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FOREWORD

It is with great pleasure that we present the Proceedings of the 2024 Maringá Medical Schools Congress (CEMM 2024), which compile the scientific studies presented during the event held on November 8–9, 2024, at UniCesumar, in Maringá, Paraná, Brazil.

The Maringá Medical Schools Congress has established itself as an important forum for integrating education, research, extension, and professional practice. Jointly organized by the Academic Centers of the three medical schools in Maringá—State University of Maringá (UEM), UniCesumar, and Uningá—the congress strengthens interinstitutional collaboration and provides an environment conducive to the exchange of knowledge and experiences among students, researchers, and healthcare professionals.

Under the theme "Interprofessionalism: Building Bridges in Healthcare," the 2024 edition brought together more than 500 participants, including keynote speakers, attendees, and authors. The event promoted meaningful discussions on contemporary challenges in healthcare delivery while emphasizing the importance of collaborative practice among different health professions to achieve comprehensive, safe, and patient-centered care.

In addition to lectures and workshops delivered by distinguished experts, the congress fostered scientific dissemination through the presentation of research across a wide range of health-related fields. The studies published in these proceedings reflect the commitment of students and researchers to scientific advancement, addressing current and innovative topics of significant relevance to academic education and evidence-based professional practice.

The publication of these proceedings serves not only as a permanent record of the scientific contributions presented during the congress but also as a valuable resource for disseminating knowledge, encouraging future research, strengthening collaborative networks, and promoting scientific and technological development in the health sciences.

The Organizing Committee and the Scientific Committee express their sincere gratitude to all authors, reviewers, speakers, sponsors, and participants whose dedication contributed to the success of this edition of the congress. We hope that the studies compiled in this volume will serve as a valuable source of reference, inspiration, and encouragement for the continued advancement of scientific research, reaffirming the commitment of the participating institutions to excellence in professional education and knowledge production.

We wish all readers an enriching and productive reading experience.



EPIDEMIOLOGICAL PROFILE OF COLORECTAL CANCER DEATHS IN BRAZIL, FROM 2012 TO 2022

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ABSTRACT: This study examines the epidemiological profile of colorectal cancer (CRC) mortality in Brazil between 2012 and 2022. Colorectal cancer is one of the leading causes of cancer-related deaths, influenced by both modifiable and non-modifiable risk factors. The research focuses on analyzing demographic data (such as age, sex, and race/color) and clinical information (including cancer stage and treatments) of individuals who died from CRC, in addition to exploring the geographic distribution of deaths and access to healthcare services. The objective is to provide support for improving prevention and screening policies, aiming for early detection and a reduction in mortality. The methodology involves a cross-sectional, retrospective study, utilizing data primarily obtained from DATASUS and academic sources. Time series analyses were conducted to identify trends in mortality over the specified period. Incomplete or inconsistent records were excluded from the analysis. The results showed that, between 2012 and 2022, there was an increase in deaths, except in 2020, due to the COVID-19 pandemic. Furthermore, colorectal cancer has a slight predominance of deaths among women (51.96%) compared to men (48.04%). The difference, although small, can be attributed to the loss of the protective effect of estrogen after menopause. The majority of deaths occur among individuals aged 60 to 80, with a median age of 69 years. Regular screening is essential for early detection and better chances of cure. In terms of marital status, married and widowed individuals account for the majority of deaths, suggesting that factors such as age and lifestyle are significant determinants. Only 31.9% of patients died during surgeries, indicating that most deaths occur outside the surgical environment. Most deaths are among white individuals (66%), with brown individuals (23.8%) and black individuals (5.93%) in smaller proportions. São Paulo and Rio de Janeiro recorded the highest number of cases, due to their high population density and better reporting. Lower education levels are associated with a higher risk and worse prognosis, suggesting the importance of awareness campaigns. Furthermore, most deaths occurred in advanced stages of the disease, with low adherence to early screening. The study highlighted the need for more effective public health policies to

increase access to early diagnosis, especially in less developed areas. The high mortality reflects the need for intervention in modifiable risk factors and the expansion of prevention and screening campaigns.

KEYWORDS: Colorectal neoplasms, Mortality, Mass screening, Epidemiology, Risk factors.

ANATOMICAL VARIATION OF THE OBTURATOR ARTERY: A CASE REPORT

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ABSTRACT: The discovery of anatomical variations is of significant importance in clinical diagnosis and surgical treatment, as it contributes to the scientific knowledge of health professionals and provides support for interpreting various situations. The obturator artery is a branch of the internal iliac artery that experiences the most anatomical variation. It is a structure located in the pelvic cavity, with diverse origins and branching patterns, as well as important surgical and clinical implications. It courses anteroinferiorly over the obturator fascia of the lateral pelvic wall, between the obturator nerve and vein, exiting the pelvis through the obturator canal (MOORE; DALLEY; AGUR, 2020). Typically, this structure is a branch of the internal iliac artery, which is crucial for surgeons performing repairs of femoral hernias and pelvic surgeons. In this regard, understanding the variability of the vascular anatomy in the pelvic region is essential, as a lack of knowledge can lead to iatrogenic injuries and hemorrhages, especially during inguinal herniorrhaphies. This study aims to report the anatomical variation of the origin of the obturator artery bilaterally. This study was conducted in 2024, in compliance with Federal Law No. 8,501, of November 30, 1992, using an adult female cadaver from the Anatomy Laboratory of the Department of Morphological Sciences at the State University of Maringá (UEM), fixed in 10% formalin. During the study of the internal iliac artery, an anatomical variation of the origin of the obturator artery was observed, varying between the two sides. In the dissected female pelvis used for this study, two different origins of the obturator artery were found in the same pelvis, indicating differences between the right and left sides. On the right side, the obturator artery originates from the superior gluteal artery, a branch of the posterior division of the internal iliac artery. In contrast, on the left side, the obturator artery arises from a common trunk with the internal pudendal and inferior gluteal arteries, which originate from the anterior division of the internal iliac artery. Based on the obtained data,



we confirm the literature regarding the varied origins of the obturator artery and its possible surgical relationships and risks, such as iatrogenic injuries, pelvic fractures, and acetabular fractures, which can result in severe hemorrhages that endanger the patient's life. Therefore, knowledge of pelvic vascularization is crucial for the quality and accuracy of surgeries, thereby reducing the risks of the quality and accuracy of surgeries, thereby reducing the risks of complications in surgical practice.

KEYWORDS: anatomy; pelvis; blood vessel dissection; internal iliac artery

RISKS AND BENEFITS OF USING SCLEROTHERAPY IN THE TREATMENT OF VARICOSE VEINS

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ABSTRACT: The venous circulation of the lower limbs is composed of a complex network of superficial and deep veins, essential for blood return to the heart. Varicose veins, in turn, are characterized by dilated and tortuous veins that result from weak venous walls and malfunctioning valves, leading to pathological reflux and increased venous pressure. As the disease progresses, symptoms such as pain, swelling and skin changes compromise the quality of life of patients. Risk factors such as advanced age, sedentary lifestyle, obesity and long periods in an upright position contribute to the development of these conditions. In this context, sclerotherapy emerges as a prominent minimally invasive treatment for varicose veins, offering benefits such as proven efficacy, lower cost and reduced recovery time compared to traditional surgical procedures. However, it is crucial to analyze the associated risks, including possible side effects and complications such as deep vein thrombosis and skin hyperpigmentation. This study aims to discuss the risks and benefits of using sclerotherapy to treat varicose veins, delving into its mechanisms, indications, and differences in relation to other therapeutic modalities, in order to contribute to clinical practice and future research on the subject. This is a narrative review of the literature, using the following health descriptors: Varicose Veins; Vascular Surgery; and Sclerotherapy. The databases consulted were PubMed, SciELO, and LILACS, using the aforementioned descriptors. Articles published between 2019 and 2024, in

English and Portuguese, were included. References published outside the described period or whose full text was not available in full were excluded. There was no discrimination regarding the type of study, including both observational studies and literature reviews. As a conclusion of the present study, it was possible to observe the great advance that has been emerging in the minimally invasive approach, sclerotherapy, in the treatment of varicose veins, where it has proven to be highly effective, especially when used in its foam form, which allows for lower costs and recovery time for the patient and delivers superior results to other minimally invasive procedures and results similar to the surgical procedure of removing the affected veins. It is also worth highlighting the importance of accurate diagnosis for the correct indication of sclerotherapy, aiming at the reduction of possible complications, such as skin hyperpigmentation, ulcers and deep vein thrombosis, whose incidence presented in the studies are minimal, thus making the procedure safe and cost-effective.

KEYWORDS: Sclerotherapy; Venous Insufficiency; Varicose Veins; Vascular Surgery; Blood Circulation.

ANEURYSMAL DILATION AND MURAL THROMBOSIS OF A LUSORIAN RIGHT SUBCLAVIAN ARTERY: CASE REPORT

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ABSTRACT: Introduction: The aortic arch (AA) typically has three main branches, but anatomical variations, such as the lusory artery (LA), occur in 0.5% to 1% of the population (Cronenwett; Johnston, 2016). The LA, or aberrant right subclavian artery, results from the incomplete regression of the right fourth aortic arch during embryonic development (Kondori et al., 2016; Schoenwolf et al., 2015). This anomaly can compress adjacent structures, leading to symptoms like dysphagia (lusory dysphagia) in up to 84% of cases (Myers et al., 2010). Other manifestations include dyspnea, retrosternal pain, weight loss, and back pain (Leite et al., 2017). LA is also associated with an increased risk of aneurysm, with a rupture rate of 19%, often fatal (Polguy et al., 2014). Furthermore, this variation is frequently observed alongside congenital heart anomalies, such as aortic coarctation and Tetralogy of Fallot (Leite et al., 2017). Clinical diagnosis is supported by imaging



exams such as computed tomography (CT) and CT angiography (Cronenwett; Johnston, 2016). Objectives: This study aims to analyze a case of lusory artery with aneurysmal dilation, focusing on the anatomical variation and the factors influencing clinical outcomes. Specifically, it seeks to detail the pathogenesis of LA, identify symptoms, discuss diagnostic tests and treatment effectiveness. Methodology: This is an observational case report of a patient with a lusory artery aneurysm, conducted at a University Hospital in Northwest Paraná. The patient's medical records were reviewed for the analysis of clinical and imaging exams, such as computed tomography and angiography. Data collection was carried out through hospital systems, and the therapeutic protocols used in the patient's treatment were evaluated in detail. Results: The clinical evaluation included the analysis of imaging and laboratory tests, which confirmed the presence of the aneurysm and the anatomical variation of the lusory artery. The main symptoms presented by the patient, such as dysphagia and retrosternal pain, were discussed, as well as therapeutic options. Surgical intervention was recommended due to aneurysmal dilation, with alternatives such as the placement of endoprotheses being considered. The aneurysm was resected, and the subclavian artery was reconstructed. Discussion: The lusory artery is the most common variation of the aortic arch, and its association with compressive symptoms and aneurysms makes it a condition of high clinical relevance. Surgical management is the treatment of choice in cases of aneurysmal dilation, with open surgery often being the most indicated. However, endovascular approaches, such as the use of endoprotheses, are promising alternatives, although they carry the risk of left subclavian artery obstruction. Individualized treatment is essential, as each case presents unique anatomical and clinical characteristics. The prognosis is generally favorable after surgical intervention, with low mortality rates. This case report contributes to understanding the lusory artery and its implications in clinical practice, especially in managing associated aneurysms.

KEYWORDS: Aneurysm, Deglutition Disorders, Vascular Surgical Procedures, Congenital Abnormalities, Subclavian Artery.

GARDNER SYNDROME IN A YOUNG WOMAN PRESENTED BY FAMILIAL ADENOMATOUS POLYPOSIS (FAP) AND DESMOID TUMOR – CASE REPORT

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ABSTRACT: Introduction: Familial adenomatous polyposis (FAP) is due to an autosomal dominant mutation, with loss of function in the APC tumor suppressor gene. The main manifestation of the Gardner's syndrome (GS) is the FAP. In addition to the multiple colonic polyps this syndrome is characterized by multiple osteomas and desmoid tumors (DT) that are characterized by a rare clonal fibroblastic proliferation in deep tissues with local infiltrative growth, but without the ability to metastasize. Objective: To report the case of a 24-year-old patient with Gardner's syndrome, manifested by FAP associated with desmoid tumor in the abdominal wall, who underwent surgical treatment for both. Methods: Prior to reporting the case, the patient's authorization was obtained according to the informed consent form (ICF). A literature review of other cases of FAP with different evolutions and treatments was performed for comparison. Finally, the case study of this patient according to the medical records provided by the hospital. Results: A 24-year-old female patient with a family history of familial adenomatous polyposis initially presented with a large abdominal mass with rapid growth associated with a 14-week pregnancy. During the consultation, a large and hardened pelvic mass was observed in the left abdomen. A core needle biopsy of the mass was performed under ultrasound guidance and revealed a desmoid tumor. It was decided to wait until the end of the pregnancy to continue the tests to evaluate the best treatment. After the end of the pregnancy, the patient underwent resection of the desmoid tumor from the abdominal wall with reconstruction using a Marlex® mesh. The anatomopathological examination of the abdominal wall tumor resection product showed desmoid fibromatosis measuring 16 cm with free margins. After surgical recovery, the patient underwent colonoscopy which showed multiple polyps distributed throughout all colonic segments, sparing the rectum, compatible with adenomatous polyposis. The anatomopathological examination showed low-grade dysplastic polyps and a larger lesion measuring 5 cm in the rectosigmoid, with high-grade dysplasia. The therapeutic plan



was total colectomy with ileorectal anastomosis. Conclusion: This case, is an example of Gardner's Syndrome in which the FAP is characterized by multiple colonic polyps sparing the rectum and the total colectomy preserving the rectum with ileorectal anastomosis avoiding permanent deficit in intestinal function, despite the extensive area of resection. This case is important because it shows that a potentially serious disease affecting a young patient can be treated appropriately with less morbidity and consequences.

KEYWORDS: adenomatous polyposis, surgical oncology, gardner's syndrome

COMPLICATIONS OF THE USE OF POLYMETHYLMETHACRYLATE (PMMA) IN AESTHETIC PENILE BIOPLASTY

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ABSTRACT: Polymethyl methacrylate, or PMMA, is a synthetic, non-absorbable polymer composed of microspheres ranging in size from 30 to 103 µm, used in several areas of medicine, especially in urology. In this regard, it has favorable properties with versatility and durability, however, it corroborates real chances of complications, such as abscesses and adverse reactions. In clinical and surgical practice, PMMA is used for penile bioplasty, with the aim of increasing the diameter of the male reproductive organ, focusing mainly on aesthetic function. In Brazil, PMMA is a product approved by Anvisa, but its use goes beyond its indications, resulting in serious complications. As a result, there is a possibility that the body recognizes this material as a “foreign substance”, leading to an exacerbated immune response and generating concern about the procedure, given its possibility of tissue necrosis, inflammatory granulomas and abscesses. Thus, this is an integrative review study, with the aim of exploring and synthesizing previously published information on the concepts and consequences of the aesthetic use of polymethylmethacrylate (PMMA). The search sources will be selected from recognized academic and scientific databases, such as PubMed, Scielo, Google Scholar and UpToDate. Studies published in the last 5 years will be included, including: national and international literature published in English and Spanish. Data collection will consist of reading and extracting

relevant information, conclusions and gaps identified regarding the erroneous use of PMMA. Thus, the objective is to conduct an integrative review with the aim of deepening and understanding the clinical and surgical manifestations of the use of PMMA in penile bioplasty, aiming to contribute to the knowledge of risks and contraindications, in order to achieve a safer, more ethical and effective clinical practice. This study is expected to demonstrate the acute and chronic complications caused by the indiscriminate use of PMMA, in order to increase the caliber of the penile shaft. Among the acute complications, we can highlight vascular embolism, necrosis, allergic reaction or infection, and among the chronic complications, the formation of granulomas, deformities and chronic inflammatory reaction. In addition, the research aims to explain the harm caused by improper handling of the product and its consequences, caused by errors in the technique due to injection of the material in an inappropriate place, needle of an inappropriate diameter and low-quality components. Finally, the aim is to understand clearly and objectively the real indications for the use of PMMA in penile bioplasty, its possible side effects, precautions, correct surgical and clinical management and mainly, safer and more effective alternative interventional methods to achieve a good prognosis. Thus, it is concluded that polymethyl methacrylate is a chemical compound used mainly in aesthetic procedures, which is approved by ANVISA and authorized for use by specialized medical professionals. However, because it is a cheap and easily accessible product, there are numerous cases of unwanted complications due to technical difficulties in application, performed by unqualified professionals and the low quality of the material. Therefore, it is essential to promote information to the population interested in using the product, explaining its harmful effects and risks due to improper use.

KEYWORDS: PMMA; Phalloplasty; Abscess.



MOHS MICROGRAPHIC SURGERY (MMS): RELEVANCE AND SAFETY FOR THE TREATMENT OF CERTAIN TYPES OF SKIN CÂNCER

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ABSTRACT: Mohs micrographic surgery (MBC) is the most effective technique to treat the most common skin cancers, such as basal cell carcinoma (BCC) and squamous cell carcinoma (SCC). Developed by Dr. Frederic E. Mohs in the 1930s, the technique allows precise mapping of the affected area, using microscopy of the surgical margins. With technological advances, such as the use of cryostat, CMM enables real-time cuts and examinations during surgery, reducing tissue removal and preserving healthy skin. It is especially indicated for cases of BCC and SCC, with high cure rates and good aesthetic results. The study aims to explore the knowledge of Mohs micrographic surgery, emphasizing its relevance and safety in the approach to certain types of skin cancer, with emphasis on BCC and CPB. It is a narrative review that analyzed Mohs micrographic surgery to treat skin cancers, such as basal cell carcinoma and squamous cell carcinoma. The articles were collected in the Virtual Health Library and SciELO, using specific descriptors and combinations with "AND". It included full texts, with no restrictions on language or date of publication, covering the period from 2000 to 2023. The selection of studies occurred in three stages: reading of the title, abstract and full text, according to the relevance to the theme. In Brazil and the USA, only dermatologists trained in Mohs Surgery (MMC) can perform the procedure, which involves 12 months of supervised training. During the training, they learn to histologically evaluate the wounds and perform reconstruction. The classic surgical technique involves demarcating the tumor and the margins to be excised (1 to 2 mm), using dermoscopy. After antisepsis and local anesthesia with vasoconstrictor, the tumor is removed and the histological slides are prepared for analysis. Next, a two-dimensional mapping of the lesion is done to verify whether the margins are positive or free of residual tumor. If the margins are positive, a new margin of 1 to 2 mm is removed in the compromised area. If the margins are free of tumor, the surgeon may proceed with

wound reconstruction. MMC is indicated for the treatment of high-risk BCC and SCC or in delicate esthetic areas. It is a safe procedure, simple postoperative complications and serious adverse events were reported in 0.72% and 0.02% of cases, respectively. The cure rate is 92% to 99% for primary BCC and SCC. In this way, Mohs micrographic surgery allows the dermatologist to act as a surgeon and pathologist, ensuring the precise removal of tumors and immediate reconstruction of the wound. It is considered the gold standard in the treatment of selected basal cell carcinoma (BCC) and squamous cell carcinoma (SCC), as it ensures that the tumor has been completely removed, unlike conventional surgery, which can leave tumor residues, so its knowledge should be widely disseminated.

KEYWORDS: Keywords: Mohs surgery; Basal cell carcinoma; Squamous cell carcinoma.

ETHICAL ASPECTS OF USING 'BEFORE AND AFTER' IMAGES IN AESTHETIC AND RECONSTRUCTIVE SURGERIES: PRIVACY, CONSENT, AND THE IMPACT ON THE DOCTOR-PATIENT RELATIONSHIP

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ABSTRACT: The use of "before and after" images in aesthetic and reconstructive surgeries has become a common and effective practice to demonstrate the results of medical procedures, especially with the growth of social media and digital advertising. These images are widely used as a marketing tool by plastic surgeons and other healthcare professionals. However, this practice raises significant ethical concerns, particularly regarding patient privacy, informed consent, and the impact on the doctor-patient relationship. CFM Resolution No. 2,336/2023 directly addresses these issues, imposing strict guidelines to ensure that the use of such images is conducted ethically and responsibly, protecting patients' rights and ensuring transparency (CFM, 2023). One of the main risks associated with this practice is the manipulation of images, either through editing or in inappropriate contexts, such as purely commercial use. This can create unrealistic expectations



among both patients and the general public, distorting the perception of surgical results. Therefore, it is crucial that the use of these images adheres to ethical principles of beneficence, non-maleficence, autonomy, and justice, preserving the integrity of the doctor-patient relationship and ensuring accuracy in the visual communication of surgical outcomes (CHAPMAN; DEVRIES, 2020). The aim of this integrative review is to examine the ethical aspects related to the use of "before and after" images in aesthetic and reconstructive surgeries, focusing on issues such as privacy, informed consent, and the impact of this practice on trust between doctors and patients. Furthermore, the review seeks to discuss the implications of CFM Resolution No. 2,336/2023 and propose ethical approaches that ensure the appropriate use of these images, protecting patients' rights and avoiding unrealistic expectations. To conduct this review, a search was performed in databases such as PubMed, SciELO, LILACS, and Google Scholar, using descriptors like "ethical aspects," "before and after images," "aesthetic surgery," "privacy," and "informed consent." Articles published between 2019 and 2024 were selected, along with regulatory documents like CFM Resolution No. 2,336/2023. The results of this review show that, although the use of "before and after" images is a widespread practice, it presents significant ethical risks. The dissemination of images without proper informed consent can compromise patient privacy and weaken the trust in the doctor-patient relationship (CHAPMAN; DEVRIES, 2020). Additionally, digitally altering images to exaggerate results is considered unethical as it creates unrealistic expectations (GOLDMAN; FITZPATRICK; CHILUKURI, 2017). In conclusion, the use of "before and after" images in aesthetic and reconstructive surgeries involves important ethical considerations, particularly regarding privacy, informed consent, and the impact on the trust between doctors and patients. CFM Resolution No. 2,336/2023 offers guidelines to ensure ethical and responsible practices, preventing manipulations and ensuring explicit, informed consent from patients.

KEYWORDS: Medical Ethics, Informed Consent, Aesthetic Surgery, Privacy

ULTRASONOGRAPHY IN LIPEDEMA: INTEGRATIVE REVIEW ON DIAGNOSIS AND EFFECTIVE MANAGEMENT

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ABSTRACT: Lipedema is a chronic loose connective tissue disease characterized by abnormal deposition of subcutaneous adipose tissue, predominantly in the lower limbs and buttocks, but may also affect the upper limbs. Often underdiagnosed, this condition is often confused with obesity or lymphedema. The adipose tissue associated with lipedema is distinguished by its association with inflammatory processes and fibrosis, making early diagnosis and accurate assessment essential for effective management of the disease. Although the literature has already demonstrated an unquantified increase in subcutaneous tissue thickness by means of magnetic resonance imaging and computed tomography, ultrasound has proven to be a more relevant tool for the diagnosis and monitoring of lipedema, in addition to assisting in the definition of diagnostic criteria and staging of the condition. The objective of this study is to analyze the effectiveness of ultrasonography in the diagnosis and management of lipedema. To achieve this objective, an integrative review of the literature was carried out, with an exploratory and descriptive focus, using a qualitative approach and a retrospective bibliographic procedure. The research involved the selection of articles indexed in the electronic databases PubMed and LILACS, covering publications between 2014 and 2024. The descriptors used were: "Lipedema", "Lipedema and Ultrasound" and "Lipedema, Ultrasound and Diagnosis". Publications in Portuguese, English and Spanish from the established period were included. The results indicate that ultrasonography (USG) is a valuable tool in complementing the diagnosis, monitoring the evolution of the disease and elucidating differential diagnoses. In addition, the use of ultrasound in clinical practice can allow for more personalized interventions, taking into account the individual characteristics of each patient. Therefore, ultrasound proves to be an important resource in the diagnosis and management of lipedema, offering a detailed assessment of changes in adipose and lymphatic tissues. Its application not only improves diagnostic accuracy but also guides therapeutic planning, allowing for more effective interventions. Furthermore, it is a low-cost and painless assessment method. The integration of ultrasound into clinical routine can significantly contribute to better management of lipedema, promoting the quality of life of patients. Therefore, it is essential to encourage the training of health professionals in the use of this technology, expanding its use in the diagnosis and treatment of lipedema.

KEYWORDS: Lipedema; Ultrasonography; Diagnosis



IMPACT OF EXPERIENCE IN AN ACADEMIC SURGERY LEAGUE ON THE CHOICE OF MEDICAL RESIDENCY

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ABSTRACT: Academic leagues are non-profit scientific civil associations managed by students under teacher guidance, which cover a particular area. Their goal is to provide their members with educational, scientific, cultural and social activities (MORAES et al., 2018), anticipating the insertion of students in fields of activity and stimulating their autonomy. Participating in the academic leagues' curricular internships is an important component of the medical student's graduation process, and may influence the future specialty choice (PONTES; TORREÃO, 2019). The field of surgery, in particular, demands the development of critical thinking skills and the ability to make quick decisions, which are often not further explored during undergraduate studies (ALAQEEL et al., 2023). Therefore, academic leagues not only supplement theoretical-practical content through the contact with professional experience, but also increase understanding and interest in the surgical specialty. To report the experience of students who are members of an Academic Surgery League, highlighting how this participation influences their future decisions regarding the choice of medical residency. The Academic Surgery League is made up of 31 medical students. From May 2023 to the present day, the students have taken part in specific classes on topics within the specialty, accompanied surgeries under the supervision of preceptors, assisted in surgical procedures and cooperated in clinical case discussions before and after surgeries. Extracurricular internships provide students with crucial experiences when choosing a medical residency. Of the 31 participating students, more than half reported that participating in surgeries guided their choice of specialty, whether it was working in a surgical area or moving to clinical practice. Experiencing the routine within the specialty was one of the most significant aspects for students. Most reported that the necessary technical skills and discussions of clinical cases before and after surgeries significantly impacted the decision-making process. These findings are aligned with the literature, which highlights

the significant role of the academic leagues in training doctors better prepared and aware of their professional choices (MORAES et al., 2018) (SAUD ABDULAZIZ ALAQEEL et al., 2023). Participation in leagues, as observed in the study of the UNIFESP Neurosurgery League, was essential for students to become familiar with medical practice, directly influencing their decisions to opt for specialties such as neurosurgery. This reinforces the importance of these leagues in creating an environment favorable to the development of specific interests and for taking more informed decisions about the choice of residency. Therefore, participation in academic leagues not only complements theoretical training, but also plays a crucial role in defining the specialty chosen by students. The participation of students in the Academic Surgery League proved to be an important element in the training of future doctors, especially when choosing a medical residency. The integration between theory and practice was essential for the development of clinical reasoning and for a deeper understanding of the specialty, showing the daily reality of professionals who work in this specialty.

