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**XX SIMPÓSIO DE PESQUISA
E EXTENSÃO ACADÊMICA**

**IV SIMPÓSIO INTERNACIONAL
DE PESQUISA E EXTENSÃO
ACADÊMICA**

Apresentação

O xx Simpósio de Pesquisa e Extensão Acadêmica da Faculdade de Ciências Médicas de Minas Gerais e iv Simpósio Internacional de Pesquisa e Extensão Acadêmica teve como temática: “Para além das montanhas: a contribuição dos mineiros para ciência”. O objetivo do evento foi promover a divulgação das atividades de pesquisa e extensão apoiadas pelo Setor de Pesquisa e Extensão no ano vigente. O evento aconteceu nos dias 21 e 22 de maio de 2024 e se destacou por promover trocas de experiências entre os alunos de todos os cursos da FCMMG e convidados externos, enriquecendo a interdisciplinaridade na instituição. Além das apresentações de trabalho pelos discentes, foram realizadas diversas palestras por pesquisadores de reconhecida excelência nacional e internacionalmente. O Simpósio contou com a palestra intitulada “É possível conciliar a clínica e a pesquisa” do Prof. Humberto Correa professor titular de Psiquiatria da Universidade Federal de Minas Gerais. Foi também ministrada a palestra “Envelhecendo com saúde e vitalidade” ministrada pela Profa. Márcia Rodrigues Zambelli que atua como pesquisadora no NeuRa (Neuroscience Research Australia Institute) e na Universidade de Sydney (Institute of Musculoskeletal Health). Além disso, foi realizada a palestra “A extensão ajudando as pessoas: uma experiência em doença de Chagas no Vale do Jequitinhonha, MG” pela professora Marta de Lana que é emérita e voluntária da Universidade Federal Ouro Preto. A palestra “Trajetória profissional e atuação no campo da epidemiologia: uma narrativa com viés” foi ministrada pelo professor Cristiano Soares Moura, Epidemiologista e analista de dados na área de Health Outcome Research.

O evento reforçou mais uma vez o potencial inovador e científico da nossa comunidade acadêmica e valorizou os pesquisadores mineiros na trajetória da pesquisa e extensão como ferramentas de transformação social.

PROFA. DRA. LETÍCIA LEMOS JARDIM

**Coordenadora do Setor de Pesquisa e Extensão
da Faculdade de Ciências Médicas de Minas Gerais**

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ORIGINAL STUDY

The influence of social networks on the self-image and eating habits of medical academics

A influência das redes sociais na autoimagem e nos hábitos alimentares de acadêmicos de medicina

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ABSTRACT

Introduction: Self-esteem and eating habits are closely linked and widely influenced by social media content, which is significantly disseminated in today's society. This content can impact individuals' self-perception and dietary patterns positively or negatively. Due to continuous exposure to stressful events, medical students may develop harmful habits that affect their self-image and diet, topics examined in this study. **Objectives:** To identify whether social media influence stimulates the adoption of healthy habits or triggers image distortions and generates negative impacts on user health. **Methods:** A cross-sectional and qualitative observational study conducted through a questionnaire for medical students at a college, from June 2023 to June 2024. **Results:** The majority of participants are in the 18 to 22 age group (59.9%). They predominantly use WhatsApp and Instagram (98.6% and 97.3%, respectively) and spend between 2 and 4 hours daily on social networks. Among them, 75% follow routines related to food and physical exercise, with 62.6% having already adopted some recommended habits through these platforms, although 62.6% do not regularly consult with a nutritionist. Additionally, 7 out of 10 students believe that social networks have a positive impact on their lifestyle, and 66.7% have had their opinion about a specific eating habit altered by content obtained on the internet. More than 80% have not been diagnosed with an eating disorder or have not used medication to achieve their aesthetic and dietary goals. **Conclusion:** Based on the results obtained, it is concluded that the majority of students believe that social networks have a positive impact on their lifestyle with the incorporation of healthy habits presented on social media. However, it is evident that these platforms exert a specific influence on food choices and aesthetic standards, which may contribute to body dissatisfaction.

Keywords: Social Networking; Self Concept; Feeding behavior; Diet, Food and Nutrition; Social Comparison.

Financial support: Faculdade de Ciências Médicas de Minas Gerais

ORIGINAL STUDY

Cardiometabolic climacteric profile and its correlation with depressed humor and attractiveness auto-perception

Perfil cardiometabólico no climatério e sua correlação com autopercepção de humor deprimido e atratividade

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ABSTRACT

Introduction: It is known that obesity is an important present-day cardiometabolic health impairment and that women pass through body changes in menopause due to age and ovarian failure. However, mental health issues during climacteric changes and its correlation with obesity are unclear. **Objective(s):** To evaluate anthropometric and mental-physical health auto-perception in women in climacteric period and to verify possible correlations. **Methods:** Patients had their Body Mass Index (BMI) and waist-to-hip ratio (WHR) measured/registered and answered to Women's Health Questionnaire (WHQ) adapted to Portuguese. In WHQ, higher scores indicate good quality of life (QOL). Statistical analysis was performed using "R" software and statistical significance was considered when p value <0.05. **Results:** From a total of 97 patients, only 17 (17.53%) patients were on ideal weight, prevailing overweight (25-29.9 BMI interval considered), with 45 (46.39%) patients. From the referred 97 patients, only 6 (6.19%) were in low risk WHR, prevailing high risk WHR (0.80-0.87, 0.82-0.88, 0.84-0.90 WHR considered, respectively, to 40-49, 50-59, 60-69 years old patients), mainly between 50-54 years old patients. 55-59 years old patients had the greater prevalence of really high risk. Regarding WHQ, it was seen a greater significance in depressed humor and attractiveness questions, revealing correlation with BMI and WHR interval. **Conclusion:** The metabolic imbalances present in climacteric and menopause, in addition to being associated with increased cardiovascular risk, were associated with mood and attractiveness.

