education.
Discussion/Conclusion: From the results interpretation, it is possible to infer that there is a significant recognition by the academics themselves of the incorporation of arts in the Medicine course, with the special aim of developing student’s empathy. The disagreements over the importance of artistic resources for this purpose only confirms the need of programs based on the use of art, considering the demand to arouse interest by practical means. As founders of the Academic League of Health and Spirituality at our university, the mentioned results inspire us to carry out future research and extension projects that offers room for the development of empathy through art in our academic environment. In addition, by our association with AALEGREES (Academic Association of Leagues and Study Groups of Spirituality and Health), we intend to contribute at a national level for the propagation of similar projects.
WINNERS

ORAL PRESENTATION

BASIC SCIENCES AND PREVENTIVE MEDICINE
Effect of an optimized antioxidant therapy on the ventricular function associated with myocardial ischemia reperfusion injury in an isolated rat heart model

Author name: Galdames, M.

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Presenter name: Galdames, M.

Mentor name: Gonzalez, J.; Rodrigo, R.; Sánchez, G.; Sanhueza, E.

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Background/Introduction: Ischemia reperfusion (IR) injury is associated with myocardial dysfunction. Both iron imbalance and oxidative stress actively participate in IR injury through damage to cell macromolecules and inflammation. Clinical trials with antioxidants have demonstrated a positive, but suboptimal effect diminishing IR injury. Is it possible to optimize these therapies with a multifactorial approach using ascorbic acid (AC), N-acetylcysteine (NAC) and deferoxamine (DFO) in aim to prevent IR injury.

Objectives: Evaluate the effect of a tri-therapy approach using antioxidants like AA, NAC, and DFO over the functional myocardial dysfunction generated in IRI. A secondary objective is to observe whether the possible influence in myocardial dysfunction is achieved through the effect on systolic function, diastolic function or both.

Methods: An experimental murine study approved by University of Chile ethics committee was performed. Using a Langerdorff technique of global myocardial ischemia, isolated rat hearts were subjected to IR. A total of 16 male Sprague-Dawley rats with weights between 200-250 g were divided into 4 experimental groups: Sham, Sham+Therapy, IR, and IR+Therapy. The therapy was administered during the myocardial reperfusion and the doses were AA 100 µM, NAC 100 µM and DFO 10 µM. End diastolic pressure (EDP) and ventricular pressure development (VPD) were measured in aim to objectify myocardial dysfunction. ANOVA test and Tukey test were performed (GraphPad Prism). Significant statistical difference was considered with p<0.05.

Results: The IR+Therapy group showed a significant decrease of end diastolic pressure (EDP 61.67±7.79 versus 86.66±4.93 mmHg; p=0.005) and a significant
increase of ventricular pressure development (VPD 31.17±4.34 versus 9.33±2.74 mmHg; p<0.0001), compared to the IR group.

Discussion/Conclusion: The associated therapy leads to a reduction on myocardial dysfunction generated by IR injury on isolated rat hearts. Moreover, myocardial function improved in both systolic and diastolic function. Early management of acute myocardial infarction (AMI) currently focus on ischemia and infarct size. Nonetheless, complications and subsequent morbidities of AMI are also related to myocardial function and novel approaches including this paradigm should be investigated. Hence, this multi-target therapy could be a therapeutic alternative for IR injury in humans, contributing to the reduction of complications of AMI.
WINNERS
ORAL
PRESENTATION
PEDIATRICS AND
INTERNAL MEDICINE
INFARCT SIZE AND EJECTION FRACTION DETERMINED BY CARDIAC MAGNETIC RESONANCE: CORRELATION WITH BIOMARKERS OF MYOCARDIAL DAMAGE

Type of research: Clinics/Internal Medicine

Author name: Del Valle-Batalla, Lucía

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Presenter name: Castillo-Astorga, Raúl; Del Valle-Batalla, Lucía

Mentor name: Rodrigo, Ramón

Department: Program of Molecular and Clinical Pharmacology, Faculty of Medicine, University of Chile

Background/Introduction: Acute myocardial infarction (AMI) is the leading cause of morbidity and mortality in the world. The final infarct size (FIS) and left ventricular ejection fraction (LVEF) are the greatest predictors of post-AMI mortality, with cardiac magnetic resonance (CMR) being the gold standard for their measurement. Biomarkers are used to diagnose AMI and estimate myocardial damage. It would be plausible to use them as predictors of FIS and LVEF, however, current evidence is not clear about this role.