KEYWORDS: Medical Education, Curriculum, Students, Medical Speciality

EFFECT OF DIETS WITH DIFFERENT WHEAT GLUTEN FRACTIONS ON THE MYOCARDIAL STEREOLOGY OF RATS

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ABSTRACT: Gluten, the primary storage protein in wheat, is a mixture of various proteins, including gliadin and glutenin. It is present in many foods consumed daily, but there is a growing trend towards reducing its consumption due to health concerns. While the relationship between gluten and digestive diseases is well established, studies on its impact on cardiovascular diseases show contradictory results. The present study aimed to evaluate the effect of feed with increasing levels of gluten on the heart morphology of Wistar rats. The experimental procedures were submitted for analysis by the Animal Ethics Committee (CEUA) at the State University of Maringá (UEM). The experiment used 50 male Wistar rats (n=10 per group), 21 days old. Five groups were formed with different levels of gluten in the feed: G0 (gluten-free), G14 (14% gluten), G42 (42% gluten), G70 (70% gluten), and G70/0 (70% gluten until 70 days, followed by a gluten-free diet). After 100 days of



treatment (121 days of age), the rats were weighed and euthanized, and the heart was collected and weighed for analysis. All hearts underwent standard histological procedures. The stereological parameters analyzed were: numerical density (expressed as the ratio of cardiomyocyte and vessel nuclei per area) and proportional volume density (Vv) of the heart muscle (cardiomyocyte), connective tissue (collagen), and blood vessels, where $Vv = Pp/Pt$, represented as a percentage (%). Statistical analysis was performed using ANOVA, considering a significance level of 95% ($p < 0.05$). The analysis of the rats' hearts considered three parameters: body mass, heart mass, and cardiosomatic index. The average body masses were: G0 (436.78 g), G14 (403.5 g), G42 (436.9 g), G70 (461.78 g), and G70/0 (450.5 g), with a significant difference ($p = 0.015$). The average heart masses were: G0 (1.97 g), G14 (1.84 g), G42 (1.81 g), G70 (1.96 g), and G70/0 (1.80 g), with no significant difference ($p = 0.14$). The cardiosomatic index varied between the groups: G0 (0.39%), G14 (0.41%), G42 (0.38%), G70 (0.39%), and G70/0 (0.38%), with a significant difference ($p = 0.04$). In terms of numerical density, no significant differences were found between the groups ($p = 0.19$). However, the volume density of myocytes was statistically significant ($p = 0.01$), as was the density of vessels ($p = 0.02$). The average collagen densities showed no significant difference ($p = 0.57$). Individual results showed significant differences between groups G0 and G70/0, and G14 and G70/0, for cardiomyocytes and vessels. Animals subjected to diets with high levels of gluten showed significant differences in body mass, particularly in the G70 group, but not in heart mass. Stereological analyses indicated variations in the densities of myocytes and vessels, but no significant differences in numerical density and collagen density, highlighting the need for further research to elucidate the impact of gluten on heart tissue.

KEYWORDS: heart, gluten, histology, morphology

RELATIONSHIP BETWEEN AUTISTIC SPECTRUM DISORDER AND CHANGES IN THE PREFRONTAL CORTEX: A LITERATURE REVIEW

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ABSTRACT: The remarkable complexity of the brain, especially the areas related to higher functions, are strongly associated with the frontal regions¹. The prefrontal cortex

(PFC) located in the anterior non-motor region of the frontal lobe, for example, underwent great development throughout human evolution, occupying approximately 25% of the total surface of the cerebral cortex. This region maintains connections with practically all cortical areas, which gives it the ability to coordinate various neural functions, therefore being fundamental to intelligent behavior². Functionally, the PFC can be subdivided into the dorsolateral prefrontal area (responsible for executive functions)² and the orbitofrontal and ventromedial prefrontal area (involved in processing emotions, controlling impulses, maintaining attention and social behaviors)³. In this context, Autism Spectrum Disorder (ASD) - a complex neurodivergent disorder, may be related to changes in brain development, specifically in the PFC. Studies demonstrate neuronal activity in this area, which may be associated with typical ASD symptoms such as cognitive inflexibility, repetitive behaviors, difficulties in modulating affective responses and decision-making. This article sought to better understand the changes in the PFC that may be associated with the symptomatology of the disorder. As a literature review, this study was limited to Portuguese and English languages ??and used only the PubMed platform to select articles that linked PFC studies to ASD, in human or animal models. To this end, the following descriptors were used in English, according to the DeCS/MeSH platform: “Autism Spectrum Disorder”, “Prefrontal”, “volume”, “Thickness”, “Synapses” and their equivalents in Portuguese. The words were randomly arranged in the search bar and only studies from 2020 to 2024 were selected, thus totaling 33 articles. Systematic reviews, meta-analyses and simple reviews were excluded. Articles that addressed other cortical regions or studied a lack of substances as a risk factor for ASD by triggering changes in the prefrontal region were also disregarded. Thus, 9 articles were selected. The results were divided into macroscopic and microscopic analysis of the PFC. Regarding brain macroscopy of individuals with ASD, one of the studies demonstrated a relationship of greater bilateral symmetry in the PFC in individuals with the disorder compared to the control group, being even more significant on the surface of the orbitofrontal cortex. Furthermore, with regard to cortical thickness, the results indicated no significant change. In the microscopic analysis of the neurons, a lower density of these nerve cells in these specific regions was indicated. Furthermore, morphological aspects of neurons in the PFC were analyzed, and it was found that the sum of cell bodies and the density of dendritic spines were lower in relation to the neurotypical group. Finally, it was also seen that there was a change in the inhibitory interneurons of the PFC, as these were quantitatively reduced in people with ASD. The analysis of the studies reviewed here allows us to conclude that there is in fact a close relationship between ASD



and significant macro and microscopic changes in the PFC that can explain the symptoms expressed in ASD and, therefore, deserve to be better studied.

KEYWORDS: Orbitofrontal cortex, ASD domain, central nervous system, neurodevelopmental disorders

JUVENILE SOCIAL ISOLATION STRESS HAS NO IMPACT ON THE THICKNESS OF THE CORPUS CALLOSUM IN ADULT MALE RATS

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ABSTRACT: Chronic exposure to stress in childhood, especially those related to emotional trauma, is linked to the predisposition to major depression in adulthood¹, in addition to other psychiatric disorders such as schizophrenia². This susceptibility triggered by stress is partly explained by the fact that cortical areas such as the prefrontal and hippocampus remain under development even in the postnatal period³, in the same way that the development of glial cells⁴ and the myelination process also occur during this period, which is maintained until in adulthood⁵. Few studies have analyzed the impact of stress on the white matter, but the existing ones have already verified that stress can promote an increase in myelination, resulting in an increase in the volume of the intra-axial bundle in the fibers of the corpus callosum. However, in terms of social isolation, there is no conclusive data on the impact of this type of stress on this structure. To verify the long-term effect of social isolation stress (SIS) in the juvenile phase on the thickness of the corpus callosum in the corpus and splenium regions of the corpus callosum. Experimental research approved by CEUA/UEM (nº 9639231121), in which 10 male Wistar rats (*Rattus norvegicus*) housed in standard lighting and temperature conditions (22±2 °C), with food and water ad libitum were, after weaning (postnatal day 21-P21), separated into two groups: control (C) and social isolation stress (EIS), the animals remained isolated for 15 days and after this period the EIS group was resocialized between days P35 and P67, where on the last day they underwent anesthesia and perfusion with 0.9% saline and Bouin. After these procedures, the brains were subjected to cryoprotection with 30% sucrose and processed in a cryostat at 40um, and stained using the Cresyl Violet technique. For quantitative analysis of the

thickness of the corpus callosum, a micrometer ruler was used in the eyepiece of the Nova Optical Systems optical microscope using a 10X objective, where the body and splenium regions of the corpus callosum were analyzed in 7 different sections of the structure. Although there was an increase in the thickness of the corpus callosum in the isolated group compared to the control, this increase did not reach statistical significance. The small variation found between groups C and EIS suggests that the stress of social isolation applied in childhood was not intense enough to cause changes in the thickness of the corpus callosum.

KEYWORDS: Social Isolation, Rats, Male, White Matter.

ALICE IN WONDERLAND: A JOURNEY THROUGH THE MAZE OF MENTAL DISORDERS

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ABSTRACT: Alice in Wonderland Syndrome (AIWS) is characterized by perceptual distortions, visual and somesthetic changes such as macropsia/micropsia, macrosomatognosia/microsomatognosia, teleopsia/pelopsia, occasional changes in the sensation of time or objects moving faster or slower, and occasional hypersensitivity to light and sound. Its etiology can stem from conditions such as migraine; infections including Epstein-Barr virus, Influenza A, Creutzfeldt-Jakob disease, SARS-CoV-2, Lyme neuroborreliosis; arteriovenous malformation; epilepsy; neoplasia; psychoactive substance use or medication; psychiatric disorders; among other organic conditions. The aim of this study was to relate Alice in Wonderland Syndrome to mental disorders, specifically anxiety disorders, depressive disorders, and bipolar disorder. This is an integrative literature review based on studies available in the SciELO, PubMed, Biblioteca Virtual em Saúde, Portal Capes, Lilacs, and Google Scholar databases. The following steps were followed to conduct the study: topic identification; formulation of the guiding question; selection of health science descriptors and databases to be used; establishment of inclusion and exclusion criteria for articles; literature search; collection of articles based on title and abstract; tabulation of studies meeting inclusion criteria; critical data analysis; results acquisition; discussion and writing of the review study. The inclusion criteria were articles published between 2010 and 2023, in English or



Portuguese, with participants having AIWS and a mental disorder (anxiety disorder, depressive disorder, or bipolar disorder). Participants diagnosed with a mental disorder by a physician or who scored adequately on official tests were considered. Exclusion criteria were review articles, articles that did not meet the study objective, or those repeatedly indexed in databases. Out of 88 articles, 9 were included in this work. Among them, 5 included female patients and 4 male patients. Regarding mental disorders, 6 participants had depressive disorder, 4 had anxiety disorder, and 1 had bipolar disorder. As for diagnosis classification, 4 were AIWS-V, 1 was AIWS-T, and 4 were AIWS-M. Only 3 patients did not report temporal distortion symptoms in AIWS. All studies, except for two, reported normal results in physiological, neurological, laboratory, or ophthalmological exams. AIWS may occur either as a cause or consequence of mental disorders, with theories of temporal and spatial distortions, as well as the Autonomous Sensory Meridian Response phenomenon, explaining the connection between both diagnoses. This study compiles works in which Alice in Wonderland Syndrome coexists with mental disorders (anxiety, depression, or bipolar disorders), highlighting the need for further research on diagnostic criteria and treatment strategies. Additionally, this research contributes to the limited medical literature on Alice in Wonderland Syndrome.

KEYWORDS: Alice in Wonderland Syndrome, Anxiety Disorders, Bipolar Disorder, Depression Disorder, Perceptual Distortion.

WELL-DIFFERENTIATED LIPOSARCOMA OF THE ESOPHAGUS: CASE REPORT

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ABSTRACT: The main differential diagnosis for giant fibrovascular polyps of the esophagus is well-differentiated liposarcoma, a rare condition that can mimic fibrovascular polyps. Both share similar clinical characteristics, such as dysphagia, weight loss and odynophagia, but liposarcoma is more aggressive. Overexpression of the MDM2 gene identified through FISH - the in-situ hybridization method - and immunohistochemistry are the main tools for distinguishing these two pathologies. Liposarcomas are more common in men aged between 50 and 60, usually located in the proximal third of the esophagus, and dysphagia is one of the predominant clinical manifestations. This report describes the

anatomopathological characteristics of an esophageal lesion and highlights the importance of the differential diagnosis between giant fibrovascular polyp and well-differentiated liposarcoma in the esophagus, emphasizing that the correct identification defines the appropriate treatment, considering the distinct clinical implications of each pathology. The study was based on histopathological analysis of the surgical specimen and immunohistochemistry of a tumor in a 52-year-old male patient who presented with progressive dysphagia for around five months, with no history of smoking or alcoholism. Contrast examinations of the esophagus-stomach-duodenum and computed tomography revealed an intraesophageal lesion measuring approximately 9.5 cm. Macroscopically, the lesion had a polypoid appearance, weighing 30g and blackish brown in color. Microscopy revealed a polypoid lesion lined by acanthotic squamous epithelium with areas of ulceration. The stroma showed proliferation of hyperchromatic oval cells in a fibromyxoid matrix, as well as mature fat cells and vessels of varying sizes. Lymphocytic inflammatory infiltrate and areas with characteristics of perineurioma were also observed. The main initial clinical diagnostic hypothesis was fibrovascular polyp of the esophagus. However, the morphology showed hyperchromatic cells and adipose tissue and, according to the literature, most of these cases of large polypoid masses of the esophagus containing adipose tissue currently appear to represent well-differentiated or dedifferentiated liposarcomas, according to the results of molecular tests, such as FISH, which evaluates the amplification of the MDM2 gene and with the use of immunohistochemical studies that reveal the overexpression of MDM2 and CDK4. Due to the difference in the behavior of the two lesions, giant fibrovascular polyp and well-differentiated liposarcoma, the latter of which may present recurrence and metastasis, a complementary immunohistochemical study was carried out to help define the diagnosis. Positivity for the p16, CDK4 and MDM2 antibodies in the neoplasm corroborated the diagnosis of well-differentiated liposarcoma of the esophagus. Liposarcoma is a malignant neoplasm, but it can have a favorable prognosis when there is complete resection, as was the case with this patient, who underwent surgery for total resection of the tumor and had a good evolution. Accurate identification of more aggressive neoplasms, such as liposarcomas, is essential to guide appropriate treatment and improve prognosis. Advanced techniques, such as immunohistochemistry and FISH, are essential to confirm the diagnosis, especially in cases that have clinical similarities with other lesions, such as giant fibrovascular polyps. In this report, immunohistochemistry was decisive for differentiation, reinforcing the need to suspect more aggressive neoplasms based on clinical manifestations,



which allows health professionals to define more appropriate approaches and provide a better outcome for patients.

KEYWORDS: Biopsy, Neoplasm, Digestive system.

THORACIC OUTLET SYNDROME: AN INVISIBLE TRAP FOR THE UPPER LIMBS

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ABSTRACT: Introduction: Thoracic Outlet Syndrome (TOS) is characterized by compression of the neurovascular structures that pass between the clavicle and the first rib, in the region of the thoracic outlet. The condition is subdivided into three main subtypes: neurogenic (nTOS), arterial (aTOS) and venous (vTOS), with the neurogenic form being the most common, accounting for approximately 95% of cases. Clinical manifestations range from pain, weakness, paresthesia, thrombosis and, in more severe cases, upper limb ischemia, which can make diagnosis difficult. With an incidence of up to 10% in the world population and great symptomatic variability, a detailed study and understanding of the syndrome is essential for an accurate diagnosis and appropriate treatment. Objective: To describe the clinical characteristics and diagnostic methods of Thoracic Outlet Syndrome, highlighting its forms of presentation and therapeutic management. Materials and Methods: An integrative literature review was carried out using the PubMed, SciELO and LiLACS databases. The keywords used were: “thoracic outlet syndrome”, “brachial plexus compression” and “subclavian artery”. The data was analyzed between July and September 2024, taking into account works published in Portuguese and English in the last five years and which were relevant in the context of TDS. Results and Discussion: TDS affects individuals of different age groups and both sexes, although it has a higher prevalence in women, with 52% of cases involving the dominant upper limbs. The main risk factors include strenuous physical activity, repetitive movements and, especially, anatomical variations, which account for 82% of cases. In the most prevalent form of the syndrome, Neurogenic TDS (nTOS), the brachial plexus is compressed, leading to pain, paresthesia and, in severe cases, muscle atrophy in the upper limbs. Initial management is based on clinical examinations and provocative tests, such as the Adson test and the elevated arm stress test (EAST), with conservative treatment, often involving physiotherapy. In the

most serious cases, surgery may be necessary to decompress the brachial plexus. The arterial and venous forms of TDS, which together account for 5% of cases, are characterized by compression of the subclavian artery or vein, with symptoms such as edema and high ischemic potential. Treatment of these forms involves the use of anticoagulants and surgery to decompress the affected vessels. Conclusion: Thoracic Outlet Syndrome, although rare, has a wide range of symptoms that make it difficult to diagnose. Early recognition and correct classification between the neurogenic, arterial and venous subtypes are essential for therapeutic success. While neurogenic cases usually respond well to conservative treatments, vascular forms often require surgical intervention. Therefore, a multidisciplinary approach is recommended to optimize diagnosis and treatment, improving the prognosis and quality of life of patients.

KEYWORDS: Thoracic Outlet Syndrome, Brachial Plexus, Surgical Decompression.

COCAINE INTOXICATION AND PROGRESSION TO BRAIN DEATH: A CASE REPORT

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ABSTRACT: Cocaine abuse represents a contemporary public health problem that is often underdiagnosed and hidden, although it is drastically widespread across all socioeconomic strata. Poisoning by drugs of abuse is one of the main causes of emergency care related to the use of chemical substances, and their consumption is strongly associated with an increased risk of mortality due to serious and potentially fatal cardiovascular diseases. Among the main neuropathological complications are vascular events such as strokes, as well as subarachnoid and intracerebral hemorrhages. Early identification of the clinical picture, followed by aggressive resuscitation, is crucial to avoid fatal outcomes. Initial treatment is supportive, and should involve methods to minimize ongoing absorption of the substance. Recent evidence reinforces the need to screen for substance use and raise awareness about the deleterious effects of cocaine, pointing to significant public health implications. This report aims to describe in detail the sequence of clinical events of a patient with cardiorespiratory arrest and possible exogenous intoxication by a psychoactive substance, with the aim of improving knowledge about the therapeutic approach and care required in these cases. The aim is to contribute to



improving clinical practices in the prevention, diagnosis and treatment of intoxication by psychoactive substances, promoting a more efficient and appropriate response to the clinical condition of similar patients. This is a 54-year-old male patient who was referred to the Regional University Hospital of Maringá (HURM) after cardiorespiratory arrest due to hypoxia and probable exogenous cocaine intoxication that progressed to brain death. The information was taken from the medical record notified to the Maringá University Hospital Toxicology Assistance Center (CIATOX/HUM). The 54-year-old male patient was referred to the HURM emergency department in serious condition, Glasgow 3, intubated, with a central venous catheter in the left subclavian vein, without sedation, with a delayed bladder catheter, and taking noradrenaline. On admission, a CT scan of the head, chest and abdomen was carried out and laboratory tests were taken. The patient was placed under intensive care in the emergency room, intubated, sedated and using a vasoactive drug. Initially, the patient was diagnosed with hypoxia secondary to intoxication by a psychoactive substance. Due to this possible diagnosis of exogenous intoxication, marijuana, cocaine, barbiturates, benzodiazepines, amphetamines, methamphetamines, tricyclic antidepressants, methylenedioxymethamphetamine, methadone and morphine were tested in the urine, but only cocaine was detected in the urine. The patient remained in serious condition, intubated and under mechanical ventilation, and had no pupillary reflexes or corneal palpebral reflex. The evolution of the clinical picture reflects the serious consequences of using illicit drugs, such as cocaine, which can trigger severe systemic complications. Cocaine is a sympathomimetic drug with stimulant and euphoric properties in the central nervous system and high doses can cause convulsions, hyperthermia, hypertension, arrhythmias, stroke, aortic dissection, intestinal ischemia and myocardial infarction. Intoxication should be managed with supportive care, including intravenous benzodiazepines to control hypertension and convulsions, and cooling techniques for hyperthermia.

KEYWORDS: Illicit drugs, Brain death, Psychedelics.

COVID-19 AND CHAGAS DISEASE CO-INFECTION INCREASES RISK OF CARDIOVASCULAR COMPLICATIONS IN PATIENTS

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ABSTRACT: Chagas disease (CD), caused by the protozoan *Trypanosoma cruzi*, is a serious and persistent health problem in Latin America, where it is considered endemic, and is characterized by multisystemic disorders that predominantly affect the cardiovascular, digestive, and nervous systems. COVID-19, caused by the SARS-CoV-2 virus and declared a pandemic by the World Health Organization (WHO) in 2020, can progress to acute respiratory distress syndrome, multiple organ failure, and severe cardiovascular damage in its most severe cases. In this sense, the cardiac damage caused by both diseases establishes an important clinical link, exacerbating the risk of serious complications in co-infected patients. Aiming to systematize knowledge regarding co-infections by both diseases, this integrative review considered studies from the PubMed and SciELO databases, including classic literature on CD and studies published on the coronavirus pandemic addressing manifestations and prognosis of comorbidities due to co-infection. Thus, studies revealed that Chagas patients infected with the coronavirus had a higher prevalence of complicated conditions such as atrial fibrillation, heart failure, and pleural effusion. In patients with chronic Chagasic cardiomyopathy, direct damage to cardiac tissue is also possible through the binding of SARS-CoV-2 to the ACE2 receptor in type 2 pneumocytes, cardiomyocytes, vascular pericytes, and macrophages, inducing the release of a storm of pro-inflammatory cytokines, an exacerbated reaction that can lead to microvascular and endothelial dysfunction, myocardial damage, instability, and myocardial infarction. Furthermore, myocardial infarction and microvascular dysfunction in patients with the chronic form of CD could be a cause of ventricular depression in patients co-infected with COVID-19, as this could precipitate arrhythmias by promoting damage to cardiomyocytes. In addition, immunosuppression caused by certain medications or other associated diseases may increase the risk of parasitemia reactivation in CD, which, in severe infections such as COVID-19, can trigger an exacerbated



inflammatory response (cytokine storm) or depression of the immune system. Regarding treatment, the study reveals that CD therapy may interact with COVID-19 medications and have unfavorable consequences for patients. Therefore, in chronic and indeterminate stages of Chagas disease in patients co-infected with the coronavirus, treatment for the parasitosis should be postponed, and treatment for COVID-19 should be prioritized, given that the latter can cause more damage and at greater intensity over a short period. The analyzed literature thus highlighted that the co-infection of SARS-CoV-2 and Chagas disease directly impacts the prognosis of affected patients, especially concerning cardiovascular damage, by intensifying existing dysfunctions caused by the parasitosis, increasing tissue inflammatory responses, immunosuppression, and complications such as acute myocardial infarction, heart failure, and arrhythmias. Furthermore, the need for greater attention to the treatment of Chagas patients co-infected with COVID-19 was emphasized, due to the higher risk of complications and clinical deterioration, making it essential to prioritize treatments that combat the coronavirus.

KEYWORDS: Chagas disease, SARS-CoV-2, co-infection.

A STUDY OF THE RELATIONSHIP BETWEEN ETHNICITY AND HOSPITALIZATIONS FOR ASTHMA IN T THE STATE OF PARANÁ FROM 2018 TO 2022

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ABSTRACT: Asthma is a chronic obstructive pulmonary disease, inflammatory in nature and with heterogeneous clinical presentations, which poses a significant risk of mortality even in mild and controlled cases. Several factors influence the presentation and natural history of the disease, including gender, age, and ethnicity, which relate to the level of disease control and exacerbations (GINA, 2022). Therefore, the present study analyzed the impact of this pathology through the incidence of hospitalizations due to asthma in the health regions of Paraná. This is a descriptive study with secondary data analysis available from DATASUS and SIH/SUS, from the period of 2018 to 2022, interpreted with simple descriptive statistics. Paraná is a state with different ethnicities, predominantly white (69%) and brown (27.47%) according to

updated data from IBGE. Contrary to this data, studies related to asthma demonstrate that the black population stands out, with a high incidence compared to other groups. According to the references, being of black ethnicity represents a risk factor that contributes to a 70% chance of inheriting this pathology (HUGHES et al., 2017). Another population evaluated in the studies was the indigenous population, which presents a low number of hospitalizations related to asthma (0.089%), a figure that can be interpreted by the fact that they represent a numerical minority, but also because they face obstacles such as difficulty accessing healthcare (CARDOSO, 2010). The ethnic variable was analyzed in isolation, however, when considering the population's income and education level, these results change, demonstrating the importance of health education in reducing the number of aggravations and complications (OLIVEIRA, 2018). The ethnic groups in the state of Paraná are distributed heterogeneously across different macro-regions, resulting in a greater number of residents of a certain race in one region compared to others, influenced mainly by the colonization of the State. This predominance of certain ethnicities in some regions leads to increased representation of this group in that area, and as a consequence, we see a higher number of hospitalizations in that region. To illustrate this data, in the northern region of the state, the white race is predominant (2,484 people hospitalized due to asthma complications), while in the eastern region, there is a predominance of browns (2,522 people hospitalized due to asthma complications) (MINISTRY OF HEALTH, 2023). Thus, it is concluded that the study of ethnicities associated with the epidemiological profile of asthma is of utmost importance regarding the management and allocation of resources in each region. It is also essential to understand the variables that influence the disease's pathophysiology, which need to be understood by policymakers for the development of public policies aimed at this pathology.

KEYWORDS: Chronic disease; Respiratory tract diseases; Ethnicity; Hospitalization.

EXPLORING MELANOCYTE TRANSPLANTATION: BENEFITS AND LIMITATIONS IN PIGMENTATION RECOVERY

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ABSTRACT: Vitiligo is a chronic disease characterized by the loss of melanocytes, resulting in white patches on the skin that appear anywhere on the body, in both sexes and all ethnicities, affecting 0.5% of the world population. Its etiology is complex, involving genetic, autoimmune and environmental factors, therefore, although topical, systemic and phototherapeutic treatments are used, they are not always effective and do not achieve a cure. Therefore, melanocyte transplantation has emerged as a promising alternative, transferring healthy cells to depigmented areas, promoting localized repigmentation in patients eligible for the procedure. The objectives are to identify approaches to melanocyte transplantation, their limitations and benefits for patients with vitiligo. This work is an integrative review, with a search for articles in indexed databases. The inclusion criteria were articles published on the subject between 2004 and 2021 in English and Portuguese that address vitiligo and its treatments, with an emphasis on melanocyte transplantation. The articles analyzed show that melanocyte transplantation, despite being a technique from the 1940s, is considered a major advance in the treatment of vitiligo. This procedure involves the transfer of healthy melanocytes to affected areas and can be performed using various techniques, with punch micrografting, which consists of transplanting skin tissue, being the most widely used surgical technique in medical practice. Therefore, careful selection of patients who are candidates for the procedure is necessary in order to minimize complications or undesirable effects. Two factors are essential for the decision to perform surgical therapy. First, the stability of the disease must be considered, which includes the absence of an area of new depigmentation or current lesions that are increasing in size over a two-year period, the absence of the Koebner phenomenon for two years, and spontaneous repigmentation around or in the achromic lesions. Second, the resistance of the disease to conventional therapies must be considered. In addition, preference is given to adult patients who are emotionally stable and aware of the inherent risks, such as incomplete repigmentation or scarring, for the surgical procedure. Finally, patients with stable unilateral vitiligo can have a 95% success rate, and in bilateral vitiligo this percentage reaches 48% of repigmentation. It is concluded that melanocyte transplantation in the treatment of vitiligo has shown to be a promising procedure for skin repigmentation, although it has restrictions for some patients who do not have stable disease, it has shown to have high success rates for those with stable and unilateral disease. Therefore, although it is not a procedure available to everyone, those who are candidates have excellent physical and psychological benefits.

KEYWORDS: Melanocytes, Vitiligo, Transplant.

IMPLANTABLE AND WEARABLE HEARING DEVICES: ADVANCES, APPLICATIONS, AND CHALLENGES IN THE FIELD OF OTORHINOLARYNGOLOGY

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ABSTRACT: Implantable and wearable hearing devices have emerged as innovative solutions in the healthcare field, not only restoring hearing but also monitoring vital signs and functions related to nutrition and communication. This combination of functionalities has the potential to revolutionize medical care, enabling real-time diagnostics and treatments based on continuous data collection and analysis. Reviewing the guidelines related to implantable hearing devices is essential, addressing criteria for selection, preoperative assessments, and surgical techniques. This analysis provides a consensus that helps define otological and audiological indications, ensuring the safety and effectiveness of interventions. At the same time, the application of wearable devices in monitoring physiological functions such as chewing, swallowing, and voice opens new possibilities for population health research. The research included a comprehensive literature review, focusing on clinical and technical studies, and analyzed 179 studies involving over 10 million participants. This approach highlighted the effectiveness of wearable devices in monitoring health and behavioral parameters, such as steps, heart rate, and sleep patterns, as well as their utility in specific functions. The findings indicate that implantable hearing devices have revised guidelines that establish best practices for candidate selection and postoperative follow-up. For wearable devices, real-time data collection enables the creation of predictive health models, with significant implications for the diagnosis and monitoring of diseases. The combination of these technologies points to a promising future in healthcare, improving diagnostics and treatments. However, challenges remain to be addressed, including privacy concerns, interoperability, and the management of large volumes of data generated. The full integration of these devices into clinical environments requires further investigations to validate their effectiveness, as well as approaches that consider ethical and technical aspects. The widespread adoption of these innovations depends on



overcoming these obstacles and establishing robust guidelines to ensure their safe and effective use.

KEYWORDS: Keywords: Devices; Monitoring; Health; Privacy; Otorhinolaryngology.

EPIDEMIOLOGICAL PROFILE OF BRAIN DEATH IN PARANÁ IN 2018

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ABSTRACT: Brain death is caused by irreversible repercussions that affect the central nervous system. Thus, it is confirmed by the absence of breathing, brain stem reflexes and coma. Before starting the protocol to determine brain death, it is necessary to keep the patient under observation for up to 24 hours. Furthermore, the diagnosis must be made by specialists in clinical or surgical neurology, intensivists and emergency physicians. Therefore, with the aim of identifying the epidemiological profile of this pathology in the state of Paraná in 2018, an observational analysis was carried out with open data available through DATASUS. Thus, the study showed a total of 247 women and 263 men reported with brain death in the state. In relation to females, the age groups with the most incidents in descending order were 70 to 79 years old (20.6%), 50 to 59 years old (20.2%) and 60 to 69 years old (19.4%). As for males, they were 50 to 59 years old (20.9%), 60 to 69 years old (19.4%) and 70 to 79 years old (16%). Regarding color, the majority (78.2%) were identified in the Mortality Information System database as white, followed by brown (14.9%) and black (4.5%). On the DATASUS platform there are several forms of occupation to be filled and, due to the range of possibilities, there is the “other” option if it does not fit. In this sense, the largest portion had this category marked with 31%, however, “housewife” was the second most frequent with 19.2% and “retirees” or “pensioners” with 12.7%. Among the causes of brain death, unspecified intracerebral hemorrhage and unspecified subarachnoid hemorrhage had the same and higher incidence with 48 cases each (9.4%) and unspecified cerebral infarction with 41 reports (8 %). Therefore, a similar number of cases is noted between the sexes, with the elderly population being the most evident among all groups aged 18 and over, such that the most predominant underlying causes suggest they are related to greater frailty, risk of falls and accumulation of comorbidities throughout life.

KEYWORDS: Brain death; Health Profile; Incidence.

PRODUCTION OF A DIGITAL BOOKLET AND AUDIOBOOK FOR AWARENESS ON THE GENITAL SYSTEMS THROUGH UNIVERSITY EXTENSION

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ABSTRACT: This experience report describes the creation of a digital booklet titled "Genital Systems: What Do You Know About Them?" and a corresponding audiobook, both developed with the aim of democratizing knowledge about the male and female genital systems, facilitating access to information for diverse audiences. The initiative arose in the context of visits to Casa Nazaré—a shelter for women in situations of social vulnerability—where a significant lack of knowledge about the anatomy and care of genital organs was observed. Faced with this gap, it was decided to develop accessible and informative materials that could contribute to self-care and disease prevention. The booklet addresses fundamental topics such as the anatomy of the genital systems, proper hygiene of the reproductive organs, as well as curiosities that demystify aspects of the human body. The content was organized into specific topics, covering the anatomy of the female genital system, vulva hygiene, anatomy of the male genital system, penis hygiene, and various curiosities. The finalized material has 20 pages, combining illustrative images and scientific text, presented in a simplified and accessible language. For its production, the Canva® app was used, resulting in a visually attractive format that is easy to understand for the target audience. The booklet's development took approximately two months, from conception to completion. In addition to the booklet, an audiobook was created to make the material accessible to people with visual impairments or those who are not literate. The transcription of the booklet into an audio format was carefully adapted, converting the written and visual language into a verbal narrative that details all relevant points of the topic. The audiobook recording was done in partnership with Rádio UEM FM, which provided its studio and technical team for the editing and finalization of the audio material. This material was presented to the residents of Casa Nazaré and discussed with them to understand whether the booklet had been written in a playful and didactic way for the community in general. There was also online and free distribution of the booklet and audiobook through the MUDI website, aiming to expand the reach of the project with accessible information for those without direct contact with the



academic environment. From this, the goal is to reduce the incidence of sexually transmitted infections and diseases related to inadequate hygiene, as well as to promote healthy and respectful discussions about sexuality, helping to break down deep-seated taboos and prejudices in society.

KEYWORDS: audiovisual, awareness, extension action, accessibility, human anatomy of the genital systems.

VIRTUAL REALITY TOOLS IN THE THERAPY OF ATTENTION DEFICIT HYPERACTIVITY DISORDER: A LITERATURE REVIEW

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ABSTRACT: Virtual reality (VR) is a tool that creates an artificial digital world in which one can fully immerse oneself; this technology has evolved within the medical field and has been used in the treatment of psychiatric conditions, including Attention Deficit Hyperactivity Disorder (ADHD). The objective was to understand the impact of VR-based technological tools for the treatment of ADHD. This work is a preliminary version of a literature review of original articles published in the PubMed database, in English, between 2018 and 2024. Articles that did not meet the objective, that were exclusively qualitative in nature, that focused on different aspects of the treatment or that spoke of studies to be performed were excluded. Of the 86 studies found, five met the selection criteria, all clinical trials, one of them randomized. The majority of the study population was children and adolescents, aged 2 to 15 years. The intervention model using VR varied for each study analyzed; some examples of the use of VR were: simulated school environment, virtual gaming environment, cognitive tests already existing in psychology adapted to the VR model, among others. The studies provided quantitative data on the therapeutic impact of VR on the executive function of these patients. In these, the use of VR showed superior results when compared to control groups, with good tolerability and few side effects. We conclude that in this initial analysis, due to the variations in the groups, samples and interventions included, it is inconclusive to determine which VR technology is most suitable for treatment. Despite this, studies with VR immersion for subjects with ADHD point to its usefulness in developing improvements in the symptoms of the disorder, demonstrating great potential as a therapeutic tool. Further studies are needed to better correlate the type of virtual reality activity most

indicated for each subtype of ADHD, as well as to know whether this improvement is sustained in the long term.

KEYWORDS: Attention Deficit Disorder with Hyperactivity; Virtual Reality; Therapeutics.

EFFECTS OF WHOLE-BODY NEUROMUSCULAR ELECTRICAL STIMULATION (WB-NMES) AND RESISTANCE TRAINING ON BODY COMPOSITION IN MIDDLE-AGED WOMEN: A PRAGMATIC CLINICAL TRIAL.

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ABSTRACT: An active lifestyle is crucial for health, helping to prevent chronic diseases, improve cardiovascular function, increase strength and flexibility, and promote mental well-being (Osuna, Cristina Moreno, et al., 2024). Regular exercise, combined with techniques such as whole-body neuromuscular electrical stimulation (WB-NMES), offers a viable option to improve muscle strength and body composition, being effective in combating sedentarism and overweight. WB-NMES is an important ally in the pursuit of a healthy lifestyle, especially for those with physical limitations or joint problems (Oliveira, TMD d., 2021). The objective was to investigate the effects of a systematic training program with WB-NMES in middle-aged women in the city of Maringá - PR. The study is characterized as a pragmatic clinical trial with a crossover method, aiming to assess the effects of WB-NMES and a systematic training program. Body composition was assessed using Bioimpedance (BIA) with the In Body 570? device in three stages: before the interventions; after 6 weeks; and after another 6 weeks of training.

The sessions occurred in two distinct phases. In the first 6 weeks, one group trained with WB-NMES and the other without. Later, after the second assessment, the groups were switched: those who were training without WB-NMES began training with WB-NMES and vice versa. The results showed significant differences in the second evaluation compared to the first, with the following averages: proteins (Md=9.0 – 8.1), minerals (Md=2.9 – 2.8), skeletal muscle mass (Md=25.2 – 23.4), and basal metabolic rate



(Md=1,355 – 1,296) ($p=0.000$). Additionally, body fat mass variables showed averages of (Md=27.5 – 25.9 – 25.9), body fat percentage decreased (Md=42.9 – 37.9 – 36.0), and visceral fat level dropped from (Md=15.0 – 13.0 – 11.2), all showing significant reductions throughout the evaluation ($p<0.05$). Based on the results obtained, it was demonstrated that WB-NMES provided significant benefits compared to resistance training, such as a greater reduction in body fat mass and visceral fat, along with improvements in skeletal muscle mass and basal metabolic rate. These findings corroborate the literature, which suggests electrical stimulation as an effective intervention to promote physical fitness and improve quality of life, especially in individuals with physical limitations.

KEYWORDS: transcutaneous electrical stimulation, overweight, physical demand, women's health.

"BUILDING DREAMS PROJECT": PROMOTING MONITORING AND SUPPORT FOR CHILDREN WITH NEURODEVELOPMENTAL DISORDERS: AN EXPERIENCE REPORT

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ABSTRACT: Introduction: Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), and other developmental disorders directly affect children's behavior, social skills, communication, and learning. In recent years, there has been a considerable increase in the identification and diagnosis of such disorders, reflecting a greater awareness of these conditions, in addition to the expansion of diagnostic tools. Giving value to the theme, the "Building Dreams Project", carried out by medical students at Unicesumar, offers essential support to children with developmental disabilities in Mandaguari, promoting their development and inclusion. Objective: To share the experience of Unicesumar medical students in the "Building Dreams Project", highlighting their contributions and learnings in providing support to children with developmental disabilities. Methodology: The project was carried out at the Dr. Osvaldo Charitable Christian Social Community, in partnership with the Academic League of Health and Spirituality of Unicesumar. The activities were conducted in a dynamic manner, aiming to assess the children's motor and social development, in addition to strengthening the

bond with the students. Each participant was individually supervised by a student. Among the proposed activities, one of them involved identifying feelings through images that represented emotions such as happiness, sadness, anger, tranquility and nervousness, seeking to stimulate the child's emotional sensitivity. Another activity used modeling clay, in which the child and the student placed colored balls between their fingers. The child had to release the ball of the same color as the instructor released, verbalize the color and follow the correct order, promoting fine motor development. After each session, the students filled out an individual briefing for each child, containing their name, age, strategic topics and overall performance. The project focused on identifying developmental difficulties, essential to promote the mental health and individual growth of the participants. This approach was especially relevant for autistic children, who participated significantly in the project. Results: By identifying feelings and using modeling clay, children understood their feelings and improved their communication and motor skills. Identifying difficulties during the activities provided parents with valuable information to better support their children's development at home. The project thus promoted both the children's individual growth and the strengthening of family bonds. Conclusion: The project demonstrates that playful and targeted interventions promote improvements in the emotional, motor and social development of children with disorders such as autism. In addition to stimulating individual progress, the positive impact on families is evident, as it provides a better understanding of their children's needs and strengthens family bonds. The integration of these activities is crucial for healthy growth and an environment of mutual support and acceptance.

KEYWORDS: Child Development Disorders. Mental Health. Reception.

HEALTH PROMOTION THROUGH AN ANATOMICAL PROTOTYPE

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ABSTRACT: Knowledge of the human body is essential for disease prevention. Therefore, university extension projects that teach anatomy help raise awareness among the population, positively impacting collective health. The objective of this



study was to encourage children and adolescents to learn more about human anatomy through a playful approach in a state school in Maringá-PR. For this, an anatomical prototype was developed with thoracic and abdominal organs, which consisted of a human mannequin measuring 70 cm high, 50 cm wide and 24 cm deep, with a frontal opening measuring 50 cm laterally and vertically. Its interior was covered with red EVA paper simulating the thoracic and abdominal muscles. The trunk organs were made by hand in colored felt, filled with soft foam, following proportions and positions observed in dissected cadaveric pieces. Making the prototype took 3 months, from purchasing the mannequin, to observing cadaveric parts and the molding, cutting, filling and sewing stages. The dynamic began with students from the state school answering a questionnaire prepared by the authors and previously approved by two doctors in anatomy. After receiving explanations about the functions, locations and possible diseases of each organ, the students were asked to position them correctly in the prototype and then successes and errors were discussed. At the end of the activity, students answered the questionnaire again, enabling a comparative analysis of learning before and after the explanations. 300 questionnaires were administered, of which 290 were validated (145 before and 145 after explanations). Students from the 6th year of elementary school to the 3rd year of high school participated, aged between 12 and 18, 75 boys and 70 girls. Before the activities, 77.24% of students incorrectly considered the position and function of the heart. However, in the final questionnaire, 68.28% correctly marked the location (on the chest, facing left) and the function (pump blood to the body) of this very important organ. As for the liver, 57.24% recognized that it is located in the abdomen and that it is involved in the production of bile and elimination of toxins. After the dynamics, this question showed an increase of 11.04% in correct answers. Regarding the kidneys, before the activities, 60% correctly pointed out their position in the abdomen and their function of filtering the blood, with an increase of 6.90% in correct answers after the explanations. Thus, in general, our results showed a significant improvement in the questions addressed, similar to a recent study² that used a similar methodology to evaluate interactive learning of human anatomy. This study showed an average increase of 22% in correct statements chosen by students. It is therefore concluded that the activities developed were effective in transmitting knowledge about human anatomy, promoting greater awareness about the function, location and common diseases of each organ of the body in order to contribute to the formation of more informed and engaged citizens in promoting of collective health.

KEYWORDS: Human anatomy; Public health; Medical Education.

“RHEUMATISM REVEALED”: RAISING AWARENESS ABOUT RHEUMATIC DISEASES IN A PARK IN THE CITY OF MARINGÁ-PR

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ABSTRACT: Rheumatological diseases have an impact and interfere in the lives of those affected, and in Brazil, they are one of the main causes of disability and absence from work¹. In this sense, it is necessary for the population to have a broad understanding of these diseases to clarify doubts, break down stigmas, provide advice and increase adherence to treatments². “Rheumatism” is a colloquial term, still widely used, to imprecisely refer to a group of rheumatic diseases, but not in their entirety¹. In view of this, the present study aimed to report and analyze the impact of the project “Uncovering Rheumatism”, which promoted dialogue between academics and the community and disseminated reliable information about rheumatic diseases to the population of Maringá. The event took place in December 2023 and was organized by ten medical students, three physicians, and a rheumatology resident from Maringá-PR. Participants were previously trained on how to approach the main rheumatic diseases and demystify beliefs, such as the idea that these conditions only affect the elderly. The location chosen was a park in Maringá, due to the age diversity of the audience, and informational booklets from the Brazilian Society of Rheumatology and a banner were used as support tools. At the event, participants were divided into two groups to transmit information to the public through questions - “Do you know what rheumatism is or have you heard of it?”, “Do you know what the main rheumatic diseases are?” and “Do you know who can have rheumatism?”. Finally, rheumatologists were available on site to answer more specific questions. Analyzing the event's audience, most of the people approached were adults and elderly people, between 30 and 60 years old, who, before the dynamic, did not know the concept of “rheumatism”, were unaware of the characteristics of the diseases addressed in the project and mistakenly believed that they only affected the elderly. In this way, after the activity, it was possible to raise awareness among the population about the



set of diseases that make up “rheumatism”. Similarly, an extension activity on Yassin’s Leprosy³ was carried out and presented positive feedback from the population. Furthermore, according to Moretti⁴, it is important to recognize this lack of information about the diseases that patients already have, as it encourages the distribution of specific knowledge about these pathologies, with the aim of helping to cope with these conditions. Finally, a study by Jaoude⁵ with rheumatology patients showed that the majority reported mental health problems without psychotherapeutic support and a sedentary lifestyle, which aggravate the diseases. In view of this, outreach activities such as ours help to adopt prophylactic lifestyle habits for rheumatism. Based on the activity carried out, it was possible to observe that the population lacks knowledge about the set of diseases that make up rheumatology and its target audience. The event was beneficial in raising awareness in the community, also highlighting the importance of preventive health habits.

KEYWORDS: Community Extension, Rheumatology, Health Education.

ATRIAL FIBRILLATION: INTEGRATION AND MONITORING BY SMARTPHONES AND SMARTWATCHES

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ABSTRACT: Atrial fibrillation (AFib) is the most prevalent cardiac arrhythmia, characterized by irregular heartbeats resulting from disorganized electrical activity in the upper chambers of the heart. The condition affects millions of individuals globally and represents a major risk factor for serious cardiovascular events such as stroke and heart failure (HF). However, arrhythmias often present asymptomatic symptoms. In this context, continuous monitoring technologies, such as smartphones and smartwatches, emerge as promising tools for identifying arrhythmias, including AFib. These innovations offer significant benefits by enabling out-of-hospital assessment, making the process more accessible and reducing time to diagnosis, with the potential to minimize complications associated with the condition. This study aims to integrate and critically evaluate studies that indicate the relationship between the use of smartwatches and smartphones

in detecting and monitoring AFib, in order to understand whether the use of such devices is a viable and reliable mechanism for those affected by the condition. This literature review was not restricted to any language and exclusively used the PubMed platform to find articles that linked atrial fibrillation with smartwatch monitoring. English descriptors based on the DeCS|MeSH platform were used: “technology”, “arrhythmia”, “smartwatch”, “atrial fibrillation”, “monitoring”, “prevention” and “screening”. 798 articles were found between 2016 and 2024. Only clinical trials and randomized control studies were selected, resulting in 9 articles for analysis, after excluding other types of publications and articles that did not address the use of smartwatches. Technological innovations, such as iECG, have emerged to improve the identification of AFib in a more effective and accessible way. These tools give patients greater autonomy, revealing cases that previously went unnoticed. Both devices employ automation to detect AFib from a single-lead electrocardiogram (ECG). The comparison between a one-lead ECG and a twelve-lead ECG showed a sensitivity of 0.89 and a specificity of 0.912 (CAMPOS et al., 2022). A large-scale evaluation showed that 35% of elderly participants were notified of the presence of the arrhythmia, with 84% of these reports confirmed as AFib (PEREZ et al., 2021). Therefore, the detection of atrial fibrillation in out-of-hospital environments is an imminent reality and can play a crucial role in preventing various complications. The use of smartwatches and smartphones, combined with technology for detecting and monitoring AFib, represents a revolution in medical practice, allowing the early identification of abnormalities and the need to seek medical assistance. This approach, increasingly present in out-of-hospital environments, has the potential to prevent complications associated with AFib, highlighting the importance of integrating these technologies into clinical practice and the need for additional research into their effectiveness.

KEYWORDS: technology, arrhythmia, smartwatch, atrial fibrillation, monitoring.

AN EVALUATION OF THE KNOWLEDGE OF PATIENTS AND COMPANIONS AT THE UNIVERSITY HOSPITAL OF MARINGÁ ABOUT TOXOPLASMOSIS

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ABSTRACT: Toxoplasmosis is a zoonosis that can infect humans through multiple routes, causing numerous complications, especially in fetuses, newborns, and immunocompromised individuals. Although most immunocompetent carriers are asymptomatic, some develop ocular involvement in the form of chorioretinitis as the main clinical manifestation. This, along with a global seroprevalence of 32.3%, highlights the importance of raising public awareness about the disease. To assess the knowledge of patients and companions about ocular toxoplasmosis. The research took place at the University Hospital of Maringá with 30 patients and companions, between July and August 2024. The participants answered a questionnaire (CAAE: 45414621.7.0000.0104), after signing the Free and Informed Consent Form. Thus, the interviewees were asked about their knowledge of the disease. After data collection, the participants received proper guidance about toxoplasmosis. The sample consisted of 11 men and 19 non-pregnant women aged between 26 and 73 years. Most of the volunteers (80%) had already heard of toxoplasmosis. Regarding transmission routes, the volunteers' knowledge about the association with cat feces (91.6%) and consumption of raw meat (70.8%) was satisfactory. However, incorrect associations were observed, such as contact with dog feces (66.7%) and consumption of raw fish (33.3%). Concerning clinical manifestations, the participants correctly associated blurred vision (75%), blindness (66.7%), gestational complications (75%), mental retardation (33.3%), and learning difficulties (45.8%). Regarding preventive measures, there was a good level of knowledge about practices such as washing raw vegetables (88%), consuming well-cooked meat (75%), drinking filtered water (91.7%), and washing hands after handling raw meat (91.7%). However, a portion of participants (88%) incorrectly believed that avoiding contact with pigeon, rat, and cockroach feces was a preventive measure against toxoplasmosis. Additionally, 41.7% considered that preventing children from playing in dirt or sand and giving away domesticated cats during pregnancy were preventive measures. 63% believed that wearing a mask when changing a cat's litter box was necessary. Most interviewees recognize the disease and its main characteristics. However, the persistence of myths and the adoption of inadequate practices highlight the need to strengthen health education actions, focusing on disease prevention.

KEYWORDS: Toxoplasmosis; Toxoplasmosis, Ocular; Disease Prevention; Surveys and Questionnaires; Public Awareness.

VIRAL VECTOR-MEDIATED GENE THERAPY FOR THE CORRECTION OF GENETIC MUTATIONS CAUSING CONGENITAL DEAFNESS

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ABSTRACT: Congenital hearing loss affects 1 to 3 in every 1,000 births. It is a sensory disorder characterized by difficulty in perceiving and interpreting sounds. The etiology is multifactorial, including genetic and/or environmental alterations. Half of all cases of congenital deafness are genetic. It can present in 2 forms: the isolated form (more prevalent), in which the patient will only have hearing loss; or the associated form, in which other organs and systems will be affected. However, genetic study is complex due to the great heterogeneity of this disease, with more than 115 genes causing isolated hearing loss. In the gene therapy approach, genetic material is transferred into the patient's cells in order to correct the genes that cause deafness. Modified viruses are considered one of the systems for performing this gene transfer, since they penetrate the target cell and express their genes within these cells. Today, therapy uses vectors based on retroviruses, adenoviruses, herpesviruses and poxviruses. However, despite their effectiveness in transporting genetic material, some vectors present a risk of infection and genotoxicity, factors that must be taken into account when choosing the vector. The first clinical trial in the world is being conducted by researchers from the United States and China, and the results were surprising, restoring hearing to children bilaterally. The objectives of this search are to analyze the efficacy of gene therapy with a modified virus in the treatment of congenital deafness due to genetic etiology. The methodology used in this study was a literature review, with the aim of obtaining updates on gene therapy in the treatment of congenital deafness. The following descriptors were used for the research: Deafness; Gene therapy; Medical genetics; Virus; Otorhinolaryngology. The selected articles met the inclusion criteria: publications published from 2015 onwards, available in full for free, in Portuguese and English. The studies that were excluded met the exclusion criteria: publications before 2015, that were not available for free and that did not address the aforementioned topic. The



target population consists of patients diagnosed with congenital deafness who were refractory to previous therapies. From the analysis of scientific articles, it was observed that gene therapy with modified viruses has currently been the greatest advance in otorhinolaryngology for the treatment of congenital deafness due to genetic etiology. Studies with larger populations are being conducted to bring new information to the scientific community and a promising treatment approach in the medical field. It is therefore concluded that innovations and technologies within medicine are essential for the discovery of new treatments that can save the patient's life, ensuring that both the patient and his/her support network have a much better quality of life. Among these treatment innovations is genetic modification using viral vectors, a therapy modality that is already used for other purposes and has recently begun to be applied to deafness due to genetic etiology, obtaining excellent results.

KEYWORDS: Deafness, Gene therapy, Medical genetics, Virus, Otorhinolaryngology.

THE IMPACT OF TECHNOLOGY ON HEALTH PROMOTION

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ABSTRACT: In recent years, mobile health applications (apps) have become important tools in health promotion, providing individuals with direct and continuous access to information and resources to proactively manage their conditions. These platforms allow daily health monitoring, promoting self-care and facilitating adherence to treatments. The popularization of smartphones has increased the accessibility of these tools, which has contributed to a more integrated and efficient approach to health and well-being management. The objective of this study is to explore the role of mobile health applications in promoting patient engagement and how these tools improve health outcomes. Engagement involves active participation in treatment decisions and the management of chronic conditions, which has been correlated with better clinical outcomes, greater satisfaction with care and lower costs. Apps such as MyFitnessPal, Mango Health, Fitbit, and Ada are examples of how these platforms can help patients manage their health and adhere to treatment regimens. A number of strategies have been proposed to increase the value of medical devices. First, improve the interface and usability of

the app with user-friendly features. This includes user research, human design, and iterative testing to ensure familiarity with the app. Ensuring compliance with regulations that protect data privacy, such as HIPAA, is critical to integration into healthcare systems. Finally, implementing incentives such as rewards and social sharing can increase employee engagement. The results indicate that mHealth apps have a positive impact on patient engagement and health outcomes. For example, MySugr for people with type 2 diabetes can improve HbA1c levels, encouraging patients to adhere to treatment. Headspace offers guided therapy to reduce stress and anxiety and improve sleep for students. Mango Health has achieved excellent results in improving medication adherence among patients with hypertension. These examples demonstrate how personalized app support can help patients better manage their conditions. Mobile health apps are essential to fostering patient engagement and improving health outcomes. They provide ongoing support, access personal information, and facilitate communication between patients and healthcare professionals. To maximize the impact of apps, it is important to invest in their use, integrate our healthcare systems, and address privacy needs. More research is needed to identify different types of apps and maximize their potential to improve access and effectiveness of healthcare.

KEYWORDS: Mobile App, Healthcare System, Medical Devices.