Objectives: Evaluate the correlation between two predictors of post-AMI mortality (FIS and LVEF) determined by CMR, and the elevation of myocardial damage biomarkers in patients undergoing primary coronary angioplasty (PCA), to study the potential predicting power of myocardial damage biomarkers.

Methods: A retrospective analysis of PREVEC (ISRCTN registry: 56034553), a multicentric, randomized, double-blind clinical study was performed. 67 patients with ST-Elevation Myocardial Infarction (STEMI) undergoing PCA were analysed. The CMR was performed 7-15 days after the event. Three radiologists blinded to clinical information measured FIS and LVEF. Total CK and CKMB were measured in peripheral venous blood at 6-8 hours after PCA. Pearson's or Spearman’s correlation coefficient were obtained according to the parametric or non-parametric distribution of the variables, and its respective tests were considered significant with a p value <0.05. The software GraphPrism 6.0 was used for the statistical analysis.

Results: A significant positive correlation was obtained between levels of cardiac biomarkers and FIS determined by CMR [total CK (r-square 0.3, p<0.0001) and CK MB (r-square 0.15, p<0.0027)]. In addition, the levels of these biomarkers showed a significant negative correlation with LVEF [total CK (r-square 0.3, p<0.0001) and CK MB (r-square 0.18, p<0.0012)].

Discussion/Conclusion: The myocardial damage biomarkers are reliable, easy to determine, and cost effective tests, and are useful predictors of FIS and LVEF.
measured by CMR in post-AMI patients. Due to this, myocardial damage biomarkers could be included in future Risk Scores.
WINNERS ORAL PRESENTATION

SURGERY AND ORTHOPEDIC
EVALUATION OF FIBROGESIS INDUCED BY POLIPROPILENE MESH IN DIFFERENT INCISIONAL HERNIA REPAIR TECHNIQUES

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Mentor name: Ponce Leon, F. - UFRJ

Background/Introduction: Incisional hernias occur through a previously incision in the abdominal wall, usually caused by a weakness in a surgical wound. Systematic reviews show that the surgical treatment of the incisional hernia has recurrence rates from 16% up to 24%. Meta-analysis are demonstrating that the retromuscular mesh hernial repair, sublay technique, have less recurrence rates, however there is no physiological explanation of those findings.

Objectives: Our goal is to compare the fibrogenesis in different techniques of incisional hernia repair and how it effects the abdominal wall reinforcement using an experimental model in rats.

Methods: Forty Wistar rats were divided in four groups according to the incisional hernia repair technique: Control (CT), Simulation (ST), Onlay (OL) and Sublay (SL). 42 days after the operation, we removed the abdominal wall for histological examination, tensiometrically analyzed the polypropylene mesh-tissue interaction and also recorded the number of abdominal adhesions.

Results: SL group presented greater value on tensiometric evaluation, with an average 36.75N for minimal tensile strength (MTS) necessary to remove the mesh (standard deviation (SD): 5.92N). In the OL group we had an average MTS of 26.4N (SD: 3.50N). The SM group presented an average 23.0N MTS (SD: 3.39N) and the CT group had an average 24.1N (SD: 2.51N) (p<0.0001). SL group had the most adhesions with an average grade of 2.75 (SD: 1.16). OL group had an average grade of 0.8 (SD: 0.63) and SM group had an average grade of 0.5 (SD: 0.52) (p<0.0001). Using the Pearson’s correlation test for the number of adhesions and tensiometric values, was obtained a r value of 0.7795 (p<0.0001). Histologically, we observed in SL group higher granuloma, histiocytes and neocollagenization values. The Pearson correlation coefficient between tensiometric score and neocollagenization was p<0.05 for all groups.