WORKSHOP ON SUICIDE PREVENTION: AN EXPERIENCE REPORT ON YELLOW SEPTEMBER

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ABSTRACT: Suicide is a significant public health issue and the fourth leading cause of death among individuals aged 15 to 29, affecting diverse backgrounds and social classes. In response to this concern, the Yellow September campaign was established in Brazil to raise awareness about the topic and promote the value of life. This case report aims to present the implementation of a suicide prevention workshop, highlighting the importance of addressing this theme and its impacts on participants. The objective of this work was to report the experience of conducting a workshop on suicide prevention



with students and staff at Cesumar University and to identify the main knowledge gaps regarding the subject and the difficulties in addressing a suicidal episode. This is a descriptive study of an experiential report based on the experiences of medical students participating in the Academic League of Mental Health (LASMUC) at Cesumar University in Maringá-PR, during a suicide prevention workshop promoted by the league, which took place on September 20, 2024. The workshop included the participation of a psychiatrist and a psychologist who discussed the definition of suicide, the mental conditions that may lead to it, and the appropriate ways to treat patients with suicidal ideation. The psychiatrist emphasized the importance of key questions in assessing suicide risk, such as the frequency and severity of suicidal thoughts and whether the patient had ever attempted to act on them. The psychologist shared her personal experiences dealing with suicide cases, underscoring the relevance of the questions formulated to identify the severity of the situation and determine if the patient needs to be referred to specialized services. After the presentations, there was a Q&A session where topics such as pharmacological therapy, the doctor-patient relationship, and family support were discussed. Participants expressed difficulty in identifying patients with suicidal ideation due to the fear of damaging the relationship by asking questions they considered invasive. The professionals highlighted that this information is essential for diagnosing the crisis and preventing death. To conclude the workshop, the psychiatrist and an actor performed a scenario depicting a suicide attempt. The scene illustrated how to offer help during a crisis, stressing the importance of not leaving the person alone, listening to their distress, and seeking temporary solutions that could divert them from the suicidal act. The report concludes that actions during the Yellow September are crucial for society, as everyone may encounter or know someone in crisis. The workshop experience was enriching for participants, who gained valuable knowledge applicable in both their personal and professional lives. This approach not only raises awareness about the seriousness of suicide but also prepares society to intervene effectively in critical moments.

KEYWORDS: Suicide, Prevention, Awareness.

NASAL WASHING AND SNELLEN TEST IN AN ACTION AMONG MEDICAL STUDENTS: AN EXPERIENCE REPORT

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ABSTRACT: With the arrival of winter, respiratory problems such as allergies, rhinosinusitis, flu and colds become more common. Nasal lavage with saline solution is an effective practice to relieve symptoms, decongest the airways and hydrate the nasal mucosa. It is a simple technique that improves respiratory comfort by removing excess secretions. Regarding the Snellen Test, created by Dr. Herman Snellen in the 1860s, it assesses visual acuity through a graph. This test is used to determine how well the eyes can perceive the details of an object at a distance and is useful in deciding the need for glasses to correct possible changes in vision. To report the experience of an action among medical students, which addressed the benefits of nasal lavage and the Snellen Test in order to identify changes in the visual acuity of the population. Volunteers, members of the Maringá Academic League of Allergy, Immunology and Infectious Diseases (LAMAI), the Academic League of Pediatrics (LAPEM) and the Academic League of Ophthalmology and Otorhinolaryngology (LAOOM), approached the public in a square in Maringá, through conversation and guidance on the importance of nasal lavage and how to perform it correctly, in addition to performing the Snell Test on those who were interested in learning about visual acuity. The positive points were the involvement of the population in learning more about nasal lavage and its importance in the treatment of flu and rhinosinusitis. The materials used in this action, such as prototypes of heads and necks, syringes and Nasoar, were extremely important to demonstrate in practice how to perform the procedure correctly and to clarify doubts. Another positive point was the use of the Snell test, which drew the attention of the population interested in learning about visual acuity. In addition, there was advice on seeing an ophthalmologist at least once a year for monitoring and care of eye health. The materials attracted the public's attention and attracted more people to the location, thus promoting greater exchange with the volunteers. Nasal lavage is a simple, safe and well-tolerated procedure, used for the prevention and treatment of flu-like symptoms and sinonasal diseases. The Snellen test is used to assess visual acuity and can assist in the early detection of visual disorders, enabling the correction of refractive errors that impair vision. Based on this, the action promoted greater knowledge and awareness regarding the techniques for the population, emphasizing the



importance of prevention for possible pathologies. The action obtained significant results, since a large part of the population was not aware of the benefits of nasal lavage for the prophylaxis and treatment of sinonasal diseases. Furthermore, the use of the Snellen Test aroused interest among people, who volunteered to take it, thus explaining how the test worked and the importance of ophthalmological care to identify visual disturbances early. It is concluded that there is a need for more information on the importance of nasal lavage in children and adults and in identifying visual disturbances early.

KEYWORDS: Nasal wash, Snellen test, Education.

RECOMMENDATION AND INSTALLATION OF TRANSCUTANEOUS PACEMAKERS IN URGENCY AND EMERGENCY: PRACTICAL TRAINING FOR MEDICAL TRAINING

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ABSTRACT: The transcutaneous pacemaker consists of a device used in emergency situations in which there is a need for a temporary pacemaker. When indicated, as in patients with bradyarrhythmias, its action is fast and effective, therefore, it is considered essential that medical school graduates understand the indications and have the skills to install this device. In this context, the objective of this study is to report the experience of a realistic simulation aimed at the management of bradyarrhythmias with a focus on the installation of a transcutaneous pacemaker. Previously, the students had received the Advanced Cardiac Life Support (ACLS) protocols, a theoretical class on cardiac rhythms and a practical class on pacemaker installation. Therefore, in a realistic simulation environment, in which there is an emergency room structure, the 5th-year medical students were inserted to care for a patient who arrived with chest discomfort. After the initial history, the students were asked to outline the initial procedures for caring for this patient. When requesting and analyzing the electrocardiogram (ECG), available on the monitoring screen, the participants in the scene diagnosed that the patient had Total Atrioventricular Block (TAVB). After trying other approaches without therapeutic success, the leader of the care asked the team to prepare the monitor for the installation of the Transcutaneous Pacemaker. The students installed and programmed the monitor, resulting in clinical improvement in the patient. The scene was watched by other students and the professor who were in an external environment. It is possible to

see that through this realistic simulation, the students had an experience similar to the reality of Urgency and Emergency, in which the patient sometimes does not respond to the first therapeutic approaches employed. In this simulation, the participating students had to provide the diagnosis, outline appropriate approaches for the condition and execute them. The leader of the scene can develop team leadership, since he can outline new approaches when the previous approach was not successful. It is important to note that the simulated environment is a controlled and safe environment, in which the professor can evaluate and monitor the scene from the external area, highlighting in the debriefing the positive points and points to be improved by the team. It is therefore clear that the simulated environment is a very promising tool for Medical Schools, since it is possible to insert students into emergency situations in a controlled environment, in which there is the possibility of evaluation, feedback and discussion between the students participating in the scene and the students listening.

KEYWORDS: Medical education, realistic simulation, cardiology.

INTERACTIVE HUMAN ANATOMY CLASS BY MEDICAL STUDENTS: AN EXPERIENCE TO PROMOTE HEALTH KNOWLEDGE IN SCHOOLS

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ABSTRACT: Education plays a fundamental role in the development of knowledge and in promoting children's interest in science-related topics. Introducing topics such as anatomy into the school curriculum can be an efficient way to instigate curiosity and understanding about the human body, contributing to the formation of citizens who are more aware of their health (Furtado, 2020; Lima & Santos, 2021). Furthermore, studies show that active methodologies, which use playful and interactive approaches in teaching anatomy, significantly increase student engagement and promote greater knowledge retention (Silva et al., 2019). Furthermore, anatomy education can serve as a starting point for more comprehensive discussions on health, hygiene, and disease prevention, topics that are essential for the integral formation of the individual. (Gonçalves, 2018). To report the experience of medical students from the Maringá Academic League of Medical



Anatomy in an action that aimed to review some of the main systems of the human body with students from the Escola Estadual Princesa Izabel in the city of Paçandu-PR. An interactive anatomy class was held, where ninth-grade students were able to learn in a playful way about the digestive, respiratory, circulatory, and renal systems. To carry out the action, the students prepared a study plan for themselves, based on the book Moore - Anatomia Orientada para a Clínica, containing a summary of the systems that would be addressed. In addition, the university's anatomy laboratory provided synthetic anatomical parts for the students to use during the class. The same class was taught in three groups, lasting approximately 50 minutes. Initially, a brief explanation was given about the location and function of each of the main organs that make up the systems, also demonstrating, in the anatomical pieces, the path and interaction of the organs during their functioning. In a second moment, there was space for questions and curiosities, in which the students, who had already had their first contact with the content of human anatomy during the school year, were able to clarify doubts about diseases related to the systems taught, in addition to handling the pieces and obtaining a better understanding of the organs. The action was beneficial, both for the students who had the experience of transmitting the acquired knowledge to the classes of adolescents through accessible language, and for the students who interacted positively during the presentations, showing interest in the explanations through several questions and personal stories. The anatomical pieces made a huge difference during the action, because the students were able to get closer to some anatomical details that were being exposed, facilitating learning and instigating their curiosity. The experience was successful, revealing the importance of disseminating knowledge in areas such as human anatomy to adolescents as a way of fostering their interest in science. In addition, the activity provided students with the opportunity to experience the challenges of interacting with this target audience, requiring adaptations in the language and approach used.

KEYWORDS: Anatomy, Playfulness, Medical Training.

TEMPORAL TREND OF HOSPITALIZATIONS DUE TO ENDOMETRIOSIS IN WOMEN IN PARANÁ STATE: AN EPIDEMIOLOGICAL ANALYSIS (2013-2023)

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ABSTRACT: Endometriosis is a chronic gynecological condition, benign and estrogen-dependent, that occurs when endometrium-like tissue appears outside the uterus. Mainly affecting the pelvic region, it is estimated to affect around 6 to 10% of women of reproductive age. Due to its multifactorial origins, diagnosis can be challenging, leading to variations in prevalence data. The presence of ectopic tissue is associated with chronic pelvic pain and infertility, with the ovaries, peritoneal surfaces, and rectovaginal septum being the most commonly affected areas. Aim to analyse the temporal trend of hospitalizations among women, aged between 15 and 54 years, diagnosed with endometriosis in Paraná State, Brazil, from 2013 to 2023. This is a quantitative and descriptive epidemiological study based on women aged 15 to 54 years, residents of Paraná State, Brazil, hospitalized with endometriosis (International Classification of Diseases [ICD] code N80) between 2013 and 2023, with data available from the Hospital Information System of the Ministry of Health. The temporal trend was evaluated using the Mann-Kendall test. In this context, the data is publicly available, and therefore no ethical committee approval is required. It was observed that between 2013 and 2023, there were 7,544 hospitalizations for endometriosis among women from Paraná aged between 15 and 54 years, with 831, 742, 651, 771, 695, 771, 779, 391, 381, 716, and 816 cases each year, respectively. This represents an annual average of 685.82 ± 156.98 hospitalizations, with a reduction of approximately 50% in hospitalizations for endometriosis during the years 2020 and 2021 compared to the other years. The Mann-Kendall statistic demonstrated a weak negative trend ($t=-0.11$) with no statistical significance ($p=0.70$). Although no significant trend was observed, hospitalizations for endometriosis were reduced by half during the COVID-19 pandemic.

KEYWORDS: Endometriosis, hospitalization, epidemiology.



HORMONAL THERAPY IN THE CLIMACTERIC: BENEFITS OF THIS TREATMENT WHEN INSERTED AT THE BEGINNING OF POSTMENOPAUSE

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ABSTRACT: Hormone therapy (HT) has been used in menopause because it offers high efficacy in relieving symptoms associated with the phase of life in which the woman finds herself. Such symptoms are caused by hormonal decline, which is evidenced by the reduced production of estrogen and progesterone by the ovaries, which are the ones that must be replaced. It should be noted that women who have a uterus require combined therapy, that is, estrogen associated with progesterone. To present the benefits offered to patients when they enter this treatment at the beginning of postmenopause, aiming to raise awareness and clarify doubts for a better understanding of the topic. The review study method was used with complete reading and understanding in the Pubmed and Periódicos Brasil Pesquisa Científica databases, using the keywords: “Hormone replacement therapy”, “Women's health”, “Estrogen” and “Menopause”. Through the evaluation process carried out through the selected databases, benefits were found such as the reduction of fractures associated with osteoporosis; decreased incidence of colorectal cancer; decreased risk of type II diabetes mellitus; lower frequency of colpitis; increased caloric expenditure at rest; reduction in low-density lipoprotein (LDL) and total cholesterol levels and increase in high-density lipoprotein (HDL); decreased risk of Alzheimer's disease; cardioprotective effect when associated with aerobic exercise; relief of vasomotor symptoms and improvement of short- and long-term memory and mood. Therefore, HT initiated after menopause stands out as the most effective intervention for relieving symptoms caused by this phase. Studies indicate that if started before the age of 60 or 10 years after the onset of symptoms, treatment tends to be safer. Therefore, it leads to an improvement in women's quality of life and well-being.

KEYWORDS: Estrogen, Hormone replacement therapy, Menopause, Women's health.

MATERNAL DESIRE IN CHOOSING THE WAY OF DELIVERY: A RETROSPECTIVE ANALYSIS OF BIRTHS IN THE CITY OF MARINGÁ - PARANÁ BETWEEN 2017 AND 2023

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ABSTRACT: Given the increase in cesarean section rates around the world in recent decades, there is much discussion about the risks of carrying out this procedure without obstetric indications¹. Under this pretext, in the State of Paraná, the old Law No. 20,127, published in January 2020, which, defending the granting of autonomy to pregnant and parturient women in choosing the type of birth, allowed mothers opt for a cesarean section, even without a medical prescription, was declared unconstitutional in June 2024². Therefore, this work aims to analyze the proportion of normal birth (NB) and cesarean section (CS) in the municipality of Maringá in Paraná, comparing the reality before and after the institution of the Law, in addition to discussing the counterpoint between the importance of maternal participation in decision on the route of delivery and the risks of cesarean section without indication. As a methodology, an ecological study was carried out, characterized as aggregate, observational, cross-sectional and retrospective, which did not require consideration by the research ethics committee as it used public domain secondary data from the “Sistema de Informações Hospitalares” (SIH) from DATASUS as a source of information, including births performed by the “Sistema Único de Saúde” (SUS), between 2017 and 2023, in Maringá - PR. The general proportion of the period and the annual proportions between the two types of birth were calculated, in addition to verifying the significance of the comparison of values ??using a chi-square test. The data revealed that, of the 28,936 births in the interval, 69.59% were CS, in contrast to 30.40% NB. Considering the chronological comparison, the annual CS percentages of 62.27% in 2017, 65.08% in 2018 and 65.56% in 2019, before the decree, contrast with 70.36% in 2020, 75.61 % in 2021, 73.05% in 2022 and 75.25% in 2023, after the approval of the Law that made it possible for mothers to choose the type of birth. According to the chi-square test, however, there is not enough statistical evidence to state that the proportions of CS before and after



2020 are significantly different. It is concluded, therefore, that there was no significant increase in the proportion of CS in Maringá after the institution of the Law, despite the maintenance of a high rate of cesarean sections¹ in the city throughout the entire period.

KEYWORDS: Obstetrics, Cesarean Section, Maternal and Child Health, Humanizing Delivery, Retrospective Studies.

REGIONAL DISPARITIES AND CHALLENGES IN BREAST CANCER DIAGNOSIS AND TREATMENT IN BRAZIL: AN ANALYSIS OF DATA AND PROGNOSIS (2013-2021)

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ABSTRACT: The disease that most affects the female population in Brazil is breast cancer (INCA, 2022). Despite the efforts of the public health system in Brazil to implement screening strategies, such as mammography, mortality from breast cancer remains high. This suggests possible failures in primary care, resulting in delays in the initiation of treatment and worsening of the prognosis of patients (GEBRIM et al., 2016). In addition, there is a lack of studies that describe the current approach to these patients in the Unified Health System (SUS), making it difficult for the public to understand the reality of the care offered to this group. This study is an excerpt from a Scientific Initiation project, being a cross-sectional, descriptive ecological research, with quantitative analysis of data from women aged 50 to 69, residing in Brazilian territory, who were part of the breast cancer screening and presented alterations in their cytopathology exams. The records were extracted electronically from the information systems of the Department of Health (DATASUS), using the periods from 2013 to 2021. In the data collected through the Cytopathological exam, the presence of a high risk was noted in 28.48% of patients across the country, with a higher concentration of this variable in the Southeast (33.72%). In the North region, the 3 highest rates were found for the size of the requested lesion, including tumors of 2-5 cm; 5-10 cm; >10 cm. Therefore, the North region has higher rates of nodules, this may occur because this same region has a lower rate of women with a previous clinical exam, which may lead to a delay in seeking the exam, leading to the appearance and growth of

palpable nodules. In the study by Borges (2016), it was observed that regions with greater economic development, such as the South and Southeast, have a higher rate of breast cancer diagnoses compared to the North and Northeast, which have higher rates of poverty and health problems. This disparity can be attributed to economic differences. In addition, the low number of exams performed is also influenced by factors such as the lack of medical indication, lack of knowledge about the recommended age range, deficiencies in public services, fear of the exam, pain, anxiety, and lack of time. Therefore, it is concluded that the values found for poor prognosis (high risk and tumor size) in the North and Northeast regions can be associated with a low infrastructure and accessibility aimed at early diagnosis and treatment of breast cancer, and the high rates found in the South and Southeast can be explained by the presence of the population migration phenomenon to treat the same disease in places that have greater availability of techniques and approach methods (FONSECA, 2022).

KEYWORDS: Breast Neoplasms; Epidemiology; Early Detection of Cancer.

INDIVIDUALIZED AND EDUCATIONAL APPROACH TO BREAST CANCER WITH THE FEMALE POPULATION DURING THE “OUTUBRO ROSA” EVENT - AN EXPERIENCE REPORT

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ABSTRACT: Breast cancer is the most frequent malignant neoplasm in women around the world. In Brazil, it is estimated that for every 100 thousand women, 6161 may be affected by the neoplasm (Peres et al., 2023). Given the extreme relevance of this disease, the project carried out by the League of Gynecology and Obstetrics of UEM aimed to raise awareness among women and alert them to prevention and guidance on breast cancer. To this end, activities were carried out that could promote access to information by women, including those in social vulnerability, and encourage them to seek means of early prevention and appropriate treatment. Initially, the participating students were trained on the subject based on the breast cancer booklet produced by INCA (Ministério da Saúde, 2022). The project was developed from the invitation made by the organizers of the event "Paraná Rosa", which aimed to promote



awareness and access to information about breast cancer. The event took place at the Municipal Urban Terminal of Maringá. During the event, women passing through the space and patients in the queue for the collection of the preventive exam for cervical cancer were approached. Initially, a questionnaire was applied to these participants with objective questions and brief answers. Based on the answers, guidance was given and correct information was provided on the subject, aiming to demystify prejudices and promote awareness about breast cancer through interactions. From the experience, it was possible to observe that most of the women did not remember the last time they went to the mastologist or gynecologist. In addition, it was noted that the vast majority of women approached did not frequently perform breast self-examination. A considerable fraction of the women had misconceptions about breast cancer, so they believed that self-examination would be enough to detect cancer and ultimately that mastectomy was the only treatment option. Also in this approach, breast prototypes were used to teach the correct way to perform breast self-examination. The experience brought important learning to both the team and the participants, highlighting the importance of health education, so that the respectful and informative approach was essential to attract the attention of women and impact them through knowledge. In addition, experience has shown that specific actions are insufficient and that it is necessary to implement continuous health education programs in the communities of Maringá, going beyond the “Outubro Rosa” campaign (Assis et al., 2020). It is concluded that this experience not only contributed to breast cancer awareness, but also highlighted the importance of health education as an essential tool in prevention, while demonstrating how much the population is still lacking quality information about breast cancer.

KEYWORDS: Breast neoplasm, Primary prevention, Breast self-examination, Health education.

PROJECT ON SEX EDUCATION IN A SCHOOL IN THE NORTH OF PARANÁ - AN EXPERIENCE REPORT

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ABSTRACT: Adolescence is a phase of several transformations, whether emotional, bodily or related to the beginning of sexual life. Data suggest that 30.5% of adolescents have already had some type of sexual intercourse, and the percentage of statements was higher in relation to students from public schools (MALTA et al., 2011). Thus, sex education in the school environment plays a fundamental role in introducing healthy habits, appropriate use of condoms, knowledge of one's own anatomy, prevention against Sexually Transmitted Infections (STIs) and unintended pregnancy, so that the insertion of projects that address these themes with high school students has great value (Malta et al., 2011; Rios et al., 2023). In this context, the project described was developed in a military school in the city of Maringá-PR, aiming to address information on sexual health for adolescents between 15 and 17 years old. Thus, lectures were given by 12 medical students organized in pairs. The academics were trained on the topics covered and the lectures were held in 4 days, reaching about 350 students. Slide presentations were used, in addition to menstrual hygiene materials (tampon, cup and menstrual disc), examples of contraceptive methods (male condom, pills, intrauterine devices, implant, vaginal ring, transdermal patch) and anatomical model of tissue vulva. Regarding the experience, the interaction, the handling of materials and the space to answer questions encouraged the participation of the students who were very participative during the intervention, raising several questions. It was noticed that many still did not have basic knowledge about the menstrual cycle and sexual health, thus revealing the important impact of the lectures for the awareness of this public, since there are still obstacles to be overcome regarding the implementation of Sex Education in Brazilian schools. (Gonçalves et al., 2013). The experience brought important learning to both the team and the participants, so the interactive approach was essential to attract the attention of young people and impact them through knowledge. In addition, this experience showed that communication is the basis for knowledge, and in a future



perspective, promoting this awareness, using interactive resources, can provide the intervention to be more effective, in addition to making information more accessible to this public. In fact, these tools, in addition to being elucidative, were important to optimize the approach to this broad subject carried out with limited time. It is concluded that this experience contributed to the emergence of a favorable and opportune environment for young people to clear their doubts and share their perceptions on the subject, leading to a greater understanding of the importance of sexual and reproductive health, while demonstrating how much of a challenge it is still to address these issues in the school environment.

KEYWORDS: Sex education, Contraception, Adolescence.

GESTATIONAL SYPHILIS IN MARINGÁ: EPIDEMIOLOGICAL ANALYSIS AND IMPLICATIONS FOR MATERNAL AND CHILD HEALTH (2019-2021)

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ABSTRACT: Syphilis is a sexually transmitted infection caused by the bacterium *Treponema pallidum*. Among its forms, gestational syphilis occurs when the infection is acquired before or during pregnancy, and can lead to serious complications, such as infertility, congenital malformations, miscarriages, and death if left untreated. Since 2018, there has been a reduction in cases of this condition, coinciding with the implementation of the Rapid Response Project to Syphilis by the Ministry of Health. The analysis of the prevalence of gestational syphilis in Maringá between 2019 and 2021 is crucial to assess transmission and the effectiveness of interventions in maternal and child health. This is a descriptive, retrospective, and ecological observational study of gestational syphilis from 2019 to 2021 in the city of Maringá-PR, based on data available in the Disease Information System (SINAN) available in DATASUS, tabulated by TABNET. The variables used were: month of diagnosis, age group, education, clinical classification, and cases confirmed by the treponemal test. The aim was to establish the epidemiology of syphilis notifications in pregnant women in the city of Maringá-PR from 2019 to 2021, in order to identify the clinical forms of syphilis in pregnant women and correlate the data from the city with those from Paraná, allowing more targeted interventions. Between

2019 and 2021, a total of 332 cases were reported. The age group most affected was 20 to 39 years old, accounting for 84.33% of cases, while the age group 10 to 14 years old had only 0.30%. The months with the highest incidence were February 2019 and April 2020. The most affected age group was complete high school, with 32.25% of cases in 2019, and incomplete 5th-8th grade in 2021, accounting for 22.5% of cases. The majority of diagnoses were primary syphilis (48.5% in 2021, 54.8% in 2020, and 49% in 2019). Reactivity to the treponemal test was high, with 85.2% of cases during the 3 years. The data are consistent with the trends observed in the state of Paraná and in most Brazilian states. It can therefore be concluded that health education is important, especially among young people and those with primary and secondary education. Raising awareness about syphilis and implementing prevention strategies, such as condom use, is essential to reduce the incidence of infection. In addition, the continuity of programs, such as the Syphilis Rapid Response Project, is essential to promote the gradual reduction, prevention and control of the disease, contributing to more effective and sustainable public health.

KEYWORDS: Syphilis; Health Education; Maternal and Child Health.

THE BENEFITS OF WEARABLE TECHNOLOGY IN MONITORING IN NEONATOLOGY

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ABSTRACT: In recent years, neonatology has benefited from the development of wearable devices, flexible sensors fixed to the skin, designed for comfortable use by newborns (rn) in the neonatal intensive care unit (us). These devices have the function of monitoring vital signs, such as heart rate, body temperature, oxygen saturation and respiratory patterns. The relevance of this review focuses on the advancement of the provision of neonatal care and the improvement of safe and effective practices. to analyze the contributions of these devices to health promotion, focusing on new technologies and their effectiveness. A systematic review was performed following the prism guidelines to evaluate the application of wearable devices in nc monitoring in us. Pubmed, scopus and web of science databases were searched to identify studies published between january 2023 and december 2024. The descriptors were used: wearable electronic devices, extremely premature neonatal and



infant intensive care units. Inclusion criteria: studies on wearable devices in us; articles in english or portuguese; studies revised by pairs with empirical data. Exclusion criteria: studies not focused in rn in us; articles without empirical data; duplicate studies or without access to the full text. studies show that real-time monitoring not only improves early complication detection, but also provides a faster and more effective response from health teams. However, the implementation of these devices faces challenges, such as high acquisition and maintenance costs, lack of standardization and interoperability, allergic reactions and need for specific training for health professionals. wearable technology is promising in neonatal care, offering continuous monitoring and essential decision-making information. However, the implementation of new technologies should be aligned with security and ethics, ensuring data privacy and patient well-being. In the future, wearable devices can become more personalized, adapting to the individual needs of each neonate.

KEYWORDS: Weight Electronic Devices; Neonatology; Neonatal Intensive Care Unit.

PALLIATIVE CARE AND PSYCHOLOGICAL IMPACT IN CHILDREN WITH TERMINAL DISEASE SUCH AS DUCHENNE MUSCULAR DYSTROPHY

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ABSTRACT: Duchenne Muscular Dystrophy (DMD) is an X-linked genetic disease that causes progressive muscle weakness and functional limitations, being the most common childhood muscular dystrophy. As the disease progresses, children face not only physical challenges but also serious psychological impacts, including anxiety and depression. Palliative care plays a crucial role in providing symptom relief and emotional support, the current study aims to examine how palliative care can improve the quality of life of pediatric patients with DMD and evaluate the psychological impact of the disease. This is an integrative literature review, searching for articles in indexed databases. The inclusion criteria were articles published on the subject between 2010 and 2023 in English, Portuguese, and

Spanish, addressing DMD and the implementation of palliative care, with an emphasis on psychological and emotional aspects. Studies conducted using questionnaires such as the PedsQL demonstrated that self-reported scores by the children and those reported by their parents were lower than those for healthy children regarding quality of life. The results showed that pediatric patients with DMD face high levels of emotional stress, anxiety, and depression, with depression diagnoses being more prevalent in patients over nine years of age. Clear communication about the disease and its implications is essential to help children and their families cope with the situation, as many parents have difficulty accepting the term “palliative care,” associating it with death. The introduction of palliative care can improve the quality of life by providing psychological support and targeted interventions for symptom relief, as well as helping the child transition from one stage of the disease to another. The discussion emphasizes that palliative care should be approached in a multidisciplinary way, involving doctors, nurses, psychologists, and therapists. One of the strategies used is cognitive-behavioral therapy, which stands out as an effective strategy, helping patients identify and modify negative thoughts that can intensify anxiety and depression. Additionally, participation in support groups provides a safe environment for sharing experiences, allowing both children and their families to feel understood and welcomed. Palliative care is fundamental to improving the quality of life for children with Duchenne Muscular Dystrophy and reducing the psychological impacts of the disease. Attention to emotional dimensions, such as anxiety and depression, is crucial, as the diagnosis and progression of the disease can have a profound impact on psychological well-being. The implementation of a family-centered approach and a multidisciplinary team can make a significant difference in symptom management and emotional support, not only improving the quality of life but also promoting an environment of dignity and respect for these children and their families throughout the course of the disease.

KEYWORDS: Palliative care, Duchenne Muscular Dystrophy, Psychological stress, Pediatrics



OBSTRUCTIVE SLEEP APNEA IN CHILDREN WITH DOWN SYNDROME: AN INTEGRATIVE REVIEW ON DIAGNOSIS AND MANAGEMENT

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ABSTRACT: Obstructive sleep apnea (OSA) is a respiratory disorder characterized by partial or complete obstruction of the upper airways, and it is even more prevalent in children with Down syndrome (DS), a genetic condition associated with anatomical and functional anomalies. Among these alterations are macroglossia, retrognathia, and muscle hypotonia, factors that promote airway collapse during sleep. Additionally, obesity, which is also common in this population, further aggravates the obstruction. It is estimated that between 50% and 79% of children with DS are affected by OSA, highlighting the importance of early diagnosis and proper management to prevent serious complications, such as pulmonary hypertension, neuropsychomotor developmental delays, and negative impacts on cognition and behavior. Polysomnography is widely recognized as the gold standard for diagnosing OSA, but its accessibility is limited in many centers due to high costs and the difficulty of performing the test in children. As alternatives, more accessible screening methods such as respiratory disorder questionnaires and nocturnal oximetry are suggested, although they are less precise. This integrative review aimed to analyze the available evidence on the diagnosis and treatment of OSA in children with DS, focusing on the most effective approaches. A total of 25 articles published between 2010 and 2023 were reviewed. The results indicated that adenotonsillectomy is one of the most recommended interventions to improve airflow in the upper airways, reducing OSA symptoms in up to 60% of cases. However, the recurrence rate of OSA after surgery is high, primarily due to the anatomical characteristics of children with DS, such as muscle hypotonia. In cases where surgery is not sufficient, the use of CPAP (Continuous Positive Airway Pressure) was highlighted as an effective alternative, despite adherence challenges due to the discomfort of wearing a mask. Another promising approach was myofunctional therapy, which consists of exercises to strengthen the muscles of the tongue and pharynx, improving muscle tone and reducing airway obstruction. However, further

studies are needed to confirm the long-term efficacy of this intervention. The management of OSA in children with DS should be multidisciplinary, involving professionals from various healthcare fields, such as otolaryngologists, speech therapists, and physiotherapists, to ensure individualized and effective treatment. In conclusion, OSA is a prevalent and debilitating condition in children with DS, and early diagnosis and appropriate management are crucial to minimize complications. Adenotonsillectomy and CPAP are effective options, but the high recurrence rate requires complementary treatments such as myofunctional therapy.

KEYWORDS: Obstructive Sleep Apnea, Down Syndrome, Polysomnography.

THE INFLUENCE OF TECHNOLOGY ON CHILD DEVELOPMENT

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ABSTRACT: Technology is present in children's lives, from infancy to adolescence. Devices such as tablets, smartphones, and computers offer new ways of interacting and learning, generating discussions about their impact on child development. This article reviews the literature to understand the influences of technology on the various dimensions of child development. The work aims to identify and discuss the main influences of technology on child development, addressing cognitive, social, and emotional aspects, in addition to highlighting practical implications for parents and educators. The research methodology is based on an integrative literature review, analyzing academic articles from reliable databases such as Google Scholar and PubMed. The focus was on studies published between 2010 and 2023, prioritizing peer-reviewed articles. The results show that technology has both positive and negative effects on child development. Among the benefits, educational games and applications can improve skills such as logical reasoning and increase school engagement. Digital platforms also allow connections between children from different cultures, promoting empathy and communication. On the other hand, excessive use of technology can lead to social isolation and difficulties in personal interactions. Prolonged exposure to social media is associated with mental health



problems such as anxiety and depression, as well as risks of cyberbullying. Increased screen time is also linked to sedentary lifestyles and obesity. Therefore, it was concluded that technology plays a complex role in child development, offering both opportunities and risks. To optimize benefits and mitigate negative impacts, it is crucial that parents and educators set limits on the use of electronic devices, promoting a healthy balance. Public policies should guide children's interaction with technology, emphasizing digital education and online safety.

KEYWORDS: Technology, social interaction, child development.

ABSTRACT, CONGENITAL LOBAR EMPHYSEMA: AN ATYPICAL CASE REPORT

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ABSTRACT: Congenital Lobar Emphysema (CLE) is an extremely rare and complex disorder of the respiratory system. With an incidence ranging from 1 case in every 20,000 to 30,000 live births, the disease compromises lung function through lucency, or expansion of the alveolar unit. Due to its low incidence, it often goes unnoticed by the clinical eye in emergency rooms, and is often diagnosed late by a specialist who notices the peculiar and specific nuances of the case and its relationship with recurrent infections that do not improve. In the case presented, a 5-year-old patient with atypical clinical manifestations intrigued an entire medical team when he presented an incidental finding on a chest X-ray, after sudden and repeated episodes of respiratory tract infection, which culminated in a hoarse cough and persistent wheezing, which caused discomfort and the patient's eventual hospitalizations, the latter being responsible for the diagnosis of CLE, when a small change was noticed on the X-ray imaging exam, and thus, with the eventual request for a Computed Tomography (CT). The young boy, of school age, began with symptoms of laryngitis hyporesponsive to drug treatment and pneumonia with hospitalization, two years before the diagnosis of the disease. The main objective of the present study is to alert the medical population that, although conditions like these are rare, they are important differential diagnoses and should not be forgotten when there is a suggestive clinical presentation or hyporesponsiveness to the established treatment, resulting in

persistence of symptoms and repeated reinfections. Treatment is individualized and depends on each case, with a surgical approach commonly required. However, the patient in the study is still undergoing a conservative approach, due to his positive response to therapy, making this an even more atypical case.

KEYWORDS: Lung; Congenital Abnormalities; Lung Diseases.

HEALTHY EATING GUIDE AT EXPOINGÁ: EXPERIENCE REPORT

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ABSTRACT: Health education is a fundamental tool for preventing nutritional problems in childhood, such as obesity and malnutrition. The "Expoingá", a far-reaching regional event, provided a suitable environment for disseminating information about healthy eating, in an accessible and interactive way, to a diverse audience. The aim of this report is to share the experience of an extension project and reflect on the impact of this playful approach on raising awareness among children and their guardians. The activities carried out as part of the "Healthy Eating Guide" project during Expoingá were discussed, highlighting the use of ludic methods to teach children how to assemble a healthy plate and raise parents' awareness of their children's nutritional status. The actions took place between May 7 and 13, 2023, in the afternoon and evening, at the Expoingá exhibition fair. Children and their guardians were welcomed in a space set aside for the project. Food toys were used to explain in a playful way how to put together a balanced plate, with the right proportion of each food group. In addition, to raise awareness about sugar consumption, bags filled with sugar were used to show the amount present in foods such as chocolate milk and cornstarch cookies. With the consent of those responsible, anthropometric measurements (weight and height) were also taken from the children. These data were compared with the child growth curves and the results were discussed with the parents, highlighting the importance of maintaining a healthy weight for proper development. As the project attracted a large audience, it was well received by the population. The fun activities made it easier for the children to understand what constitutes a balanced diet. The use of sugar bags had a big impact on parents, who were often surprised to discover the amounts of sugar in common everyday foods. In all, approximately 200 children were seen during the event, and



their measurements were analyzed based on growth curves. The activity also encouraged parents to reflect on their family's food choices. Many parents reported that the practical and visual approach made it easier to internalize the information. In addition, the presence of medical students at the event also provided a space for exchanging information, generating discussions about the importance of healthy eating and regular monitoring of child growth. Therefore, participation in the event demonstrated the effectiveness of playful activities as a tool for health education. The interactive approach allowed knowledge to be built up in an accessible way, promoting awareness of healthy eating habits for both children and their guardians. In this context, university extension played an important role in promoting health and in the academic training of the students involved.

KEYWORDS: Health Education, Child Nutrition, University Extension, Health Promotion, Eating Habits.

PEDIATRIC EMERGENCY ROOM SHIFTS: AN EXPERIENCE REPORT FROM THE PEDIATRICS ACADEMIC LEAGUE

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ABSTRACT: The completion of extracurricular internships during medical school is essential for the training of health professionals, establishing an intrinsic relationship between theory and clinical practice. Participation in shifts in healthcare services allows students to experience, in practice, the knowledge covered in theoretical classes, as well as to perform activities such as taking medical history, conducting physical examinations, and other procedures, always under the supervision of experienced professionals. In the field of pediatrics, these internships are particularly important, as they enable students to develop specific skills for the evaluation and management of children in different clinical contexts. Practical experience in real healthcare environments is crucial for training competent pediatricians, ready to face the challenges of child care. The Pediatric Academic League of the State University of Maringá (UEM) offers its members the opportunity to participate in shifts at the pediatric emergency department of the Regional University Hospital of Maringá (HURM), expanding the practical experience of future physicians. This experience report aims to describe the students'

experiences during the shifts and highlight the impact of this practice on the development of clinical skills and diagnostic reasoning, as well as providing a greater understanding of management in acute pediatric situations. Since February 2024, 28 members of the Pediatric Academic League have participated in supervised shifts in the emergency department of HURM. Under the guidance of pediatricians and preceptors, the students were exposed to a variety of clinical cases, such as respiratory illnesses, gastroenteritis, fever, rashes, and other pediatric emergencies. Activities included initial assessments, taking medical histories, conducting physical examinations, and participating in therapeutic management. There were also activities in the ward, such as newborn screening tests, heart tests, and neonatal triage. Case discussions were held at the end of each shift, promoting critical reflection on the adopted conduct. Participation in the shifts brought benefits to the students. Of the 28 students involved, 100% reported a significant improvement in their ability to conduct pediatric histories efficiently and systematically, and 85% stated that the practice helped enhance their clinical reasoning, especially in the assessment of pediatric emergencies. The students emphasized that the continuous supervision of preceptors and residents was essential for their training, allowing them to perform procedures safely. Additionally, the shifts provided greater familiarity with the hospital environment and teamwork, which are fundamental skills for the practice of medicine. This experience was considered by many as an opportunity to consolidate theoretical learning and highlighted the importance of extracurricular internships in medical education, especially in challenging specialties like pediatrics. In conclusion, the shifts in the pediatric emergency department, organized by the Pediatric Academic League, were essential for the development of students' practical and theoretical skills, providing a comprehensive and dynamic experience in pediatrics. The experience significantly contributed to the training of the students, preparing them for the challenges of medical practice in a pediatric hospital environment, and demonstrated the importance of integrating theory and practice in medical education.

KEYWORDS: Medical Education, Pediatrics, Emergency Care, Extracurricular Internships.



ACUTE OTITIS MEDIA IN CHILDREN: EPIDEMIOLOGICAL TRENDS, RISK FACTORS AND COMPLICATIONS

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ABSTRACT: Acute Otitis Media (AOM) is a common pathology in pediatrics, characterized by the rapid onset of signs and symptoms of the middle ear, such as ear pain, ear rubbing and hearing loss. It is more prevalent between 6 and 24 months of age and in males. Risk factors include: viral respiratory infection (being the main one), age, family history, schools, tobacco smoke and environmental pollution, use of pacifiers and time of year between autumn and winter, due to the high incidence of respiratory viruses. Interventions are necessary to prevent possible complications, such as meningitis, abscess, hearing loss and hearing loss, mastoiditis and hospitalizations. To minimize these risks, prevention is necessary, emphasizing vaccination, especially against pneumococcus and influenza, and educating parents about children's exposure to risk factors. The present study carries out a narrative review of the epidemiological trends of Acute Otitis Media and its possible complications. This is a narrative review, using the UpToDate and Scielo databases. The inclusion criteria were the selection of articles in Portuguese, covering the period from 2020 to 2024. The keywords were used: "acute otitis media", "epidemiology" and "complications". Using the descriptors, strings were formed with terms combined by Boolean operators (AND): acute otitis media AND child health AND public health. The incidence of AOM is highest between 6 and 24 months of age, decreasing after five years of age. Approximately 80% of children will have at least one episode of AOM in their lifetime. Annually, around 700 million new cases of AOM are recorded, with the majority occurring in children under five years of age. Preventing risk factors and keeping vaccinations up to date are of paramount importance. AOM, also called Purulent Otitis Media or Suppurative Otitis Media, is a common pathology, mainly in children, being responsible for a large part of medical consultations and the use of antibiotics in pediatrics. Regarding its epidemiological aspects, AOM is more prevalent in males and more common between 6 and 24 months of age, being uncommon in school-age children. Therefore, this article aims to analyze the epidemiological data of AOM, its risk factors and

complications, in order to provide more information about the disease and its appropriate treatment.

KEYWORDS: Acute Otitis Media, Epidemiology, Complications.

SUN EXPOSURE AND SKIN HYDRATION IN THE ELDERLY: EXPERIENCE REPORT

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ABSTRACT: The elderly population has increased its number significantly in recent years. Currently, in Brazil, according to IBGE, this population already exceeds 30 million, representing around 14% of the general population. Based on this, it is necessary to create more public policies for elderly people. Aiming at this scenario, this report aims to address ways of preventing skin diseases in the elderly, as these can cause numerous changes, such as dryness, itching, tumors, physical disabilities, and even lead to death. To report the experience in a long-term care institution for the elderly, where the objective was to raise awareness and provide guidance on skin care for the elderly, with a focus on hydration and sun exposure. Experience report: The extension project was carried out by the Maringaense Academic Leagues of Dermatology and Medical Clinic in a long-term institution for the elderly, with the presence of medical students, where the focus was to promote the importance of skin hydration and sun exposure in the elderly population. Explanatory folders were created containing guidance on how to prevent dry skin, allergies and wounds, which were distributed to the elderly and also to employees, along with instructions on important skin care. In addition, free samples of sunscreen and moisturizers were also distributed, which were applied to the faces and hands of the elderly by students participating in the action. Furthermore, the importance of sun protection for the prevention of skin cancer was highlighted. Interaction with the elderly took place through conversations and activities, such as card games. Given the various diseases that affect the skin of the elderly, among the most frequent are malignant and benign tumors and dryness. Based on this, the action promoted greater knowledge and awareness among both elderly people and caregivers, highlighting how care and prevention are essential. The action achieved positive results, as many elderly people were unaware of skin care and the risks of lack of sun protection. Furthermore, interest was shown by the elderly and local employees. It is concluded, therefore, that promoting the health of the elderly, including the approach to care and prevention of skin diseases,



is of paramount importance and more actions are needed to address these topics.

KEYWORDS: Elderly, hydration, sun exposure.

SELF-MEDICATION IN BRAZIL

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ABSTRACT: According to the National Health Surveillance Agency (ANVISA), self-medication is defined as when an individual ingests a pharmacological substance without the guidance and prescription of a health professional. Brazil is considered one of the main countries in which the population irrationally self-medicates, due to the search for relief of symptoms. Due to the lack of information and the need for a “cure”, the population ends up consuming unnecessary drugs or in high doses, which can lead to poisoning. To investigate the prevalence data on self-medication in the Brazilian population. This study was carried out by searching for scientific articles in the following databases: PubMed (National Library of Medicine), Scielo (Scientific Electronic Library Online), Medline (Medical Literature Analysis and Retrieval System Online), Lilacs (Latin American and Caribbean Literature in Health Sciences and BDENF (Virtual Health Library). The descriptors used were: self-medication, medicines and drug intoxication, as well as the corresponding ones in English, self-medication, medicines and drug intoxication. Data were collected between 2019 and 2024. The results obtained in this study reinforce that self-medication has a high prevalence rate in Brazil, with women being the main agent of this act. However, it is noted that the search for pharmacological therapeutic resources occurs based on symptoms (headache, myalgia, colds and fever). In view of this, it is worth highlighting that the medications used to treat these conditions are available in the market without the need for a prescription, as these are drugs authorized by ANVISA for over-the-counter sale. Based on the results obtained, it can be concluded that most Brazilians who resort to self-treatment are female. Among the factors that contribute to self-medication, recommendations from family, friends and store clerks stand out, as well as the perception of pain relief without the need to consult a doctor. However, it is essential to implement appropriate interventions and prevention strategies to address this practice and reduce the health risks associated with self-medication.

KEYWORDS: Drug intoxication, Medicine, Self-medication.

SKIN CARE IN AGING: STRATEGIES FOR MAINTAINING SKIN HEALTHY IN OLD AGE

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ABSTRACT: Skin aging is a physiological process and involves a series of factors, which affect the different layers of the skin and supporting tissues, resulting in thinning and weakening. It is divided into intrinsic, which is related to genetic and chronological factors, and extrinsic, resulting from environmental damage, such as ultraviolet radiation emitted by the sun, smoking, nutritional habits and pollution. Skin aging encompasses a series of clinical signs, such as wrinkles, gray hair and the appearance of blemishes. Furthermore, as a consequence of aging, there is an increase in the prevalence of skin diseases, the most common of which are malignant, pre-malignant and benign tumors, superficial mycoses and dryness, in addition to actinic keratosis, which has a high incidence from 50 years, and is considered a pre-malignant lesion. There are also complaints regarding stains, allergies and itching. Based on this, skin care for the elderly is extremely important in order to avoid the appearance of pathologies and prevent progression to more serious cases, such as the evolution of a pre-malignant lesion into a malignant one. In order to avoid these events, measures are necessary, such as frequently carrying out self-examination of the entire body, including the scalp and soles of the feet, with emphasis on possible changes in color, texture and size of "spots", use sunscreen and avoid unprotected sun exposure, drink water frequently and hydrate your skin. This review aims to elucidate strategies for skin care in aging and emphasize the importance of prevention against diseases that most affect the elderly. The electronic databases PubMed, Scielo and UpToDate were used. The research was carried out by searching for articles between the years 2020 and 2024, using the keywords: “skin diseases”, “elderly”, “skin care” in logical combinations and their derivatives, in terms in English and Portuguese. Based on research, the need for skin care for the elderly is clear. Different skin types have been identified, which makes the care approach necessary and individualized. Self-care, including cleansing and moisturizing, is key to maintaining skin integrity. Furthermore, a balanced diet, water intake, and the use of topical and oral products are essential for care and prevention. The absence of symptoms does not mean that care can be ignored, highlighting the importance of specialized knowledge from healthcare professionals. It is



crucial to improve visual assessment to aid more accurate diagnoses in order to achieve early diagnosis and prevention. It is concluded that, in the clinical assessment of elderly people, it is essential to consider age-related changes and exposure to risk factors. This study aims to provide information to professionals who care for the elderly, enabling them to identify aging changes early, helping to prevent and treat diseases. Given this, it is essential to consider the implementation of public policies that promote comprehensive care for the elderly population.

KEYWORDS: Elderly, skin diseases, prevention, skin care.

MULTIDISCIPLINARY APPROACHES IN THE MANAGEMENT OF ALZHEIMER'S

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ABSTRACT: Alzheimer's Disease is a progressive neurodegenerative disorder characterized by cognitive and memory deterioration, directly impacting the lives of patients and their families. In this context, the use of multidisciplinary approaches for managing Alzheimer's aims to bring together complementary healthcare areas to serve as protective factors against disease progression and improve patients' quality of life throughout its course. This study's main objective is to analyze the contributions and effectiveness of these approaches in the management of Alzheimer's Disease (AD), focusing on how they can support patient rehabilitation and comprehensive care. Specifically, it seeks to identify the key disciplines involved—such as medicine, psychology, physical therapy, and occupational therapy—review their effectiveness in promoting patient well-being, and explore the challenges that hinder the integration of multidisciplinary care. This qualitative literature review was conducted using the SciELO Brazil and PubMed databases, focusing on multidisciplinary approaches to Alzheimer's management, with an emphasis on randomized clinical trials and systematic reviews from the last 10 years. The search terms used included: Alzheimer's; management; nutrition; physical exercises; occupational therapy. The reviewed articles confirm the aforementioned effectiveness, with particular emphasis on outcomes related to depression, stress levels, agitation, cognition, memory, autonomy, daily living activities, and clinical characteristics such as vascular

and inflammatory risk. The primary pathophysiological mechanisms of AD involve the accumulation and/or impaired clearance of beta-amyloid protein, hyperphosphorylation, and the formation of neurofibrillary tangles related to tau protein, along with a neuroinflammatory component. Physical activity was found to significantly improve prodromal manifestations of AD, including reductions in blood pressure, obesity, and pro-inflammatory activity, as well as improvements in lipid profiles and endothelial function, all of which promote neurogenesis and synaptic plasticity. Similarly, dietary factors demonstrated neuroprotective potential, particularly diets low in saturated and trans fats and rich in antioxidants. Elevated circulating cholesterol levels, for example, were shown to compromise the integrity of the blood-brain barrier and increase the deposition of beta-amyloid peptide in brain tissue. Furthermore, cognitive stimulation and cognitive reserve—reinforced through leisure activities, occupational therapy, and social interactions—are promising strategies for both the prevention and management of Alzheimer's and its behavioral symptoms. Prolonged stress exposure contributes to neurodegeneration, and as neurodegeneration progresses, cortisol levels increase. However, multidisciplinary cooperation presents challenges, often influenced by factors such as time, availability, financial resources, and geographic location, along with the late presentation of individuals with dementia to specialized healthcare services. In conclusion, integrated approaches to AD management play a crucial role in improving patients' quality of life. Yet, the integration of disciplines still faces challenges, which demand resolute attention given the compensatory value of such collaboration.

KEYWORDS: Alzheimer's, management, nutrition, physical exercises, occupational therapy.

THE IMPACT OF INSULIN ON ALZHEIMER'S DISEASE

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ABSTRACT: Sugar is one of the most appreciated ingredients by individuals, because once ingested it induces a feeling of pleasure, promoting repetitive consumption, with the potential to cause dependence. Even today, many people are unaware of the harmful effects associated with their excessive use, and the consumption of foods rich in sugar continues to increase every



day. Although the acquisition of glucose in the brain is independent of insulin, the receptors of this hormone are present in the central nervous system (CNS), where they seem to perform an important neuromodeling function, interfering in several processes Cognitive. In this sense, understanding the relationship between sugar consumption and cognitive activity can contribute to a better understanding of the pathophysiology of cognitive diseases such as Alzheimer's disease. To discuss the physiological role of glucose in the CNS, as well as to understand how disturbances in brain energy metabolism may be related to the development of cognitive diseases such as Alzheimer's. This study was carried out based on searches for scientific articles in databases such as PubMed (National Library of Medicine), Scielo (Scientific Electronic Library Online) and Google Scholar. The following descriptors were used: Alzheimer's Disease, Insulin and Cognitive Dysfunction, as well as the corresponding descriptors in English: Alzheimer Disease, Insulin and Cognitive Dysfunction. Studies published between 2011 and 2021 were evaluated. It was evaluated that the increase in blood glucose levels generates harmful effects on brain glial cells, particularly in astrocytes. These effects appear to be caused by reduced glutathione levels, and compromise the production of glial fibrillary acid protein (GFAP), which is essential for the functioning of these cells. In addition, the elevation of blood glucose also alters the release of the S100B protein, which plays a fundamental role in the survival of nerve cells, and favors the increase in the release of chemokins that intensify inflammatory processes in the brain. In addition, decreased glutamate-mediated neurotransmission has been reported, negatively affecting cognition. In addition, the formation of oxygen free radicals can lead to oxidative stress and intensifies inflammation, resulting in cell damage, lipid peroxidation, and cell death. The consequences of the changes mentioned was a decline in cognitive function. Based on the results presented, it was found that high levels of sugar in the diet and insulin resistance, by resulting in increased blood glucose, can contribute significantly to cognitive decline. Therefore, maintaining good eating habits and reducing sugar intake can contribute to the prevention of neurodegenerative diseases. Continuity of research is crucial to clarify the mechanisms involved in these processes and to create therapeutic interventions that can prevent or delay the progression of these diseases.

KEYWORDS: Alzheimer Disease, Insulin and Cognitive Dysfunction.

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ABSTRACT: The Centro Dia is a public service aimed at elderly individuals and people with disabilities who depend on some level of care, being considered a form of health promotion. In aging, it is essential to address not only physical and social care but also mental care to ensure healthy aging, avoiding senility. In this sense, the objective of this work is to report on the meeting organized by medical students in their basic training cycle with the elderly population to promote health. The project was organized and planned by 4th-period students with the help of a faculty member to create a "Festa Junina" at the Centro Dia in the city of Maringá in 2022. The event consisted of combining traditional 'Festa Junina' games with health promotion activities such as blood pressure (BP) measurement, dancing, bingo, general knowledge quizzes, toy assembly, the "clown's mouth" game, and typical festive foods to stimulate the motor, intellectual, and social skills of this population. These activities allowed the elderly to socialize in a fun and educational way, as topics such as lifestyle changes and the importance of treatment adherence were discussed, starting with BP measurement to ensure the well-being of the elderly, which is the goal of the Centro Dia. Furthermore, the games involving memory and reasoning were valuable not only for mental stimulation but also for building connections among the elderly, promoting moments of relaxation and strengthening bonds. The impact of this visit was visible through the increased physical and emotional disposition among participants on that day. The experience highlights the importance of social spaces for the promotion of health and well-being within the elderly community, as exemplified by the Centro Dia. Simple actions, such as those carried out in this project, have a positive impact on the lives of these individuals, creating a more active, healthy, and socialized routine.

KEYWORDS: Health Promotion, Aging, Socialization.

"HEALTH PROMOTION IN AGING: EXPERIENCE OF A 'FESTA JUNINA' AT THE CENTRO DIA IN MARINGÁ"

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MPOX: WHAT TO KNOW ABOUT THE DISEASE AND ITS INCIDENCE IN BRAZIL.