Discussion/Conclusion: The sublay technique for treatment of incisional hernias in an experimental model, provides an increase in both adhesions and tensiometric values, in comparison to other techniques. Also, the histopathological findings in the sublay group were higher and strongly related to a more efficient fibrogenesis than in the onlay group. We can assume that the use of sublay technique in incisional hernia repair provide better fibrogenesis, and the fortification of the abdominal wall may be more efficient with such an improvement.
Performance evaluation of a commercially available indirect immunofluorescence kit for the serological diagnosis of Dengue

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Presenter name: Carolina Rodrigues Dal Bo

Mentor name: Cristóvão Luis Mangueira

Department: Hospital Israelita Albert Einstein

Background/Introduction: Dengue is a public health issue in Brazil, due to its epidemics. The majority of serological test available in Brazilian laboratories are foreigners and their validation take place in regions with low prevalence of the disease that also didn’t went through other arbovirus outbreaks, that could result in false-positive due to antibodies cross reaction. One indirect immunofluorescence test that differentiates Dengue, Zika and Chikungunya infections was released in Brazil competing with ELISA.

Objectives: Evaluate the diagnostic performance of an indirect immunofluorescence commercial test for diagnosis of Dengue in a population with high prevalence of arbovirus infections.

Methods: 200 serum samples from the routine of the Clinical Laboratory of Hospital Israelita Albert Einstein were used. They were collected in 2014 with clinical suspicion of Dengue infection and were defined as positive or negative for Dengue by an immunoenzymatic test (ELISA). All samples were also tested by indirect immunofluorescence (IFI) Mosaic Biochip. Using the Software EP EValuator, specificity, sensibility and the Kappa coefficient were calculated. In discordant samples, virus research was carried out by Polymerase Chain Reaction (PCR), as a diagnostic confirmation method.

Results: Among the 200 samples, 20% were classified as positive and 80% as negative for anti-DENV IgM antibodies in the reference test ELISA. Among the 40 positive samples, 25% were negative in the IF test; of these, only 20% were also negative for dengue. Of the 160 negative samples in the ELISA test, 5% were positive in the IFI test; of these, 33% had Dengue virus detected by PCR. In the Kappa test, the agreement index was 0.7 (0.572-0.829). Sensitivity and specificity of IFI were: 75% and 94%.

For anti-DENV IgG antibodies, among the 200 samples, 15.5% were positive and 84.5% were negative in the ELISA. Of the 31 positive samples, 12.9% were negative in the IFI test; of these, 25% presented "undetected" DENV in the PCR. Of the 169 negative samples, 8% were positive in the IFI test; of these, 64% were
also positive in the PCR. In the Kappa test, the agreement index was 0.695 (0.563-0.83). Sensitivity and specificity of the IFI were: 87.1% and 91.7%.

Discussion/Conclusion: The agreement (Kappa index) between IFI and ELISA was acceptable, demonstrating a good performance of the new test. However, when compared with the PCR results, the method used as confirmatory in the discordant samples between the tests, it demonstrated greater agreement with ELISA in the majority of cases, except in cases negative in the ELISA and positive in the IFI for anti-DENV IgG antibodies in which the The PCR result was 64% coincident with IFI.

We concluded that, for the diagnosis of acute infection, the use of the ELISA alone would be sufficient for the serological diagnosis, not justifying the incorporation of another method. Replacement of ELISA for IFI could compromise the sensitivity, increasing the number of false-negative for IgM. In spite of this, IFI has the advantage of helping in the serological differentiation among 3 common arboviruses in Brazil at a single test, what may be advantageous in concomitant epidemics by more than one etiological agent.
WINNERS POSTER SECTION
SURGERY AND ORTHOPEDIC
ANTHROPOMETRIC PROFILE OF THE CAUCASIAN NOSE IN THE CITY OF RIO DE JANEIRO: IMPORTANCE FOR THE AESTHETIC PLASTIC SURGERY

Author name: Louro, M.H. – UNIGRANRIO

All co-authors names: -

Mentor name: Mury I.C.

Background/Introduction: Patterns that relate to nasal esthetics are essential for proper preoperative assessment and surgical programming. The standardized nasal aesthetic measures used today, in general, are a mixture of the artistic ideals of beauty obtained by models and celebrities. Because they do not consider population measures in these standard measurements, such measures vary according to those different populations and allow a discrepancy between the desire of the plastic surgeon and the patient's real desire for rhinoplasty. Not all patients wish to obtain an aesthetic result according to these values currently offered, but rather a natural result, with some characteristics that resemble their ethnicity and population of origin. The Brazilian population lacks population studies about their nasal measurements.