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ABSTRACT: The Minister of Health, Nísia Trindade, announced the creation of an Emergency Operation Committee to control the spread of mpox, considered by the WHO in Africa as a public health emergency of international importance. Despite the severity, Nísia highlighted that it is a time for alert, not alarm. The planned measures include purchasing tests, alerts for travelers and updating the contingency plan, but there is no forecast for mass vaccination. The Ministry considers that the risk of a new wave of the disease is low for Brazil. In 2024, 709 cases and 16 deaths were reported in the country, while globally cases exceeded 14 thousand, with 524 deaths. Mpox is a viral disease caused by the MPXV virus, of the Orthopoxvirus genus, with three forms of transmission: contact with secretions from infected people, contaminated objects and rodents. Symptoms include fever, headache, body aches, chills, fatigue, lymph node enlargement and mild to moderate rashes, lasting 2 to 4 weeks. Suspected individuals must isolate themselves until transmission ceases and the lesions disappear. Diagnosis is made by laboratory tests, preferably with samples from the lesions. Treatment is supportive, focused on relieving symptoms and preventing complications. Vaccination is recommended for at-risk groups, including people with HIV/AIDS and laboratory professionals, with pre- and post-exposure vaccination strategies to protect against severe forms of the disease. To analyze the epidemiology of mpox in Brazil in 2024, evaluating the distribution of cases, predisposing factors and control measures implemented by the Ministry of Health, with a focus on protecting public health. In the present study, epidemiological bulletins prepared by the Ministry of Health were used to analyze the number of cases of infection by the mpox virus in Brazil, as well as its incidence by sex, region and time period. The objective was to identify predisposing factors and assess whether there is a growing threat to public health in the country in the year 2024. In terms of incidence, the Federal District and Goiás presented 11.0 and 10.2 cases per 100 thousand inhabitants, respectively. In 2024, of the 106 cases reported, 45.3% were in São Paulo (48 cases) and 39.6% in Rio de Janeiro (42 cases). The majority of confirmed and probable cases (90.9%) were male, and black (42.5%) and white (41.0%) races/color represented the majority of cases. In summary, the current risk of mpox for Brazil is still considered low, however, measures have already been taken to

minimize the impacts. Furthermore, it is extremely important that health professionals and the general population know how to identify the disease, so that there is less contamination between individuals.

KEYWORDS: Mpox, Brazil, Epidemiology.

PREVALENCE OF DEPRESSIVE SYMPTOMS AND ASSOCIATED FACTORS AMONG ELDERLY PATIENTS IN PRIMARY HEALTHCARE: A CROSS-SECTIONAL STUDY

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ABSTRACT: Data indicates a considerable increase in the population aged 65 and older in Brazil, highlighting the inversion of the age pyramid in the country. Although the elderly population is protected by laws and rights that allow them to experience the aging process, there is a notable rise in the presence of depressive symptoms within this demographic, attributed to a combination of biological, psychological, and social factors. Major Depressive Disorder (MDD) represents the classic condition among depressive disorders, characterized by alterations in affect, cognition, and neurovegetative functions that persist for at least two weeks. Today, Primary Health Care (PHC) serves as the primary entry point and the first contact for patients within the healthcare system, thereby being considered the "backbone" of any effective health system. Consequently, it is essential for healthcare professionals to be knowledgeable about this condition, enabling them to effectively address issues related to mental health. Thus, the objective of this study is to analyze the prevalence of depressive symptoms and associated factors among elderly individuals receiving care at a Health Unit in Maringá, Paraná. This is a descriptive, exploratory, and cross-sectional study conducted with individuals aged 60 and above who are registered and monitored at the Basic Health Unit (UBS) Paraíso, located in Maringá, Paraná. Initially, a list of the elderly individuals monitored by the Family Health Team (ESF) at the mentioned UBS was requested. Subsequently, a simple random sampling was conducted to determine which individuals would be included in the study. The sampling was based on data from registered elderly individuals who had at least one chronic illness (hypertension and/or diabetes) documented in their medical records. Individuals who were hospitalized during the data collection period or who had severe sequelae from a Stroke



or any neurological condition that would prevent their participation were excluded from the study. As a result, 84 elderly individuals participated. Data collection was then conducted in the homes of these patients, with one of the questionnaires being the Geriatric Depression Scale (GDS-15), which assesses the presence of depressive symptoms. It was found that women exhibited a higher prevalence of depressive symptoms (25%). Furthermore, 70.2% of the patients were aged 70 years or older. Additionally, 19% had exclusively public health coverage, and 26.2% of the patients had sought medical consultation within the last three months. Thus, it is crucial to implement measures aimed at the prevention and appropriate treatment of depression in the elderly. This includes the establishment of public policies focused on promoting mental health and ensuring equitable access to quality health services. Moreover, it is essential to invest in education and awareness programs regarding aging and its implications for mental health, targeting both healthcare professionals and the general population.

KEYWORDS: comprehensive healthcare assistance; primary healthcare; elderly health; major depressive disorder.

VARIATION IN THE NUMBER OF MAMMOGRAMS AS BREAST CANCER SCREENING IN PARANÁ: ANALYSIS FROM 2019 TO 2022

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ABSTRACT: Breast cancer is a disease caused by the disordered multiplication of abnormal breast cells, forming a tumor, and the test done for its detection is mammography. In the state of Paraná, according to INCA (National Cancer Institute), about 41.06% of women are affected by this cancer annually, and this disease is of great concern for public health. To analyze the number of mammograms performed in women in the state of Paraná as screening for breast cancer. Quantitative and retrospective study with the number of mammograms performed in Paraná from 2019 to 2022, using data from DATASUS and INCA. The annual variations in exams were compared, considering the impact of the COVID-19 pandemic on access to health services. According to DATASUS, in 2019, 1,191 women underwent the screening test for breast cancer, in 2020 this number reduced to 744 women, in 2021 there was already an increase to 812 women

and in 2022 the number increased to 995 women who underwent the exam. The data presented reveal a significant variation in the number of mammograms performed in the state of Paraná between the years 2019 and 2022. There is a sharp reduction in 2020, possibly attributed to the restrictions imposed by the COVID-19 pandemic, which impacted access to health services. However, from 2021, there was a trend of increasing the number of tests performed, suggesting a resumption of breast cancer screening and prevention efforts. These results reinforce the importance of public policies that ensure continuous and expanded access to mammography, since this is the main screening test for the early diagnosis of breast cancer, essential to increase the chances of cure and reduce mortality.

KEYWORDS: Breast cancer, health, impact.

HEALTH EDUCATION STRATEGIES IN THE PREVENTION OF COLORECTAL CANCER: AN EXPERIENCE REPORT FROM AN EXTENSION PROJECT

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ABSTRACT: Colorectal cancer has become one of the leading causes of cancer-related mortality, representing about 10% of deaths in Western countries and being the third most frequent among men and women in Brazil. It develops from a precursory polypoid phase in the colon or rectum, which can evolve into cancer over the long term if not detected and treated early. Due to its high prevalence and the importance of early detection, the Academic League of General Surgery and Anesthesiology of Maringá (LACGAM) organized an outreach project aimed at raising public awareness about the risks and prevention of colorectal cancer. The main objective of the initiative was to educate the population about colorectal cancer, its risk factors, symptoms, and the importance of preventive exams, as well as to promote healthy lifestyle habits for prevention. The event attracted approximately 100 individuals, focusing on the age group between 40 and 70 years, since it is the most affected by the disease. The goal was to increase awareness and encourage the undertaking of exams such as colonoscopy, which is fundamental in screening. The project was held at Parque do Ingá in Maringá on April 21, 2024, from 8 a.m. to 2 p.m. The organizing team set up structures with tents, tables, and informational brochures, which were distributed to the public. The action involved active engagement with park visitors by league members, providing explanations about the warning



signs of colorectal cancer and the importance of prevention. Pamphlets were distributed highlighting risk factors such as advanced age, family history, sedentary lifestyle, smoking, excessive consumption of red meat, and ultra-processed foods. They also addressed symptoms including the presence of blood in the stool, changes in bowel habits, and unexplained weight loss. Additionally, healthy habits were encouraged, such as regular physical exercise, a diet rich in fiber, and reducing alcohol and tobacco consumption. The team's approach was friendly and aimed to sensitize participants about the importance of screening exams, especially colonoscopy for people over 45 years old. The qualitative impact was assessed through participant feedback, who expressed great interest in obtaining more information about this type of cancer. The campaign reached its target audience and achieved the goal of promoting awareness about the disease, emphasizing prevention through the adoption of healthy habits and regular examinations. Consequently, the campaign was a success, reaching a significant number of people and promoting health education, prevention, and early detection. The active involvement of the community and the distribution of informational materials fostered awareness and the importance of preventive health.

KEYWORDS: Colorectal Cancer, Prevention, Health Education.

ANALYSIS OF ORAL MUCOSAL CELLS OF FAMILY FARMERS EXPOSED TO PESTICIDES ASSOCIATED WITH THE USE OF PERSONAL PROTECTIVE EQUIPMENT

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ABSTRACT: Agricultural productivity in Brazil is related to export monoculture and agribusiness. However, constant exposure to pesticides can increase the risk of poisoning due to the absorption of these chemical agents by the body, and there is a correlation between exposure to pesticides and increased frequency of micronuclei, since these professionals are exposed to these compounds on a daily basis (Aleem & Malik, 2005). For this reason, the use of Personal Protective Equipment (PPE) is a requirement for worker protection, however, not all farmers use it in the recommended way. Therefore, the objective of this

study was to analyze the frequency of micronuclei associated with occupational exposure to pesticides in 39 farmers and to relate these changes to the use of protective equipment. Thus, samples of the oral mucosa of the farmers were collected using a cytological brush and processed as described in Benedetti et al. (2013). Subsequently, the frequency of micronuclei was compared between the groups separated according to the use of PPE. Among the samples analyzed, the exposure time ranged from 1.5 to 50 years, with a mean of 24.24 years (± 10.62). Among the farmers in the study, 3 reported using personal protective equipment in the recommended way, 36 reported using it partially or not using it at all. The data show that farmers who did not use all the recommended protective equipment had more cells with micronucleus (mean of 2.05 ± 3.82). In contrast, those who used all the recommended equipment had a lower mean (1.07 ± 1.26). The non-use or partial use of PPE may be related to the increase in micronuclei and cytogenetic alterations of cells (Corcino et al., 2019). Thus, the increased frequency of micronuclei presented by farmers who did not use the recommended PPE suggests a greater exposure to mutagenic agents present in pesticides, indicating greater protection against these effects in farmers who used PPE in a complete way. Epidemiological studies show that recurrent exposure to pesticides and increased frequency of micronuclei is associated with health risks for rural workers, causing significant genetic damage that enables numerous adverse health effects, cardiovascular diseases, and the development of some types of cancer (Dos Santos et al., 2022), so these findings may be related to serious consequences for the health of rural workers. It is also noteworthy that only 7.6% of the farmers reported using PPE in the recommended way, while 92.4% reported using them partially or not at all. This reinforces the need for a more rigorous approach to inspection and training on the use of PPE, which is essential to protect the health and physical integrity of workers. Finally, chronic exposure to pesticides and inappropriate use of PPE may be associated with a higher frequency of micronuclei, in addition, these results reinforce the importance of the correct and constant use of PPE during agricultural activities to avoid chronic pesticide poisoning.

KEYWORDS: Agrochemicals, DNA damage, mutagenicity tests.



ASSESSMENT OF THE HEALTH CONDITIONS OF CHILDREN UNDER FIVE YEARS OF AGE IN THE SCHOOL ENVIRONMENT

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ABSTRACT: The curriculum of the second year of the medical course at Ingá University Center (UNINGÁ) includes the subject “Public Health II”, which plays an important role in the professional training of medical students. In addition to enabling the application of the knowledge acquired during the undergraduate course, the subject helps in the development of a more humanized and holistic view of health. In view of this, the objective of this work is to report the experience of a medical student in caring for a child at a Municipal Early Childhood Education Center (CMEI) in Maringá/PR as part of the subject “Public Health II” of the medical course at Uningá. This is an experience report carried out at a CMEI in Maringá/PR, based on the assessment of the health conditions of children less than five years of age. It was realized the care of a five-year-old child with suspected Oppositional Defiant Disorder (ODD), as reported by the teachers. First, an anamnesis was performed, which aimed to investigate the child's behavior, her relationship with her classmates, teachers and guardians, as well as her lifestyle habits. A complex family structure, lack of good eating habits and agitation during conversation were noted. Next, a physical examination was performed, which indicated that she was overweight, with no other changes in hygiene or presence of injuries. Finally, development was assessed through a sensory stimulation practice. A group game was proposed in which the students had to listen to sounds made by different animals and identify which animal this sound belonged to among the options presented. The child performed well, demonstrating adequate development for her age. Based on the practice described, the student can reflect on: a) the family's influence on children's eating habits; b) the importance of preventing eating disorders in childhood and developing educational and health promotion actions; and c) the need to assess the child's cognitive and psychomotor development. Thus, carrying out theoretical and practical activities during undergraduate studies is relevant for academic development and professional training, as it allows the application of medical knowledge and encourages reflections on it, as well as its role in community health.

KEYWORDS: Public Health, Child, Daycare.

LANGUAGE AS A BARRIER TO THE HEALTH OF IMMIGRANTS IN BRAZIL, AN EXPERIENCE IN PUBLIC HEALTH

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ABSTRACT: Language is what allows us to live in society and, as a result of the globalization process, health professionals come across patients of the most diverse nationalities in Brazil: Haitians, Venezuelans, among others. Law 8080/1990, which regulates the Unified Health System (SUS), mentions the ethical principle of universality in article 7, item I. Establishing that the SUS must guarantee access to health for all, without discrimination based on nationality, it is necessary that professionals have strategies to care for such patients. This experience report with a qualitative approach prepared from the perspective of a student during an internship at the Cardiology outpatient clinic of a University Hospital, in 2024, aims to highlight the communicative difficulty between doctor and patient who speak different languages ??and demonstrate that language barriers have major impact on the quality of healthcare. The patient, a Venezuelan man, 76 years old, accompanied by his grandson (he did not speak Portuguese, only Spanish), came to the Outpatient Clinic for an Echocardiogram evaluation. Your medical history he indicated Type 2 Diabetes Mellitus (DM2) since 2005, left bundle branch block (LBBB) since 2015, Systemic Arterial Hypertension (SAH) being treated since 2004, Gout, 4 surgeries on the left eye due to retinal detachment and cataract, a stroke Ischemic Stroke (CVA) in 2004, and presented Metabolic Syndrome – The responsible intern pointed out its frequency in Endocrinology and Cardiology –. The patient was using polypharmacy, and understanding which drugs were being used correctly was one of the first difficulties in care, as the patient did not know them by name in some cases. As a result, the consultation progressed slowly and, at times, repetitively so that the patient, along with his grandson, understood the procedure to be followed, such as the laboratory tests requested to monitor his cardiovascular status. In this way, it is clear that the language acts as a communicative barrier, bringing with it many challenges. Despite this, the commitment of interns and resident doctors is notable through tangible explanations and the use of more common words in a medical consultation, using the patient's language to adapt to the situation. The consultation



allowed for an expanded and contextualized view of the reality of immigrants in Brazil, facilitating the identification of needs and actions to be implemented, which could establish a relationship of trust and empathy between health professionals and immigrants, an essential factor for the success of interventions and recommended by Law 8080/1990.

KEYWORDS: Humanization of Care, Health Communication, Equity in Access to Health Services.

EPIDEMIOLOGICAL ANALYSIS OF DENGUE BETWEEN 2020-2024 IN THE MUNICIPALITY OF MARINGÁ, PARANÁ, BRAZIL

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ABSTRACT: Dengue is an infectious, non-contagious arbovirus, transmitted by the bite of the female *Aedes aegypti* mosquito. It presents an endemic profile in Brazil, with cases occurring throughout the year, outlining a seasonal pattern, coinciding with hot and rainy periods, when it is observed an increase in the number of cases and a greater risk for epidemics that effectively occur in different regions of the country on a cyclical basis¹. In view of this, the objective of this work is to analyze the epidemiological panorama of dengue between 2020 and 2024 in the municipality of Maringá, Paraná state, whose climate is classified as humid subtropical mesothermal², and to classify the notification of probable cases according to the year and month of notification, sex, age group and race of the patient, final classification, evolution and need for hospitalization of the disease. For the methods, this work is classified as an aggregate, observational and cross-sectional study (ecological study) and it used as a source of information secondary data in the public domain, collected in the Notifiable Diseases Information System (SINAN), via DataSUS and IBGE, therefore being exempt from consideration by the research ethics committee. Among the variables analyzed, the results revealed, in the year 2024, the highest incidence of the disease (6,212.10 cases per 100 thousand inhabitants). Respecting the seasonal profile of arbovirus, the largest number of cases was concentrated in the months of February to April throughout the analyzed period (2020-2024). Considering the final classification, the clear majority of probable cases of dengue were confirmed.

Regarding evolution, in all years, over 96.72% of cases were cured, and the highest mortality rates observed were in 2024 (5.50 deaths per 100 thousand inhabitants) and 2020 (4.99). In this way, the epidemic character in the year 2024 is concluded and the seasonal variation of dengue fever in the city of Maringá is evident. Thus, the need for additional studies arises and it is essential to plan and execute coping strategies, in order to analyze in depth risk factors and clinical characteristics of the disease in the municipality, aiming to improve patient care, predict future trends of the infection and guide its fight in the coming years. References: 1 - Dengue: diagnosis and clinical management: adult and child [electronic resource] / Ministry of Health, Secretariat of Health and Environmental Surveillance, Department of Communicable Diseases. – 6th ed. – Brasília: Ministry of Health, 2024. 2 - Szapak LEF, Baldo MC, Zandonadi L. Distribution and frequency of pluviosity in Maringá and Campo Mourão-PR. *Journal Sapiência Soc Sab e Prat Edu.* 2021;10(2):1-18.

KEYWORDS: Dengue Virus, *Aedes aegypti*, Epidemiology, Severe Dengue.

SURVIVAL ANALYSIS OF PATIENTS HOSPITALIZED FOR INFECTIVE ENDOCARDITIS IN THE STATE OF PARANÁ (2013-2023)

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ABSTRACT: Infective endocarditis has high morbidity and mortality due to the risk of embolization and bacteremia. Thus, it is essential to analyze the epidemiological profile and the impacts on the prognosis of patients hospitalized with this infection, in order to improve therapeutic strategies. The study aims to retrospectively analyze the survival of patients hospitalized for infective endocarditis in Paraná between 2013 and 2023, relating to age, sex, and race/color. The research was based on data from the DATASUS system, considering code I33 of the International Classification of Diseases, to assess survival in patients hospitalized for infective endocarditis in Paraná, between 2013 and 2023. The database recorded 542 observations and 91 deaths. Patients of both sexes were included, divided into three age groups (0 to 25 years, 26 to 50



years, and 51 years or older). The analysis used the Kaplan-Meier model to estimate the probability of survival over time. The log-rank test was used to compare the survival curves between different groups according to age, sex, and race. Cox regression was applied to model the impact of explanatory variables on time to death, together with deviance analysis (ANOVA). The Aalen model, which evaluates additive risks, was used with weight adjustments to test the significance of different variables. The Kaplan-Meier model showed that the probability of survival decreases over time, and after 80 days, only 70% of the patients remained alive. The analysis by sex indicated that men have worse survival, with the probability of survival dropping to 60% at 60 days, while women maintain about 70% probability over this period. Regarding age, patients over 50 years of age were more vulnerable to death, while individuals between 0 and 25 years of age had a more stable survival. As for race, the white population had a lower probability of survival throughout the period analyzed, with consistent decreases of up to 45 days. The black breed showed high initial survival between 7 and 14 days, but there were uncertainties around 30 and 45 days. The analysis of the Aalen model, using the chi-square global test (14.69 with 7 degrees of freedom, p -value=0.0402), indicated the significance of the model, although no single variable showed a strong association with the risk of death. This finding reflects the complexity of infective endocarditis, which makes it difficult to identify isolated variables with relevant statistical significance. Survival from infective endocarditis in Paraná is significantly influenced by the time of infection, with the worst results observed in men over 50 years of age and of the white race. Detailed knowledge of the epidemiological profile of the disease is essential to improve the clinical management of patients.

KEYWORDS: Endocarditis, Epidemiological Profile, Survival, Survival Analysis, Regression Models.

SILENCED VOICES: CONSEQUENCES OF SEXUAL ABUSE IN CHILDREN AND ADOLESCENTS

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ABSTRACT: Sexual abuse against children and adolescents is a form of violence in which an adult or older adolescent exerts control over the victim, disregarding their autonomy and treating them as an object of sexual gratification in an unequal

power dynamic. Sexual abuse is defined as any erotic act between an adult and a child, with or without physical contact, and without the need for force. This violence generates numerous internal conflicts and difficulties in the healthy development of the victims, who grow up surrounded by fear and insecurity. Among the various consequences, the presence of psychological disorders in these children and adolescents stands out. For this reason, it is essential to offer victims a network to combat this violence, with a multidisciplinary approach aimed at the protection and support of these children and adolescents. The proposed research aims to analyze the psychological and social consequences of sexual abuse, as well as understand how healthcare professionals can improve the care provided to victims, map existing guidelines, and study strategies to raise awareness in society about this violence. This study consists of a systematic literature review, aiming to conduct a theoretical review of sexual violence against children and adolescents. To this end, a data eligibility and analysis protocol will be applied, followed by the development of a flowchart with the proposed methodological protocol. So far, the study aims to map the main consequences of sexual abuse against children and adolescents, including psychological disorders such as depression, anxiety, and sleep disturbances. The research will analyze existing protocols and guidelines that guide healthcare professionals in attending to victims, highlighting current recommendations and any gaps in public policies. These results will not only allow for a better understanding of the issue but will also serve as a basis for future interventions and new protection policies. From this analysis, it is expected that the research will contribute to the improvement of professionals involved in the care of these children, promoting a holistic and effective approach to their care. It is also hoped that this study will provide enough theoretical material to raise societal awareness about the severity of this violence and the importance of proper care. Sexual abuse against children and adolescents is a critical issue that demands urgent attention and a multidisciplinary approach. By mapping the psychological and social consequences of abuse and analyzing care protocols, this study aims not only to improve the care provided to victims but also to contribute to the formation of a more aware and engaged society in the prevention of this violence. The recommendations arising from this research could strengthen public policies and promote a protective and supportive environment, essential for the healthy development of affected children and adolescents. Thus, it is hoped that the work conducted will not only expand knowledge on the subject but also inspire concrete actions to confront and combat this serious violation of human rights.

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KEYWORDS: Adult Survivors of Child Abuse. Child Abuse, Sexual. Comprehensive Health Care. Social Vulnerability.

CARDIOPROTECTIVE POTENTIAL OF COPAÍBA OIL (COPAIFERA SPP.): SYSTEMATIC REVIEW ON EFFECTS ON THE CARDIOVASCULAR SYSTEM

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ABSTRACT: Copaiba oil (*Copaifera spp.*) is native to the Amazon rainforest and has long been widely used by the local population and cosmetics industries for its anti-inflammatory, antioxidant, relaxing and anxiolytic properties. However, little was known about its use in the treatment of damage to the body caused by cardiovascular diseases. Nowadays, research has investigated its effects on the cardiovascular system, especially in conditions of pulmonary arterial hypertension (PAH), metabolic syndrome, oxidative stress and diabetes, as well as its consequences, opening up new therapeutic possibilities, especially as an alternative and lower-cost route. This systematic review aims to evaluate the efficacy of copaiba in the cardiovascular system as a cardioprotective element, in addition to its relationship with oxidative stress and inflammation, as well as its effects in the treatment of lesions and alterations to the heart and vessels as a result of cardiovascular pathologies, with a focus on diabetes. In this context, a search was carried out in the PubMed, Scielo and CAPES databases, with publications from 2017 to May 2024. Five scientific articles were analyzed using the terms “Copaiba”, “Heart” and “Cardiovascular” as keywords for the search, namely: “Effect of Free and Nanoencapsulated Copaiba Oil on Monocrotaline-induced Pulmonary Arterial Hypertension”; “Copaiba Oil Attenuates Right Ventricular Remodeling by Decreasing Myocardial Apoptotic Signaling in Monocrotaline-Induced Rats”; “The Effect of Copaiba Oil Odor on Anxiety Relief in Adults under Mental Workload: A Randomized Controlled Trial”; “Evaluation of the vascular and cardiac effects of treatment with copaiba oil and white pitch: a perspective for reducing oxidative stress and improving cardiac microstructure”; “Anti-inflammatory action of copaiba oil”. This review, which chose the 5 articles mentioned above from an analysis of 13, is justified by the need for greater knowledge,

studies and experiments on the therapeutic and preventive properties of copaiba oil in relation to the cardiovascular system and its disorders, mainly related to diabetes, as was conducted in the articles used in this review, and publications that did not cover the compound's anti-inflammatory property or focused on epithelial repair - a common use of copaiba oil - were discarded. It is therefore concluded that this literature review highlights the benefits of using copaiba oil in the treatment of cardiovascular disorders as well as the compound's cardioprotective effects, highlighting the compound's relevance for these purposes.

KEYWORDS: Copaiba, cardiovascular, heart, oxidative stress.

EDUCATIONAL STRATEGIES TO IMPROVE CHILDREN'S ORAL HEALTH: AN EXPERIENCE REPORT

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ABSTRACT: It is well known that oral health results from a set of habits that should be established from early childhood, as this care is understood as a preventive measure that helps build healthy practices for adult life. It is essential that this form of education involves the active participation of various social actors, such as the family, school, and health sectors. From this perspective, creating a foundation of preventive educational approaches can foster health, improve quality of life, and lead to lower public health costs in Brazil. Thus, the present work aims to describe the experience of medical students from Unicesumar resulting from an educational approach to oral health with schoolchildren. This action was carried out by second-year medical students during the Community Interaction II course, involving an educational intervention in health with children aged 5 to 9 years, who were in the 1st to 3rd grades of elementary school, at a school in Sarandi, in the interior of Paraná. The intervention was divided into four stages: theoretical research, profile investigation, result analysis, and educational action. In the first stage, students conducted a prior observational study aimed at identifying the challenges related to the children's age group, such as the development of healthy habits. In the second stage, through an investigation of anthropometric, visual, and oral profiles, tools such as a measuring tape, digital scale, Snellen chart, and flashlight were used. The results indicated a high prevalence of poor oral hygiene, evidenced by cavities, dental plaque, and bad



breath. Based on these results, an educational action was carried out to teach brushing and flossing techniques, as well as distribute mini oral hygiene kits, using playful and pedagogical strategies. This action produced effective results, as the children actively participated in all the proposed stages. By identifying the oral health issues presented by the schoolchildren, the action was mediated by seeking pedagogical approaches focused on teaching the children the importance of oral hygiene. Rhetorical techniques were used, along with demonstrations of correct brushing with the help of a dental mannequin, encouraging the children to replicate what they had learned using the mini brushing kits they received. As a result, the intervention was deemed successful, with significant interest and active participation from the children. The educational action helped raise awareness about the formation of healthy habits. Educational interventions like this are essential for improving children's oral health; however, it is important to emphasize that the involvement of parents, schools, and public health agencies must be collective. Thus, interventions of this nature can contribute to this joint effort to support public health and improve children's quality of life.

KEYWORDS: Oral hygiene, Educational intervention, Health promotion.

GYNECOLOGICAL AND SEXUAL HEALTH CHALLENGES OF HOMELESS WOMEN: A STUDY IN THE MUNICIPALITY OF MARINGÁ-PR

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ABSTRACT: The health of homeless individuals is a stigma that is intensifying daily, contributing to the exclusion of this group from government health institutions, making it difficult for them to access health services. That said, excessive mortality is directly associated with the social segregation experienced by these people, with the mortality rate for homeless women being 12 times higher than that of the rest of the female population, with an average age of death of 52 years. In view of this, the present study aims to analyze the gynecological and sexual health conditions of homeless women in the city of Maringá-PR. This is a quantitative study. Data collection was carried out through medical records of women who identify themselves as homeless, taking into account the following selection criteria: (a) homeless women in the city of Maringá-PR; (b) age 18 or

older; (c) being within the regional limits of the CnR, that is, who were served by this institution. The data were tabulated in a Microsoft Excel® spreadsheet and later transcribed into the Statistical Package of Social Science SPSS® statistical program. The number of the CEP's consolidated opinion is 5,361,488. In addition, the approval of the Maringá-PR Health Department, with official letter no. 2469/2021, for the use of the medical records of the Street Clinic was noted. In total, the medical records of 87 homeless women were analyzed. It was found that 44 women declared themselves single; 30 reported being married and/or in stable relationships, and in 13 medical records the information was not presented. Regarding the survey on HIV, syphilis, and viral hepatitis; 10 women have HIV and of these, 5 use antiretroviral therapy (ART) and 5 do not use it; of the 87 women, one had viral hepatitis; Furthermore, 12 women had syphilis, and of these, 2 were not treated. It is worth noting that this data is consistent with the fact that there is a significant relationship between risk factors for exposure to the disease and homelessness. In Brazil, the seroprevalence of T-pallidum antibodies is the highest among homeless people in the world, and this fact can be explained both by the increase in rapid testing by the Unified Health System (SUS) over the years, and by the shortage of benzathine penicillin. The analysis of the gynecological and sexual health conditions of homeless women highlights their vulnerability, with a high prevalence of HIV, syphilis, and limited access to treatment. Exposure to risk factors aggravates their conditions, while social inequalities and barriers to access to health require specific public policies. Promoting comprehensive and humane care is essential to improve the quality of life of these women. Therefore, a multidisciplinary approach, focused on combating stigma and social inclusion, is essential to guarantee the right to health and reduce the barriers faced by this group.

KEYWORDS: Homeless Women, Gynecological Health, Sexually Transmitted Infections, Vulnerable Population.

IMPACTS OF ELECTRONIC CIGARETTE USE ON ACADEMIC PERFORMANCE AND MENTAL HEALTH OF MEDICAL STUDENTS: AN INTEGRATIVE REVIEW

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ABSTRACT: Electronic cigarettes were created in 2003, through the vaporization of liquids containing solvents, flavorings and, in most cases, nicotine. Their effects on health and cognitive performance remain uncertain. Furthermore, the ineffectiveness of regulatory policies and quality control standards makes it difficult to assess the safety of these devices. Among the student community, the popularization of electronic cigarettes raises concerns about their impact on academic performance, especially in relation to memory, concentration, mood and learning. In view of this, the present study aims to evaluate the influence of electronic cigarettes on student performance and their possible relationship with sleep, mood and anxiety disorders. This is an integrative literature review of the MEDLINE database through PubMed. The search strategy was created with the acronym P.I.C.O. for the following question: what is the influence of electronic cigarettes on academic performance? The descriptors used are indexed in DeCS/MeSH and were combined with Boolean operators with the following search strategy: ("Students") AND ("Electronic Nicotine Delivery Systems" OR Vaping) AND ("Academic Performance" OR Anxiety OR Sleep). The inclusion criteria were: studies published between 2020 and October 2024, written in Portuguese, English and Spanish and available in full text. The exclusion criteria were: literature reviews, reports, monographs, theses, duplicate studies and articles that did not answer the guiding question. The PRISMA flowchart was applied. Six studies were selected (five cross-sectional studies and one cohort study). The common sample covered the student population, including individuals from high school, undergraduate and graduate schools, predominantly from the United States, with sample sizes ranging from 761 to 195,443 participants. The main objective of these studies was to investigate the relationships between the use of electronic cigarettes and the psychobehavioral impairment of users. All studies identified significant associations between vaping and mental health problems, including attention deficit hyperactivity disorder, general mental disorders, and psychotic symptoms. Additionally, it was found that e-cigarette users had lower quality sleep, sleeping less than 8 hours per night, and reported higher alcohol consumption. Another relevant finding was the increase in stress levels among e-cigarette users, with women being the most affected group, while depressive symptoms were observed in both sexes. Therefore, it was possible to identify the vulnerability experienced by students in relation to the indiscriminate use of e-cigarettes, requiring investigation and regulation by public agencies regarding the long-term harm caused by such substances. In this regard, the harm caused to the health of these students is undeniable, in favor of the commercialization of e-

cigarettes, which leads to the loss of emotional balance and mental health of individuals. These findings highlight the need for more effective control and awareness policies regarding the risks of electronic cigarettes, considering their possible repercussions on students' health and academic performance.

KEYWORDS: Academic Performance, Electronic Nicotine Delivery Systems, Medicine, Sleep, Vaping.

DESCRIPTIVE ANALYSIS OF SUICIDE ATTEMPTS IN BRAZIL (2013-2023) BY SEX AND YEAR OF NOTIFICATION, INVOLVING MEDICATION USE

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ABSTRACT: It is noticed that there is a greater number of women in these requirements, predisposing the discussion about the forms used by the male public, as well as the possible underreporting and change of motivation in a period related to the Covid-19 pandemic. The main objective of this study was to perform a descriptive analysis based on data obtained from the DATASUS platform, without age restriction and focusing on the numerical difference between men and women, over a period of 10 years. The discussion will be directed at underreporting and differentiated focus during the pandemic years in Brazil (February/2020 - May/2023). Thus, data on attempted suicide due to exogenous drug poisoning and deaths resulting from the same cause were obtained from the Department of Information Technology of the Unified Health System (DATASUS). From these collected data, a mixed study was carried out, combining quantitative (descriptive analysis) and qualitative statistical approaches with the use of the Excel platform, seeking a comprehensive comparison between the sexes over the years. Based on this analysis, it is noted that the number of suicide attempts with the use of medication by women (49,165) is much higher than that of men (15,208), and it is possible to discuss other forms of suicide used by the male public (unrelated to drug intoxication). However, although the number of suicide attempts among women is higher, the evolution to death in male attempts presents a higher percentage (0.9925%), compared to that of women (0.5021%), highlighting the greater male success in cases of attempted suicide by medication. In relation to the years 2019-2020, a drop in the number of suicide attempts is noticed, possibly due to



underreporting, with greater prioritization for cases related to Covid-19 infection. Thus, females represent a much higher number of suicide attempts compared to men, while males have a higher suicide death rate, indicating higher mortality. Therefore, although women make more suicide attempts, men are the ones who most evolve to death by drug poisoning.

KEYWORDS: suicide, intoxication, pharmacological preparations.

SURVIVAL STUDY IN HOSPITALIZED PATIENTS WITH ATRIAL FIBRILLATION AND FLUTTER IN THE STATE OF PARANÁ (2013-2023)

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ABSTRACT: Atrial fibrillation (AF) and atrial flutter are common tachyarrhythmias, with the prevalence of AF increasing due to an aging population. This condition raises the risk of severe complications¹. Often asymptomatic, AF can be underdiagnosed, leading to an underestimation of patient risk². This study aims to retrospectively analyze the survival of patients hospitalized with atrial fibrillation and flutter, classified under the International Classification of Diseases code I48, in the State of Paraná, Brazil, between 2013 and 2023. Methods: The study utilized the RStudio software for statistical analysis of data from the DATASUS database. The database contained 5836 observations and 248 death events. The analyzed variables included age, sex, and ethnicity, in a survival curve related to the length of hospitalization in days. Age was categorized into three groups: group 1 up to 65 years (non-elderly), group 2 from 65 to 74 years (elderly), and group 3 over 75 years (very elderly). Sex was divided into category 1 (women) and category 3 (men), while ethnicity included six categories. Survival analysis was illustrated by the Kaplan-Meier model, and the log-rank test was used to compare curves between groups. Cox regression assessed the impact of variables on time to death, accompanied by deviance analysis (ANOVA). The Kaplan-Meier survival curve shows that around 30 days, the survival rate reaches 50%. The curve by age group showed that group 1 (non-elderly) has the highest survival rate over time. Group 3 (very elderly) has the worst

survival, reaching 50% survival around 30 days, while group 2 exhibits an intermediate pattern. The log-rank test was performed to compare survival curves by age group, obtaining a p-value of 6×10 , which is extremely low. The value suggests a significant difference in survival curves by age, highlighting the role of this variable in predicting outcomes. The Cox regression model also yielded significant results. Age groups 2 and 3 were statistically significant, also indicating an impact of the age factor on the risk of death. On the other hand, sex and ethnicity were not statistically significant, suggesting that they do not contribute significantly to predicting death. Deviance analysis revealed that the age variable has a significant p-value (9.316×10), indicating a strong impact of the variable on survival time. Sex and ethnicity were not statistically significant in this analysis, suggesting that they do not contribute to the outcome. The study revealed that the survival of patients hospitalized for atrial fibrillation and flutter in Paraná is strongly related to age, with people over 65 years old having a higher risk of death. The variables sex and ethnicity did not show statistical significance in the outcomes. Epidemiological analysis is crucial for the development of public policies and hospital management directed at risk populations.

KEYWORDS: Arrhythmias; atrial fibrillation; atrial flutter; epidemiology; length of stay.

MEASURING THE SWEETNESS OF LIFE

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ABSTRACT: Diabetes Mellitus (DM) is a chronic disease with high global prevalence, characterized by persistent hyperglycemia due to dysfunction in insulin secretion and action. DM is primarily classified into type 1 (DM1), which is autoimmune in nature, and type 2 (DM2), which has multifactorial origins, such as obesity and physical inactivity. DM2 is linked to chronic complications, such as cardiovascular diseases, neuropathies, and nephropathies, overburdening healthcare systems. In Maringá-PR, 17.5% of elderly patients registered in health units have DM2, with a higher incidence among women (55%) and in the Mandacaru and Zona Sul regions. Systemic arterial hypertension (SAH) is the main comorbidity, present in 77% of elderly patients with DM2, highlighting it as an important challenge in managing this population. This report aims to describe the experience of



medical students from UniCesumar during the "City Hall in the Neighborhoods" project, conducted in Maringá-PR, which focused on raising awareness and educating the local population about DM2. This descriptive study is an experiential report carried out by medical students from UniCesumar in Maringá-PR. The action took place at Parque do Ingá on a single date, with the participation of 11 students and approximately 15 participants. They took turns at stations for measuring capillary blood glucose, using glucometers and reagent strips provided by the institution. The activity included a moment of health education, addressing non-pharmacological strategies for controlling blood glucose, such as balanced diet and physical exercise, in addition to guidance on the proper administration of hypoglycemic agents and insulin. Approximately 16.3% of the participants were in a state of hyperglycemia. During the activity, two samples of participants were identified: 4% without DM and 12.3% who already had a previous diagnosis. The experience was fundamental in bringing students closer to clinical practice, allowing them to apply the theoretical knowledge acquired in the classroom. The students explained the pathogenesis of DM and how the correct diagnosis of the disease is made. They recommended that participants seek the Basic Health Unit (UBS) for more detailed investigation and follow-up, given the large number of questions about diet and health among those present. The performance of capillary blood glucose testing and health education carried out by the students was effective in raising awareness about DM2, highlighting the importance of prevention. DM2 is associated with modifiable risk factors, such as poor diet and sedentary lifestyle, reinforcing the need for educational actions. The experience aligned with the principles of the Unified Health System (SUS), promoting integrality, equity, and universality by offering free care and guidance to all present. The action demonstrated the positive impact of preventive initiatives on public health and combating the advancement of diabetes.

KEYWORDS: Glycemic Index, Diabetes Mellitus, Health Care, Accessibility to Health Services.

RELATIONSHIP BETWEEN BODY WEIGHT AND CHILD HEALTH: AN ANTHROPOMETRIC STUDY IN CHILDREN AGED 6 TO 7 YEARS IN SOUTHERN BRAZIL

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ABSTRACT: Human development depends on a complex interaction between intrinsic factors, such as genetics, and extrinsic factors, such as nutrition and physical activity. Adequate weight during childhood is crucial, as it directly influences structural, ponderal, and neurological growth, as well as impacts academic performance. School-aged children who are overweight or obese are at a higher risk of developing chronic diseases, such as type 2 diabetes, systemic arterial hypertension, and cardiovascular complications. In Brazil, the age group most affected by overweight and obesity comprises children between 7 and 14 years old, a period marked by poor eating habits and physical inactivity. Undernutrition, on the other hand, also has a negative impact, interfering with cognitive development and learning capacity, making it essential for children to have sufficient lipid reserves for biological processes such as neuronal myelination and synaptogenesis. To promote healthy development, it is crucial to adopt preventive measures, such as a balanced diet and regular physical activity. In the context of this study, the objective was to report the experience of medical students from UniCesumar in partnership with an elementary school located in Sarandi, Paraná, where anthropometric data (weight and height) of children aged 6 and 7 years were collected to assess the nutritional status of this population. The methodology involved dividing the students into three groups, each responsible for measuring the 70 children using a scale and measuring tape. The data were subsequently analyzed using Microsoft Excel software. The results were interpreted based on the Z-score, which assesses the position of a value relative to the population mean, measured in standard deviations. In First Grade B, 65.21% of the children had adequate weight for their age (Z-score between -1, 0, and 1), while 26.08% were classified as obese (Z-score of 2) and 8.69% were in severe obesity (Z-score of 3). In Second Grade C, 68.15% of the children were at an ideal weight, 13.63% were obese, and another 13.63% were in severe obesity. However, 4.5% of the children were underweight. In Third Grade B, 47% of the students had an adequate weight, 38% were overweight, and 9% were in severe obesity. Only one child (6%) was classified as underweight for their age. These data highlight the importance of monitoring children's nutritional status, as both overweight and undernutrition pose risks to health and cognitive development. Although the survey was successful, it faced the logistical challenge of separating children who were waiting for measurement from those who had already been evaluated to



avoid duplications. For future studies, it is suggested to include additional measurements, such as abdominal and neck circumference, for a more detailed analysis of the children's anthropometric profile, providing a more comprehensive view of their nutritional status.

KEYWORDS: Morphometric Description, Childhood Overweight, Anthropometric Assessment.

IMPACT ON LUNG HEALTH: COMPARISON BETWEEN TRADITIONAL CIGARETTES AND ELECTRONIC CIGARETTES

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ABSTRACT: The use of electronic cigarettes (vapes) has grown significantly, especially among young people, raising questions about their safety compared to traditional cigarettes. Both products contain harmful substances, but the way they are consumed and the chemical compounds used differ, which may influence the impacts on lung health. This study aims to compare the effects of the use of traditional cigarettes and electronic cigarettes on lung health, focusing on respiratory symptoms, lung function and associated diseases. An integrative literature review was carried out, covering articles published between 2015 and 2023. The sources were selected from databases such as PubMed and Scopus, using keywords related to “electronic cigarettes”, “traditional cigarettes” and “lung health”. The results indicate that the use of traditional cigarettes is strongly associated with chronic respiratory diseases, such as Chronic Obstructive Pulmonary Disease (COPD) and lung cancer, due to the inhalation of tar and other toxic substances. On the other hand, e-cigarettes, although considered less harmful, have also shown significant adverse effects. Vape users have reported symptoms such as coughing, shortness of breath, and airway irritation. Exposure to e-liquid vapors can cause lung inflammation and compromise lung function, although to a lesser extent than conventional cigarettes. It is therefore concluded that although e-cigarettes may be perceived as a less harmful alternative to traditional cigarettes, both pose risks to lung health. The need for regulation and education about the risks of vaping is crucial, especially among young people, to curb potential long-term health damage.

KEYWORDS: E-cigarettes, traditional cigarettes, lung health.

HEALTHY PLAY

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ABSTRACT: Childhood obesity is a major global public health challenge. In Brazil, the prevalence of this issue has grown alarmingly in recent decades. Data from the 2022 Food and Nutrition Surveillance System (SISVAN) show that 16.33% of children aged 5-9 years are overweight, with 9.38% being obese. Law No. 8,142, of December 28, 1990, mandates community participation in the management of the Unified Health System (SUS), emphasizing the role of citizens in their own health and highlighting the importance of shared responsibility and participation in decisions related to health policies, aiming for equity and access for all. Childhood obesity requires a collective and integrated approach, involving family, community, and government for the implementation of effective preventive and control measures. The promotion of healthy habits through health education (as outlined by the National School Health Program - PSE) is essential to prevent obesity from early childhood. To present the experience of medical students from UniCesumar in collaboration with a municipal school in the city of Sarandi. The goal was to promote health for children in food vulnerability and to emphasize the importance of physical exercise during childhood, based on the practical application of SUS and PSE principles. This descriptive study, in the form of an Experience Report, was conducted by medical students from UniCesumar with 83 elementary school students in Sarandi-PR. The students promoted physical activities aimed at keeping the children active and combating overweight. Two activities were carried out: "Duck, Duck, Goose," where children play a tag game in a circle, and an interactive Tic-Tac-Toe game. The initiative aimed to show that physical activity can be fun and done collaboratively. The action had a satisfactory outcome, as out of seventy students, only two did not participate in the activities, without any apparent reason. A positive aspect was the internalization that physical activity is enjoyable, allowing the development of body skills and proprioception, as well as promoting cooperation in team formation and the establishment of new friendships. However, managing the students in an orderly manner was a challenge, especially when leading them



to the court all at once, which caused some disorder. To improve the activity, a third option could be offered to include children who did not participate or those with any kind of disability. Based on our experience and the objectives of the PSE, it was possible to make a brief assessment of the children's physical health, highlighting the lack of family and school encouragement for physical-motor development, especially due to the lack of sports opportunities. By encouraging student leadership, we realized the importance of humanizing the activity and promoting regular and enjoyable physical activities, which foster autonomy, self-care, and community interaction.

KEYWORDS: Childhood obesity, Physical exercise, Physical-motor development, Autonomy, Self-care.

ADVANCES IN PUBLIC HEALTH PROMOTION: TRANS OUTPATIENT CLINIC IN MARINGÁ-PR

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ABSTRACT: Brazil has made progress in public policies for the health of trans and transvestite people, especially after Act No. 1,707/2008, which instituted the transsexualization process in the SUS. Despite improvements, such as Act No. 2,803/2013, which created trans outpatient clinics with multidisciplinary care, there are still social barriers, discrimination, and lack of infrastructure that limit access. In June 2022, Maringá, PR, opened a Trans Outpatient Clinic, offering psychological support, legal guidance, and hormonal monitoring, avoiding travel to Curitiba, then a reference center, and promoting specific and integrated care for this population. This study seeks to analyze the first year of the "Trans Outpatient Clinic" in Maringá, from the perspective of the health team that works there, in addition to understanding how the professional training process, case management, and procedures performed there took place. Using a qualitative approach, the research involved, in the foreground, a bibliographic review on social rights and health of minorities, focusing on Trans Outpatient Clinics and the health of the transgender and transvestite population. In the background, semi-structured interviews were conducted and recorded with five members of the team (nursing, social work, endocrinology, and pharmacy), ensuring anonymity and confidentiality. In the third stage, the recordings were transcribed and the study data were tabulated. The research was approved by the Ethics Committee of the State University of

Maringá, with CAAE registration: 71540123.8.0000.0104. The Trans Outpatient Clinic of Maringá has a multidisciplinary team of nine professionals from different areas of health, recognizing the importance of care focused on this population. The professionals reported efforts to establish the service in the municipality through the team at the Testing and Counseling Center (CTA) in Maringá and that they did not receive training to start services at the trans outpatient clinic. Despite the lack of specific training, their previous experience at the CTA helped guide the first cases managed. The professionals highlighted the evolution of the service, which went from monthly to weekly appointments due to high demand, with the number of patients seen almost doubling in the first year. However, they face challenges, such as the lack of psychiatrists and surgical procedures available, which results in dropouts, as it is a service that the trans and transvestite population frequently seeks. The professionals believe that the outpatient clinic has a positive impact on the lives of patients, providing access to safe treatments and emotional support, promoting significant changes in self-esteem and social relationships. They emphasize the need for continuous improvements and adequate training to better serve this population. Therefore, the creation of the Trans Outpatient Clinic in Maringá is an important advance in the rights of trans and transvestite people, arising from the demand for specialized care. The clinic not only provides healthcare, but also promotes visibility and respect, combating stigma. However, it has faced challenges such as a lack of staff training and difficulties in purchasing medications, leading to user dropouts. To improve the reception, it is essential to continuously train healthcare professionals and seek adequate resources, allowing the clinic to serve as a model for other regions.

KEYWORDS: Gender Identity, Health Policy, Sexuality.

HEALTH EDUCATION: EXPERIENCE REPORT ON OPHTHALMOLOGICAL ACTION WITH SCHOOLCHILDREN

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ABSTRACT: Visual impairments impact psychomotor development, socialization, and learning, especially during school age. Due to the social impact generated by various degrees of visual disabilities, it is essential for medical students, as future health professionals, to receive training for ophthalmological care. However, many universities' curriculum

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do not cover ophthalmology, creating a knowledge gap. In response, an ophthalmological action was conducted for screening and medical care to identify and resolve eye problems diagnosed in children and adolescents in May 2023 in Maringá - PR. To demonstrate the importance of developing skills and competencies in ophthalmological semiology for medical students and to present the impact of ophthalmological care actions on children and adolescents in situations of social vulnerability. The action conducted in May 2023, in partnership with a Non-Governmental Organization (NGO), took place at a shelter for children and teenagers in vulnerable situations. It involved the participation of medical students and ophthalmologist who screened 276 children, of whom 90 received medical care, and 63 were provided with corrective glasses at the end of the consultation. During the screening conducted by the students, questionnaires were administered regarding prior use of glasses, eye drops, history of ophthalmological consultations, and eye surgeries. The Snellen Test was then used to assess visual acuity, followed by the administration of dilating eye drops to prepare them for examination with the autorefractor. Subsequently, the refraction degree was adjusted using the ophthalmological refractor during the consultation with volunteer ophthalmologists. At the end of the consultation, children diagnosed with visual disorders were given corrective glasses. Challenges encountered included the number of children to be seen and difficulties in administering the eye drops, as for many, it was their first experience in an ophthalmological consultation, which made them anxious and curious. The action had a positive impact on the eye health of the children seen, as early detection of visual disorders is crucial for effective treatment and reversal of conditions, especially in socioeconomically vulnerable situations with limited access to healthcare. Of the 90 children seen, 63 received corrective glasses, representing 70% of the consultations conducted. Furthermore, the activity contributed to the learning of the volunteers by providing practical experience in ophthalmological exams and follow-up on consultations with specialists. It is understood that the action successfully fulfilled its beneficial social impact by diagnosing eye pathologies and providing resources to treat them, either by supplying corrective glasses or by referring them for thorough evaluation of the identified conditions. Additionally, it provided an overview of ophthalmological practice, enhancing the knowledge of the students, who will be better equipped to address patients with ophthalmological complaints, especially in childhood.

KEYWORDS: Health assistance; Ophthalmology; Eye health.

CONGENITAL SYPHILIS AND EDUCATION: AN ANALYSIS OF THE CORRELATION WITH MATERNAL EDUCATION LEVEL IN PARANÁ

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ABSTRACT: Syphilis is a disease caused by the spirochete *Treponema pallidum*. This pathology is mostly acquired through sexual contact, however, when not treated properly, it can be transmitted from the mother to the newborn (vertical transmission), being called congenital syphilis. Among women with untreated early syphilis - who present only painless lesions -, 40% of pregnancies result in miscarriage or fetal loss. Furthermore, syphilis can also cause neonatal death, prematurity and low birth weight. In addition, socioeconomic factors, including maternal education, play a crucial role in increasing rates of congenital syphilis, because the lack of education is often associated with reduced access to screening and treatment during pregnancy, which exacerbates the ongoing problem. This study aims to evaluate the correlation of cases of congenital syphilis with the level of education of the mother living in the state of Parana. This ecological analysis was carried out based on data collection at the Department of Informatics of the Unified Health System (DATASUS), following the variables of maternal education. The cases that were investigated are those related to congenital syphilis in the period from 2019 to 2023. The selected group was women over 20 years old. From the data collected, descriptive statistics were applied using Excel in order to organize the research results. In this way, 3.128 cases of congenital syphilis were analyzed, distributed according to maternal education level. The highest proportion of cases (29,73%) was observed in mothers who attended between the 5th and 8th grade of elementary school, with a total of 930 cases. Next, 771 cases (24,65%) were observed in mothers with completed secondary education. It was noted that 715 cases (22.86%) were classified as "ignored", "blank" or "not applicable", representing records where it was not possible to obtain or did not apply information on maternal education. The fourth highest number of cases was identified among mothers with incomplete secondary education, totaling 373 cases (11,92%). The lowest proportions were observed among mothers with complete higher education (72 cases, 2,30%) and mothers with incomplete higher education (71



cases, 2,27%). Moreover, 177 cases (5,66%) occurred among mothers who attended the 1st to 4th grade of elementary school, while the lowest incidence was among illiterate mothers, with 19 cases (0,61%). These data suggest a possible correlation between maternal education and the occurrence of congenital syphilis, with a higher prevalence among mothers with lower or incomplete levels of education. Finally, the data analyzed indicate that there is a relevant relationship between cases of mothers with low education or incomplete education, highlighting the importance of public policies aimed at education and access to maternal health to prevent the disease.

KEYWORDS: Congenital Syphilis, Maternal Education, epidemiology.

MORTALITY AND HOSPITALIZATION FOR ACUTE MYOCARDIAL INFARCTION IN MARINGÁ: AN EPIDEMIOLOGICAL STUDY

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ABSTRACT: Acute myocardial infarction (AMI) is one of the main causes of mortality in Brazil and worldwide. It is a condition that generates significant impacts on public health, especially among the elderly population, that's why epidemiological data are important information for the development of public health policies and prevention and early diagnosis strategies. This current study focuses on the analysis of mortality and hospitalization data in the elderly population due to AMI between 2019 and 2023, segmenting the data by age group and sex, in the city of Maringá-PR. The main objective of this study is to evaluate the mortality rate and the number of hospitalizations associated with AMI in the city of Maringá in the elderly population during the period from 2019 to 2023, identifying significant differences in the rates between men and women, as well as between different age groups. This descriptive study used data from the Unified Health System (SUS) regarding hospital morbidity and mortality due to AMI in the city of Maringá. The target population included individuals aged 60 years or older, grouped into the following age groups: 60 to 64 years, 65 to 69 years, 70 to 74 years, 75 to 79 years, and 80 years or older. The analysis was stratified by sex (male and female) to assess differences between groups. Mortality rates were calculated based on the number of deaths in relation to the total number of hospitalizations due to AMI in

the same period. The results revealed a total of 1.928 hospitalizations due to AMI in the analyzed period, with a higher prevalence among men (1.225) compared to women (703). The lowest age group for hospitalization among men was 75 to 79 years (136), however, this same age group had the highest mortality rate (23,53%). In women, the group aged 80 years or older was the most impacted, with the highest number of hospitalizations (136) and a mortality rate of 23,03%. The total mortality rate for AMI was 13,85%, being 12,49% among men and 16,22% among women. These data indicate that, although men have a higher number of hospitalizations, women have a higher risk of mortality, especially at older ages, since the mortality rate for women is higher in the overall rate and in all age groups analyzed, except for those aged 75 to 79, in which male mortality prevails. According to the data obtained, within this prism, some factors should be analyzed to justify this difference between the sexes, such as the difference in symptoms that exist between the two groups. It is known that women have less angina in cases of AMI, which leads to a lower medical demand compared to men, in whom the presence of this symptom is found in the majority of cases. The reported data therefore reveal the need for interventions focused on the prevention, diagnosis and early treatment of AMI, especially among elderly women.