Objectives: To evaluate the anthropometric measurements of the nose in Caucasian patients in the city of Rio de Janeiro and compare it with the aesthetic ideas of Powell & Humphreys.

Methods: Cross-sectional, observational, descriptive, quantitative and qualitative study about the anthropometric pattern of Caucasian volunteers aged 18 to 50 years of the Unigranrio’s Clinic. Patients with a history of face and nose trauma, previous facial surgery and non-Caucasian patients will be excluded. The following variables will be obtained through frontal and lateral views: intercanthal distance, alar distance, nasal dorsum length, nasofrontal angle, nasolabial angle and nasal tip projection (Goode’s method). Statistical analysis will be performed to compare the measurements obtained between the genders and with the ideal esthetic standards.

Results: The study counted on the participation of 100 volunteers, being 50 men and 50 women. The minimum age was 18 years and the maximum of 40 years, with an average age of 22.4 years. The mean age of the men was 22.3 years and the average age of the women was 22.4 years.

The mean values obtained in the population of Rio de Janeiro were: nasolabial angle of 104.7 °; nasofrontal angle of 136.2; Goode’s method of 0.75; distance ratio (width) / nasion-pronation of 1.29; distance interannary distance / distance ratio of 1.33. Only 4% of the population sample had an intercanthal distance equal to the alar distance (ratio of alar distance to intercanthal distance of 1.0), while the
vast majority (96%) presented a greater distance to the intercantal distance. The alar distance was significantly greater than the intercantal distance (p <0.001).

The statistical analysis comparing the results obtained in the population sample studied between the sexes is presented below. The nasofrontal angle (p = 0.004281663) and the intercantal / alar distance (p = 0.00210256) showed a significant difference between the genders.

Discussion/ Conclusion: The population sample of the city of Rio de Janeiro differs statistically from the current aesthetic standards of nasal anatomy, except for the nasolabial angle. In the comparison between the genders, men presented a sharper nasolabial angle, a more projected nasal tip and a greater intercantal / alar distance than women. Given the importance, it is necessary to promote facial anthropometry so that future studies may contribute to surgeons' knowledge of specific nasal measurements in different populations. Thus, the aesthetic result of future rhinoplasty can be increasingly natural and appropriate to the demographic aspects of the patient.
WINNERS
POSTER SECTION
CLINICS AND
INTERNAL MEDICINE
EFFECT OF ASCORBATE INFUSION ON VENTRICULAR FUNCTION IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION WHO UNDERWENT PERCUTANEOUS CORONARY ANGIOPLASTY

Type of research: Clinics/Internal Medicine

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Presenter name: Gothe, M.J- Universidad de Chile

Mentor name: Rodrigo, R.

Department: Molecular and Clinical Pharmacology Program- Universidad de Chile

Background/Introduction: Acute Myocardial Infarction (AMI) is the leading cause of morbidity and mortality worldwide. Post-AMI ventricular function is an important predictor of associated complications. An ejection fraction (EF) of less than 50% is associated with higher rates of post-AMI complications.

Objectives: To evaluate if the infusion of ascorbate in AMI patients treated with percutaneous coronary angioplasty (PCA) is associated with improved ventricular function indexes.

Methods: A retrospective analysis of the multicentric double-blind, placebo controlled, randomized PREVEC clinical trial was conducted (ISRCTN56034553), in which an intravenous solution of ascorbate was administrated to AMI patients with ST segment elevation undergoing PCA, reaching plasmatic concentrations of 10 mM before myocardial reperfusion. This was realized in three different centers: University of Chile Clinical Hospital, San Borja Arriaran Clinical Hospital and San Juan de Dios hospital. Patients who completed follow up with magnetic resonance imaging 7-15 days (n=67) and 2-3 months (n=39) after AMI were analyzed. EF and infarct size were determined by cardiac magnetic resonance imaging (MRI) 7-15 days and 2 to 3 months post-AMI.

Results: 67 and 39 patients were analyzed (37 placebo, 30 ascorbate; 21 placebo and 18 ascorbate, respectively). Ascorbate administration was associated to a significant increase of the EF between MRI1 and MRI2, and also with a significantly higher number of patients with a preserved EF (more than 50%) at 2-3 months, compared with the placebo group.

Discussion/Conclusion: Antioxidants such as ascorbate could have an important protective role in post-AMI myocardial remodeling.
PERCEPTION OF STIGMA, RESILIENCE, SATISFACTION WITH LIFE AND QUALITY OF LIFE OF YOUNG PEOPLE LIVING WITH HIV/AIDS

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Mentor name: Daisy Maria Machado

Background: In view of the strong influence of stigma at various points in the life of a patient living with HIV, it is necessary to deepen our knowledge about the possible factors that influence the way an individual faces these adversities, and how they reflect in their quality and satisfaction with life.

Objectives: The present study aims to compare HIV positive patients who acquired the virus by vertical transmission and by horizontal transmission, having as a parameter the individual's perception of the stigma he suffered, his resilience capacity, and how much this influences his satisfaction with life and his quality of life.

Methods: The study will be observational and cross-sectional, carried out with patients of both sexes, who are between 16 and 24 years of age, accompanied at two outpatient clinics of the Escola Paulista de Medicina, Federal University of São Paulo. The Pediatric Infectology Discipline Center (CEADIPe) serves children, adolescents and young adults (ages 0 to 24 years) infected with HIV, mostly by vertical transmission. The Center for the Control of Immune Deficiencies (CCDI) serves patients older than 18 years infected with HIV, most of them being sexually transmitted. As instruments of the study, a questionnaire with sociodemographic characteristics and 4 scales will be used, one for each subject already mentioned - in order to evaluate and compare the two groups of patients: 1) Scale of stigmatization built by Berger, Ferrans and Lashley 2) Scale of Resilience of Wagnild and Young 3) Quality of Life ((WHOQOL - abbreviated) 4) Scale of satisfaction with life.

Results: To date, 37 patients were interviewed, 26 who were infected vertically and 11 were infected horizontally (two of them due to blood transmission). All patients obey the inclusion criterion of age (between 16 and 24 years), the median age being 21 years.

Patients were interviewed so far exclusively in CCDI (5 patients) and in CEADIPe (32 patients). All of them signed a free and informed consent form (TCLE).

The questionnaires were answered in full, although there was a greater difficulty in answering them on the part of some less educated candidates. In most cases, it was necessary to help the interviewer to better understand the questions and define the answer. More details will be addressed in the final report.
Failure to comply with the initially proposed schedule (which foresaw the end of the interview of all the candidates during the first three months of research) is largely due to the difficulty of accessing Horizontal Group patients who meet the inclusion criteria for age. Most of these patients were expected to be at CCDI, but many of them, being on sporadic or on discharge (referred to another service), did not respond to contact attempts to mark the interview. This highlights the need to seek out a new location where patients in this group can be interviewed, which is part of the planning for the project from now on.

After the interview of the remaining candidates (planned to be completed by the end of October, which will occur concurrently with the completion of the data), there will be a statistical analysis of the data. Following this, in the final months of the project realization period, the final report will be written and the literature will be updated.

**Discussion/ Conclusion:** No final conclusions were made until now because there are something like a third of the patients yet to be interviewed. There are some clear differences between some isolated answers that are quiet interesting at a first sight, but need better analysis with the help of a psychologist. One example is sentence 5 from the scale of satisfaction with life that says: "If I could live a second time, I wouldn’t change almost anything in my life". The horizontal group (9 patients) were more inclined to disagree (78%) with that affirmative than the vertical group (31%). In general we still have to wait for the complete study for final conclusions.
WINNERS POSTER SECTION
PREVENTIVE MEDICINE
AN ANALYSIS OF CURRENT DOCTOR-PATIENT RELATIONSHIP

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Mentor name: Pereira, J.X.

Background: The doctor-patient relationship is seen as a determinant in medical care and in the success of the therapy. It is an interaction that involves trust and mutual responsibility, which reinforces its role in the health-disease process. However, this relationship is being weakened by several factors, such as greater access to information, dehumanization of medicine and unavailability of resources. Therefore, it is necessary to understand the impact of these aspects on the current medical reality.

Objectives: This paper aims to evaluate the impressions about medical care in Brazil, focusing on the doctor-patient relationship, the interference of the reality of the Unified Health System (SUS) in this process and what would be the ideal profile of a doctor for the population.