KEYWORDS: Myocardial Infarct, Mortality Rate, Hospitalization.

VEGAN DIET AS A STRATEGY FOR OBESITY PREVENTION: BENEFITS AND SCIENTIFIC EVIDENCE

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ABSTRACT: According to Boyd (2019), obesity is a chronic disease that contributes to the deterioration of health worldwide, given its role in various other pathologies, such as type 2 diabetes, hypertension, dyslipidemias, sleep apnea, among others. Because of this, preventing this disease is of utmost importance for national public health. One preventive measure is changing the population's dietary patterns, as they are currently based on high-calorie but low-nutrient foods. Finally, the current integrative review aims to explore the vegan diet as a way to reduce the incidence of obesity. For this



purpose, scientific studies were used that included clinical trials and observational studies, peer-reviewed from PUBMED and SCIENCE DIRECT databases, covering the period from 2019 to 2023, in Portuguese and English. The descriptors used are indexed in DeCS/MeSH and were combined with Boolean operators. Review articles, case reports, monographs, theses, duplicate studies, and articles that did not address the guiding question were excluded. From the data collected in Zhu et al. (2021), it is noted that the vegan diet, which is based on the consumption of vegetables, greens, cereals, and fruits, excluding animal-derived foods, has contributed to the reduction of body fat among its adherents. Thus, studies show that a plant-based diet is rich in fiber and low in fat, which consequently leads to reduced energy intake and an increase in postprandial metabolism. In the randomized clinical trial by Kahleova et al. (2020), 244 people participated, implementing a vegan diet consisting of 75% carbohydrates, 15% proteins, and 10% fats for approximately 16 weeks. As a result, the average weight decreased by 6.4kg in the plant-based diet group, compared to 0.5kg in the control group (CI95% -6.7 to -5.0), and an 18.7% increase in postprandial metabolism was observed in the vegan group (CI95% 4.4% to 22.3%), with no significant difference in the control group. Based on the study by Zhu et al. (2021), high adherence to this diet was inversely related to weight gain, meaning that patients with high adherence maintained their weight more easily compared to those who did not fully adhere to the diet. Finally, based on the collected studies, it was observed that the vegan diet helps reduce BMI, making it extremely important for the prevention of obesity, which affects a large part of the population today, contributing to improved public health if implemented by patients and health professionals.

KEYWORDS: Obesity, Diet Vegan, Feeding Behavior, Disease Prevention.

EPIDEMIOLOGICAL ANALYSIS OF CHILD SEXUAL VIOLENCE IN A HEALTH REGION OF PARANÁ

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ABSTRACT: The World Health Organization (2022) refers to sexual violence as any non-consensual sexual contact that is completed or attempted; non-contact acts of a sexual nature; sexual trafficking committed against someone without the

possibility of consenting or refusing; and online exploitation. The Statute of the Child and Adolescent (ECA) considers violence any act that includes "enticing, harassing, instigating, coercing, entrapping, inducing and exposing the child or adolescent to explicit sexual content, real or simulated, being a crime punishable by imprisonment and payment of a fine" (Brazil, 1990). The research sought to demonstrate the epidemiological profile of aggressors and victims (aged between 0 and 14 years) in cases of sexual violence in the 30 municipalities covered by the 15th Regional Health Service of Paraná, in the period between 2018 and 2023. A cross-sectional descriptive analysis of secondary data collected until August 2024 was carried out, through the Notification Injury Information System (Sinan). 784 cases were reported. Of which 133 (16.9%) in 2018; 140 (17.8%) in 2019; 123 (15.6%) in 2020; 105 (13.3%) in 2021; 79 (10%) in 2022; and 204 (26%) in 2023. The number of cases between 2019 and 2021 is lower when compared to the occurrences of 2018 (pre-pandemic) and 2022 to 2023 (post-pandemic). When verifying the incidence, calculated according to the latest IBGE population census of 2022, the municipalities were grouped according to the predefined interval, demonstrating the risk groups in descending order. In first place, the municipality of Ivatuba stands out; in second, the municipality of Presidente Castelo Branco; in third, Flórida, Ângulo and Maringá; and in fourth, the other municipalities covered. The age group of the victims was stratified, with the following intervals evaluated: <1 year, 1 to 4 years, 5 to 9 years and 10 to 14 years. There is a predominance, in the years 2018, 2019 and 2020, of children between 1 and 4 years old as being the most affected by sexual violence. From 2021 onwards, there is a gradual change to the 10 to 14 age group. The analysis of the aggressor's life cycle shows that adults are responsible for 47.9% of the cases, adolescents correspond to 17.7% and the options "ignored/blank" are equivalent to 15.3% of the cases. It is concluded that the municipality of Ivatuba has the highest incidence. The presentation of the epidemiological profile of aggressors and victims reveals the importance of knowing the characteristics of child sexual violence in the 15th Regional Health Service of Paraná. Most of the victims were between 10 and 14 years old, and the aggressor was an adult in most of the total notifications. The COVID-19 pandemic may have directly influenced the number of notifications and underreporting. It is essential to recognize this reality and direct efforts to prevent and combat sexual violence against children and adolescents through public policies, developing tools that facilitate the reporting and reception/protection of these victims.

KEYWORDS: Child abuse; Child Abuse, Sexual; Sex offenses.

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PREVIVA: AWAKENING TO LIFE – KNOWLEDGE AND PREVENTION AGAINST CANCER THROUGH AN EXTENSION PROJECT

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ABSTRACT: Cancer is one of the leading causes of death worldwide, with millions of deaths annually, and its global incidence is expected to double by 2070 if preventive measures through national policies are not adopted (Soerjomataram and Bray, 2021). Aiming to combat this scenario, the "PreViva" outreach project of the Academic League of Oncology and Hematology (LAONC) linked to the State University of Maringá, was created with the objective of raising awareness among the population about the importance of prevention and early diagnosis of the main cancers that affect the Brazilian population, as well as breast and prostate cancers, the most common in cisgender women and men, without relating to non-melanoma skin cancers. The project focuses on reducing mortality from these diseases by educating people about risk factors, such as smoking, obesity and HPV infection, in addition to promoting preventive campaigns such as Pink October and Blue November. The project methodology includes training medical students affiliated with LAONC with classes taught by professionals specialized in the oncology area, a qualitative study based on the literature on cancers with a high incidence in the population, and public policies for national awareness campaigns. In addition, the project prepared publications on the social network Instagram (@laonc.uem) with informative materials in accessible language and educational resources, emphasizing signs, symptoms, and prevention methods, seeking to engage the community in carrying out regular exams. The project participated in the largest scientific event in Paraná – Paraná Faz Ciência 2024 – with a stand addressing cancers linked to infection by the Human Papilloma Virus (HPV). Finally, lectures were held at Plaenge construction sites, aimed at construction workers. The results of the project demonstrate that the integrated approach to awareness, both in person and virtually, has a significant impact on the public. The lectures revealed that many of the workers were unaware of basic information about cancer, which reinforces the need for these initiatives. In addition, digital campaigns reached a larger audience, facilitating the

dissemination of important data on prevention and self-care. The actions carried out at Plaenge construction sites and at academic events, such as the Paraná Faz Ciência Career Show, allowed for a direct connection between academics and the community, facilitating the exchange of information on breast cancer, prostate cancer and HPV. There was also demystification about prostate cancer, with many listeners demonstrating greater acceptance of tests such as PSA and digital rectal examination, which are essential for early diagnosis. Therefore, the "PreViva" project contributed significantly to raising awareness among the population about the importance of prevention and early diagnosis of the most prevalent cancers in Brazil. The use of interactive lectures and posts on social media expanded the reach of the information, indicating that, by educating and raising awareness among both the academic and non-academic population, there is a contribution to demystifying cancer and ensuring a better prognosis. In this way, "PreViva" not only helped to disseminate knowledge about cancer, but also encouraged proactive health practices that can positively impact mortality from these diseases in the future.

KEYWORDS: early detection of cancer, tertiary prevention, mortality premature.

DESCRIPTIVE ANALYSIS OF ADMISSIONS FOR NERVOUS SYSTEM DISEASES (CHAPTER VI. ICD-10) IN THE STATE OF PARANÁ BETWEEN 2013 AND 2023:

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ABSTRACT: Nervous system diseases are among the leading causes of years lived with disability worldwide, with mortality from these disorders having increased by 39% globally in recent years. Neurodegenerative diseases such as Parkinson's, Alzheimer's, and Multiple Sclerosis accounted for 51,000 hospitalizations in Brazil between 2010 and 2020. These high hospitalization rates, which increase each year, are mainly due to population growth and aging, which demand improvements in health care strategies. Therefore, for preventive actions to be implemented at the local level, it is important to understand the regional epidemiological profile of hospital admissions for neurological diseases. The objective of this study is to



descriptively evaluate the profile of hospitalizations for Nervous System Diseases in the state of Paraná between 2013 and 2023. The methodology is based on an ecological, retrospective, quantitative, and descriptive study using the Hospital Information System (SIH) database from DATASUS, analyzing Hospital Morbidity, associated to place of hospitalization, for the period from January 2013 to December 2023 in the state of Paraná. Hospitalizations were filtered by year of care according to the ICD-10 Morbidity List, restricting only to diseases of Chapter VI (Diseases of the Nervous System). Based on these fixed variables, the variation in hospitalizations was observed according to age group, sex, health macro-region, and type of care. The results showed that 186,374 hospitalizations were recorded during this period, with the most prevalent morbidities being Epilepsy; Disorders of Nerves, Roots, and Nerve Plexuses; Transient Ischemic Stroke and related syndromes; and Migraine and other headache syndromes. Until 2018, the number of hospitalizations increased successively, with a 25% reduction between 2019 and 2020, rising again in 2021 but not surpassing the 2018 level. The predominant age group was 50 to 59 years (16.4%), followed by 40 to 49 years (14.2%). Regarding sex, of the 15 morbidities assessed, 11 showed male predominance, however, the disease with the greatest gender disparity was Disorders of Nerves, Roots, and Nerve Plexuses, with 22,570 female hospitalizations compared to 9,837 male hospitalizations (risk 2.29). Most hospitalizations occurred in the Eastern Macro-region (108,366, peaking in 2019), followed by the Northern (31,707), Western (23,438), and Northwestern (22,863) regions. Emergency care was predominant (75.81% of hospitalizations), with only Cerebral Palsy and other paralytic syndromes; and Disorders of Nerves, Roots, and Nerve Plexuses showing a predominance of elective care. Therefore, the temporal analysis of hospitalizations showed an increase in numbers of hospitalizations due to increased life expectancy, as the peak occurs between 50 and 59 years of age. A notable reduction in hospitalizations was observed during the COVID-19 pandemic. Finally, there was a predominance of emergency care, underscoring the importance of neurologists in emergency settings. Thus, understanding the regional epidemiological profile of hospital admissions for neurological diseases is crucial for implementing preventive actions at the local level.

KEYWORDS: Nervous System Diseases, Hospitalization, Morbidity.

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ABSTRACT: Hospitalization is necessary for the treatment of various medical and psychiatric conditions, but it can be an aggravating factor for anxiety disorders due to the unfamiliar environment, routine changes, and isolation. During hospitalization, patients experience high levels of anxiety, especially in contexts of unpredictability and discomfort, which affects their recovery and emotional well-being. The objective of this study was to conduct a systematic review to explore the association between hospitalization and the exacerbation of anxiety disorders, as well as to identify pharmacological and non-pharmacological interventions that can reduce anxiety during hospitalization. The review was conducted using the PRISMA model (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), and the databases used were BVS, PubMed, and Scielo, covering the period from 2020 to 2024. The inclusion criteria were primary studies published in the last 4 years that analyzed the relationship between hospitalization and anxiety, using keywords such as "Hospitalization" and "Anxiety Disorders". Five articles were selected after a rigorous screening based on methodological quality criteria. The reviewed studies indicated that hospitalization can exacerbate anxiety disorders due to factors such as isolation, lack of control over the situation, and pain. Non-pharmacological interventions, such as music therapy and reflexology massage, were effective in reducing symptoms of anxiety and pain in critically ill patients. In addition, family involvement in the care of pediatric patients also contributed to reducing anxiety in children and their caregivers. Emotional support practices and complementary therapies showed potential to improve the well-being of hospitalized patients. It is concluded that hospitalization is a significant factor in the exacerbation of anxiety disorders, and non-pharmacological interventions, along with family involvement, can improve mental health and the hospital experience. The integration of multidisciplinary approaches, including complementary therapies and psychosocial support, should be promoted to reduce anxiety in hospitalized patients and improve health outcomes.

KEYWORDS: Keywords: Mental Health, Anxiety Disorders, Hospitalization, Complementary Therapies, Psychosocial Care.

TITLE: IMPACT OF HOSPITALIZATION ON THE EXACERBATION OF ANXIETY DISORDERS AND MANAGEMENT: A SYSTEMATIC REVIEW

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COMPARATIVE ANALYSIS OF BORDETELLA PERTUSSIS INFECTIONS IN THE STATE OF PARANÁ BETWEEN 2020 AND 2024: AN ECOLOGICAL STUDY



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ABSTRACT: Whooping cough was analyzed in an epidemiological study that identified an increase in cases in 2024 and outlined the sociodemographic profile of the most affected populations, highlighting the importance of vaccination. Whooping cough, or pertussis, is an acute respiratory infection caused by the bacterium *Bordetella pertussis*. Transmission occurs through contact with respiratory droplets from infected individuals, usually through coughing or sneezing, posing significant risks to unvaccinated young children. Vaccination is crucial for prevention, but immunity may wane over time, leaving adults susceptible to the disease again. In 2014, whooping cough was responsible for 24.1 million cases and 160,700 deaths in children under five. Periodic outbreaks occur every two years, and in 2024, the Pan American Health Organization (PAHO) issued an alert regarding the increase in cases across 17 countries, including Brazil, emphasizing the urgency of increasing vaccination coverage. The study aimed to outline the sociodemographic profile of *Bordetella pertussis* infections in the state of Paraná between January 2020 and October 2024. A descriptive and quantitative epidemiological study was conducted, focusing on time series data for whooping cough cases. Data collection was performed using the National Disease Notification System (SINAN), available through the Department of Informatics of the Unified Health System (DATASUS). The variables analyzed included age group, race, and gender, with data tabulated in Microsoft Excel to facilitate the visualization of key epidemiological patterns. The results indicated 800 confirmed cases of whooping cough and three deaths during the study period, with a mortality rate of 0.38%. There was a significant increase in cases in 2024, representing a peak compared to previous years. The sociodemographic analysis revealed that the white race was the most affected, with 631 confirmed cases (78.88%), followed by the mixed-race population with 74 cases (9.25%). All deaths occurred among individuals of the white race, predominantly among women (66.7%) and infants under one year of age, highlighting the vulnerability of this age group to the disease. Regarding age groups, the highest prevalence of cases was observed among children aged 10 to 14 years, with 123 confirmed cases (15.38% of the total). There was a slight predominance of cases among females, with 356 records (55.5%). The study concludes that whooping cough remains a significant public health concern, particularly regarding infant

morbidity and mortality. The increase in cases in 2024 and the identified sociodemographic profile, including a higher incidence among white individuals, females, and those aged 10 to 14 years, underscore the importance of early vaccination to prevent deaths and severe complications caused by the disease.

KEYWORDS: Whooping cough, Epidemiologic Measurements, Health Information Systems.

LEGAL AND CLINICAL ASPECTS: AN INTERDISCIPLINARY VIEW OF CRIMES AGAINST PEDOPHILIA AND PEDOPHILIC DISORDER

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ABSTRACT: The study on pedophilic disorders and pedophilia is crucial in the legal and medical fields, as it involves issues of mental health, child protection, and law enforcement in Brazil. Understanding these distinctions is essential for the development of public policies aimed at child protection and the appropriate treatment of individuals with pedophilic disorder. In the Brazilian justice system, addressing cases of child sexual abuse presents difficulties, particularly concerning diagnosis and culpability, factors that directly impact penal approaches, treatment measures, and child welfare. This study aims to conduct an interdisciplinary analysis between law and medicine regarding crimes against pedophilia and pedophilic disorder, focusing on clarifying their definitions, legal implications, and clinical approaches. This exploratory and interdisciplinary study, with an emphasis on qualitative research, will investigate definitions, diagnoses, and legal implications of the concepts of pedophilia, pedophilic disorder, and crimes against pedophilia. The first phase consists of an extensive literature review, utilizing scientific articles, legislation, and mental health manuals such as the DSM-5 and ICD-11, to understand the intersections between law and medicine. Brazilian regulations such as the Child and Adolescent Statute and Law No. 14,811/2024, which updates approaches to sexual crimes, will be analyzed. In the second phase, a comparative analysis will be conducted between legal and medical approaches, highlighting convergences and divergences that affect public policies and therapeutic interventions. The study will also address the limitations of the subject, suggesting improvements in the application of law and clinical treatment for individuals with pedophilic disorder, and

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will analyze the importance of Brazilian Law No. 14,811/2024 in child protection. Preliminary results indicate an understanding that pedophilic disorder, as described in DSM-5 and ICD-11, is a paraphilia characterized by fantasies, impulses, or sexual behaviors involving prepubescent children. The distinction between pedophilia and pedophilic disorder is essential: the disorder occurs when these fantasies cause distress to the individual or result in criminal behavior. Studies suggest that pedophilic disorder may be associated with other mental conditions, such as obsessive-compulsive and personality disorders. In the legal field in Brazil, laws such as the Child and Adolescent Statute and Law No. 14,811/2024 reinforce the criminalization of sexual abuse and child exploitation, imposing severe penalties. Treatments include cognitive-behavioral therapy and the use of medications, such as SSRIs and antiandrogens. However, spontaneous seeking of treatment is rare, and most patients are identified after contact with the Brazilian legal system. The interaction between law and medicine presents challenges, but a multidisciplinary approach is crucial for protecting childhood and treating paraphilic disorders. Therefore, it is necessary to distinguish and understand the clarification of the distinctions between pedophilia, pedophilic disorder, and related crimes, as well as to identify gaps in clinical and legal treatment of these cases. This study aims to contribute to the development of more effective public policies for prevention and intervention, offering a theoretical framework for the improvement of legal and mental health practices.

KEYWORDS: Child Welfare, Criminal Law, Mental Disorders.

DESCRIPTIVE ANALYSIS OF MORTALITY DUE TO NERVOUS SYSTEM DISEASES IN THE STATE OF PARANÁ BETWEEN 2013 AND 2023

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ABSTRACT: The number of deaths from neurological disorders and years lived with disability increased by 39% and 15%, respectively, worldwide. It is estimated that 13 million years of life are adjusted for disability due to epilepsy. This scenario results from population growth and aging, highlighting the need for policies related to sustainable development goals

and national prevention measures, as well as estimating the number of hospital beds needed to treat these patients. Therefore, it is extremely important to understand the epidemiological profile of regional mortality from neurological disorders, aiming at local preventive and curative measures. The objective of the present study is to analyze mortality from Nervous System Diseases (NSDs) in Paraná, between 2013 and 2023. The methodology is based on an ecological, retrospective, and descriptive study, with secondary mortality data obtained from the Hospital Information System (SIH) and population estimates from DataSUS for residents of Paraná. Deaths from NSDs (Chapter VI of ICD-10) based on the residence of the deceased were filtered. The Mann-Kendall test was used to characterize the temporal evolution of mortality rates. The results showed that 34,890 deaths were recorded from NSDs, with 30,280 deaths in people over 50 years old, with an average mortality rate of 24 deaths per 100,000 inhabitants, with a growing trend confirmed by the Mann-Kendall test ($p < 0.0001$). The diseases were divided according to the 'ICD-10 category', with Alzheimer's disease (G30) being the main etiology correlated with neurological mortality during the period, followed by other degenerative diseases of the nervous system (G31), Parkinson's disease (G20), Epilepsy (G40), and Cerebral Palsy (G80). Except for G80, the growing trend in mortality rates over time was confirmed by the Mann-Kendall test, with significance levels of $p < 0.0001$ for G30 and G31, $p < 0.001$ for G20, and $p < 0.01$ for G40. G30, G31, and G20 (neurodegenerative diseases) had the highest number of deaths in individuals over 80 years old, while epilepsy had the highest frequency between 50 and 59 years, and mortality from Cerebral Palsy was highest between 20 and 29 years. Based on the data, it is concluded that higher mortality after age 50 is associated with the epidemiological nature of the etiologies grouped in Chapter VI, with a predominance of deaths from neurodegenerative diseases and an increased risk of mortality with age. Thus, we can affirm that, excluding deaths from cerebrovascular and neoplastic causes, neurodegenerative diseases are the main contributors to the number and increase in neurological mortality in Paraná, as ICDs G30, G31, and G20 account for more than 70% of the deaths during the period analyzed. On the other hand, cerebral palsy has a higher mortality rate before age 50, but its prevalence is lower than that of neurodegenerative deaths, and it does not show a growing trend, not contributing to the shift in the age profile of mortality from Nervous System Diseases.

KEYWORDS: Mortality, Nervous System Diseases, Elderly.

PROMOTION PERSPECTIVES OF SELF-CARE FROM THE NURSING ROLE'S



VIEWPOINT IN PATIENTS WITH HEART FAILURE

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ABSTRACT: In Brazil, there are about 2 million patients with heart failure (HF), with 240,000 new cases per year. It is essential to have efforts aimed at promoting health in HF patients, with self-care being indispensable. Self-care is defined as the ability of individuals to perform activities that benefit their health and maintain well-being and quality of life without needing the assistance of caregivers or healthcare professionals. This study aims to identify how self-care influences the treatment and understanding of HF patients. It is an integrative review of the last 10 years of the MEDLINE/PubMed, SciELO, and LILACS/BVS databases, guided by the following question: how do nursing care practices help in the development of self-care for HF patients? For this question, the PICO acronym was used: P: HF patients; I: nursing care; C: not applicable; and O: self-care related to HF. The search strategy employed DeCS/MeSH descriptors as follows: ("Heart Failure*" OR "Congestive Heart Failure") AND ("Nursing Care*" OR "Patient Care Planning" OR "Nurses") AND ("Self Care*" OR "Patient Compliance" OR "Self-Management"). The PRISMA checklist was applied. Inclusion criteria: full and free text, published from 2013 to 2023, written in English, Portuguese, or Spanish. Exclusion criteria: theses, monographs, duplicates, and articles that did not answer the guiding question. A total of 104 studies were obtained. After reviewing titles and abstracts, full texts, and applying the exclusion criteria, 11 studies were included in the review. Analyzing these studies, it is evident that nurses play a crucial role in promoting self-care in the treatment of heart failure. Telephone calls are strategies to increase accessibility and follow-up for non-pharmacological treatment. Adherence to self-care is related to factors such as education level and better clinical outcomes. Furthermore, investing in evidence-based therapeutics is essential to minimize complications. Finally, the motivational interviewing method improves patients' self-confidence and may be an alternative for progress in the daily lives of HF patients. Nursing provides patients with the necessary autonomy to cope with HF. The presence of these self-care promotion methods

benefits patient adherence to treatment, contributing to greater knowledge of this subject for both patients and their support network.

KEYWORDS: Delivery of Health Care; Health Promotion; Heart Failure; Nursing Care; Self Care.

GASTRITIS AND GASTRIC ULCERS: AN EXPERIENCE REPORT ON HEALTH PROMOTION ACTIONS

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ABSTRACT: Gastrointestinal system diseases, such as gastritis and peptic ulcers, are common public health issues. Although symptoms are often underestimated, it is crucial for treatment to be initiated early. Therefore, interventions that raise awareness about these conditions are essential, promoting the health and quality of life of patients. This work aims to describe how the topics of pathologies such as gastritis and peptic ulcers were addressed during the outreach activity in Maringá, Paraná. The awareness and health promotion action took place in June 2024, carried out by students from two academic leagues of the Medicine course in Maringá, Paraná. The event, planned in three stages, involved preliminary study, creation of educational materials, and the actual action, which lasted 2 hours, with students taking turns at the tent and approaching passersby. Banners featuring the symbols of each league were displayed to increase the visibility of the action, and students wore lab coats. Nine students participated, distributing informative pamphlets and educating the public about gastritis and gastric ulcers in the Eurogarden neighborhood. Individuals who were open to the students' approach received explanations about the symptoms of these diseases, factors that relieve or worsen the symptoms, and other guidance. Thus, the action demonstrated a positive impact on both participants and the public involved, highlighting the importance of frequently conducting awareness initiatives to expand reach and promote health and quality of life. Based on the interest shown by the approached population, periodic exams and medical consultations for early diagnosis were also encouraged, thereby improving quality of life and reducing the progression of these diseases. These initiatives should be encouraged and expanded in both universities and public health



policies to promote prevention, education, and healthy habits, thereby improving the population's quality of life.

KEYWORDS: Gastritis; Public Awareness; Quality of Life.

EPIDEMIOLOGICAL ANALYSIS OF LUNG CANCER MORTALITY IN BRAZIL: DATASUS DATA FROM 2012 TO 2022

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ABSTRACT: Lung cancer is one of the main malignancies that affects both men and women, representing the leading cause of cancer death in the world. The main risk factor is related to smoking and passive exposure, which justifies its alarming rate of morbidity and mortality. At the end of the 20th century, the pathology became one of the main preventable causes of death. Although the incidence and mortality rates from lung cancer have decreased globally with the decrease in cigarette use, this continues to be a reason for unfavorable outcomes within oncology. In view of this, we aim to analyze an integrated and comprehensive approach to the prevention, management and research of lung cancer, focusing on reducing morbidity and mortality associated with the disease. In this context, the present study has a cross-sectional ecological approach of quantitative analysis, with the participants of this research being individuals who were diagnosed with lung neoplasia from 2012 to 2022 and who subsequently died. The records were extracted electronically from the information systems of the Department of Health (DATASUS), including the Hospital Information System (SIH/SUS) and the Outpatient Information System (SIA/SUS). To calculate mortality rates, deaths of men and women of all ages were considered, multiplied by 100,000 and divided by the population of the same age group, in the regions of Brazil, from 2012 to 2022. Lung and bronchus cancer accounts for approximately 15,654 deaths per year in Brazil over the decade analyzed (2012 and 2022), consolidating itself as the main cause of death from malignant neoplasms in the country. This prevalence, higher than that observed in other types of cancer such as breast and prostate, reflects the impact of smoking and the need to intensify prevention and control actions. An analysis of the geographic distribution reveals a higher incidence of cases in the South of Brazil (16.33:100,000), while the Northeast has the lowest rate (8.56:100,000). This regional variation may be related to factors such as lifestyle habits, access to health services, and exposure

to risk factors. The average Brazilian rate (11.12:100,000) places the country close to the world average, suggesting the influence of global factors on the epidemiology of the disease. Lung cancer predominantly affects individuals between the ages of 60 and 69, with a clear prevalence in males. The national standardized rate for men is 14.48 cases per 100,000 inhabitants, almost double the female rate of 8.55:100,000. This gender disparity may be related to factors such as the higher prevalence of smoking among men. Thus, lung cancer is a significant problem in Brazil, mainly driven by smoking. Regional and gender variations indicate the need for specific preventive actions. Moreover, to reduce mortality, it is essential implement effective policies and ensure early diagnosis.

KEYWORDS: Lung cancer; Smoking; Mortality due to neoplasms.

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