Methods: For the study of the doctor-patient relationship, an online form with objective and discursive questions was applied, approaching the possible interference factors in this process. The questionnaires were distributed through social networks, aiming a collection of responses in a randomized way. At the end, 90 questionnaires were obtained and evaluated quantitatively and qualitatively about the following points of interest: 1) Current medical care; 2) The role of the Unified Health System (SUS); 3) The vision regarding the doctor; 4) The judicialization of medicine; 5) Other relationships in health.

Results: The results allowed us to understand that in the medical care, 69% affirm that they felt treated only as a disease and 64% considered the physical exam important to determine their confidence in the professional. About the SUS, 73% stated that they use the private system for the most part, however, 69% see no relationship between the quality of the professional and their place of performance. However, 72% believe that the positive and negative factors of the SUS interfere in their relationship. Regarding the doctor’s view today, 43% agree and 13.3% disagree on the doctor’s ability to hear their complaints and history. 29% agree and 33% disagree on the professional's ability to encourage the patient to ask questions. 35% agree and 23% disagree about receiving all the desired information. 20% agree and 35% disagree about having been involved in decisions made. Approaching the topic of judicialization of medicine, only 2 of the 90 participants had filed a lawsuit against the physician.

Discussion/Conclusion: Therefore, it is important to understand the patient’s need to be part of their health-disease process, whether through the reception or the active participation in decisions. There is a demand for improvements in the relationship,
which must be considered by the caregiver and the person who receives the care. With this in view, the medical care will meet its goal of providing no harm and offering benefits. Thus, diagnosis and individualization of care, as well as the sharing of improvements in health infrastructure, will allow, in a long-term, that this relationship between the physician and the patient truly meets what is proposed to be, which is to see the sick as a sick and not only as an illness.
Title: QUALITY OF LIFE AND PSYCHOLOGICAL ASPECTS EVALUATION IN PATIENTS WITH GESTATIONAL TROPHOBLASTIC DISEASE

Type of research: GO

Author name: Dittmer, F. P.

All co-authors names: -

Presenter name: Dittmer, F. P.

Mentor name: Sun, S. Y.

Department: Obstetrícia Patológica - EPM/Unifesp

Background/Introduction: Gestational trophoblastic disease (GTD) encompasses a benign form represented by molar pregnancies, complete hydatidiform mole (CHM) and partial hydatidiform mole (PHM), and a malignant form, the gestational trophoblastic neoplasia (GTN). PHM and CHM have clinical features similar to miscarriage and transformation to GTN in 20% and 5% of cases, respectively. After molar uterine evacuation, the hCG level should be measured weekly. Post molar neoplasia diagnosis is made when occurs a plateau or rising of hCG values. Molar spontaneous remission is characterized by hCG level within the normal range (<5mUI/mL) for 6 months. Besides the suffering of pregnancy loss, GTD patients need to deal with the chance of malignant transformation. It affects their lives, physical and emotionally. There are few studies about the psychological aspects of GTD patients leading us to study this aspects.

Objectives: To evaluate the quality of life, depression, state and trait of anxiety in patients with hydatidiform mole (before the remission) and in patients with gestational trophoblastic neoplasia. To analyze differences between the two groups.

Methods: Transversal and prospective study, multicentric, done in Centro de Referência em Doença Trofoblástica Gestacional do Hospital São Paulo/UNIFESP and Centro de Doença Trofoblástica Gestacional de Botucatu/UNESP. The participants were women interviewed between august 2017 and march 2018, separated in two groups: HM group, during the post-molar surveillance and before the remission; and GTN group, during chemotherapy treatment. The interview and the WHOQOL-bref assessment, the Beck’s Depression Inventory and the the State-Trait Anxiety Inventory (STAI) were applied by the researcher in a private room, during about 40 minutes, after the participant consent. The scores were analysed by the SPSS/Windows version 21.0 program. For the statistics analysis, a p-value ≤ 0,05 was considered.
**Results:** From 38 patients interviewed, 20 were of the HM group and 18 of the GNT group.

The quality of life related to the physical, psychological and environment domains was regular for both groups, with no statistically significant difference between them. However, on the social domain, the patients of the HM group presented a better quality (13/20, average 4.2) than the GTN patients (8/18, average 3.6) (p-value=0.026 t-Student test).

The Beck's Depression Inventory result has shown that 78% of the patients (29/37) presented with dysphoria or depression, with no difference between the HM (15/19) and GTN (14/18) groups (p-value=1.00 Fisher test).

The State-Trait Anxiety Inventory result has shown that 68% (26/38) of the patients had high Anxiety state and 63% (24/38) had high anxiety trait, with no statistically significant difference between the two groups.

**Discussion/Conclusion:** Patients in both groups, HM and GTN, presented at interview, with positive hCG. It meant, for the HM patients, that they had the possibility of malignant transformation. On the other hand, for the GTN patients, the increasing of hCG levels meant the need of chemotherapic treatment. Then, it was possible to conclude that the possibility of a neoplasia diagnosis had the same impact in the quality of life compared to confirmed neoplasia diagnostic.

The social domain of the WHOQOL assessment includes questions about family, friends and husband support. The fact that HM patients had better quality of life than GTN patients in this domain can be explained by the fact that people may scary and distance when they face someone with a cancer diagnosis, because they do not know how to deal with it. Besides that, patients with GTN demand more because they need a longer treatment. This may exhaust not only the patient, but also people around her.

We also conclude that a lower quality of life was associated with higher rates of depression and anxiety. This suggests that improvements in the quality of life may reduce the depression and anxiety rates in this patients.

This results show that psychological assessment to GTD patients is indispensable to help improve their quality of life and decrease the depression and anxiety rates.
WINNERS
POSTER SECTION
EXTENSION
PROJECTS
PREVALENCE OF THE ABUSIVE USE OF psychotropic AGENTS BY MEDICAL STUDENTS IN COLLEGES FROM MIDWEST OF MINAS GERAIS

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All co-authors name: Faria, B. L.;

Mentor name: Guidine, P.A.M

Background: Methylphenidate is a central nervous system stimulant, which belongs to the amphetamines group, acting as a sympathomimetic drug. Despite having well-defined clinical indications such as Attention Deficit Hyperactivity Disorder (ADHD), it has been used indiscriminately in recent years to improve cognitive performance in healthy subjects undergoing a stressful routine, as in the case of medicinal students.

Objectives: To investigate the use of methylphenidate by medical students in order to improve academic performance by evaluating frequency, dosage and adverse effects.

Methods: In the first semester of 2015 and 2017, a sample of 240 academics from 2 medical schools in the midwest of Minas Gerais were randomly selected from the 1st to 8th period (15 students per period) and invited to answer a validated questionnaire developed by Carneiro et al. (2013). The questionnaire contains questions regarding the use of methylphenidate, its adverse reactions, addiction and its use for cognitive enhancement or for other purposes. During the study the identity of each participant was preserved.

Results: Of those interviewed, 12% used the drug without prescription. Of these, 69% believe that the drug increases their concentration and contributes to improving their academic performance; 54% had adverse effects, which are: tachycardia (42%), anxiety (62%), loss of appetite (65%), and behavioral changes (50%). Despite of the adverse effects, 64% continued to use the drug, 45% continuously. Of these, 40% noticed a necessity to increase the dose to maintain their effects and 60% said they had improved their school performance. Those who discontinued the use of methylphenidate, 20% reported having tried other types of drugs to increase school performance. About those who didn’t present side effects, none used the drug for more than 15 days and only 25% increased the dose of the medicine. Among students who switched methylphenidate to another drug to treat their base disease, 25% continue to use methylphenidate during the period of tests in college even without medical advice.

Discussion/Conclusion: There is an elevated prevalence of clandestine use of methylphenidate by healthy people as a cognitive performance enhancing agent, despite the short and long term health damages of using this substance. Most students believe that the drug improves their academic performance, although there is no recent evidence corroborating cognitive improvement in healthy subjects using methylphenidate. In addition, most maintain constant use of this drug despite the presence of significant adverse effects related to prolonged use of the drug (tachycardia) and even short-term use (anxiety, loss of
appetite, tremors). Even those who abandoned the use of methylphenidate as a result of adverse effects reported that they had sought other drugs to replace it in the function of improving academic performance, which could indicate an emotional dependence of the drug as described in the literature.