Keywords: Climacteric; Cardiometabolic Syndrome; Mental Health; Depressive Disorders

Financial support: G.L.B.B received a scientific initiation scholarship from Fundação Educacional Lucas Machado.

ORIGINAL STUDY

Prevalence of abnormal uterine bleeding in patients with endometrial polyps undergoing surgical hysteroscopy in a university hospital: a retrospective study

Prevalência de sangramento uterino anormal em pacientes com pólipos endometriais submetidas à histeroscopia cirúrgica em hospital universitário: um estudo retrospectivo

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ABSTRACT

Introduction: Endometrial polyps are the most commonly found structural pathology in the uterine cavity, consisting of sessile or pedunculated projections on the surface of the endometrium secondary to focal hyperplasia. The most common clinical presentation of endometrial polyps is abnormal uterine bleeding (AUB), and studies aim to understand its link to malignancy. Questions arise regarding whether polyps are precursors to endometrial neoplasia or if higher cancer rates result from detection bias due to AUB symptoms. With these uncertainties, there is no established protocol for the optimal management of these lesions, ranging from expectant management to surgical removal. **Objectives:** Evaluate abnormal uterine bleeding prevalence in patients with endometrial polyps undergoing surgical hysteroscopy. Compare malignant findings in hysteroscopy and histopathology in patients with polyps with and without abnormal bleeding complaints. **Methods:** This is a retrospective cross-sectional study, conducted through data collection from medical records of patients who underwent surgical hysteroscopy at a university hospital between 2008 and 2022. **Results:** Data from 1421 patients who underwent surgical hysteroscopy were collected, with a median age of 35 years. Among the patients, 1,088 (77%) had polyps, with 421 (33%) reporting abnormal uterine bleeding. Endometrial cancer was detected in 12 (1.2%) of the patients who had a polyp visualized during SH. At the 0.05 significance level, a significant association was observed between endometrial cancer and AUB results. Using odds ratio calculation, the likelihood of a patient with endometrial polyp developing cancer was 17.0 times higher when the AUB result was positive, and 1.10 times higher for each one-year increase in patients' age. **Conclusion:** The prevalence of UAB in patients with endometrial polyps in this study was 33%. A statistically significant association was found between AUB and cancer, but the association between polyp and cancer remains controversial.

Descriptors: Hysteroscopy; Uterine Diseases; Uterine Hemorrhage.

Financial support: supported by PROBIC and Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Factors associated with arterial stiffness in patients with chronic obstructive pulmonary disease

Fatores associados à rigidez arterial em pacientes com doença pulmonar obstrutiva crônica

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ABSTRACT

Introduction: Cardiovascular morbidity and mortality is high in patients with chronic obstructive pulmonary disease (COPD) and arterial stiffness can add predictive value beyond that obtained from traditional risk factors. The identification of modifiable risk factors can contribute to reducing cardiovascular outcomes. **Objective:** To identify factors associated with arterial stiffness in patients with COPD. **Methods:** Systematic review of the literature with the descriptors “Chronic Pulmonary Obstructive Disease” and “Vascular Stiffness” and their synonyms in the MEDLINE (by PubMed), BVL and Ebsco databases. The types of studies considered for analysis will be case-control and cross-sectional in English, Portuguese and Spanish with no restriction on year of publication. Before the final analysis, the search strategy will be repeated to identify new studies that could be included. The selection of studies is being carried out by two reviewers independently, and conflicts will be resolved by a third reviewer. Arterial stiffness indices (pulse wave velocity-PWV, Augmentation index – AIX@75, Central systolic blood pressure – SBPC, Central pulse pressure – PPC) will be evaluated in individuals with COPD of both sexes. Individuals with α -1-antitrypsin deficiency, bronchiectasis, pulmonary fibrosis, pulmonary embolism, chronic renal failure, diabetes, patients undergoing cardiorespiratory and vascular rehabilitation will be excluded. **Results:** The bibliographic search found 202 articles. After selecting the articles, the results between patients with and without arterial stiffness will be compared. The systematic review protocol was registered with PROSPERO under the code CRD42024518072. **Conclusion:** The identification of risk factors for arterial stiffness may favor the introduction of measures capable of modifying cardiovascular repercussions in this population.

Descriptors: Chronic Pulmonary Obstructive Disease, Vascular Stiffness, Pulse Wave Analysis.

Financial support: supported by the Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL RESEARCH

Assessment of arterial stiffness in patients with peripheral arterial disease undergoing percutaneous transluminal angioplasty: a prospective longitudinal observational study.

Avaliação da rigidez arterial em pacientes com doença arterial obstrutiva periférica submetidos ao procedimento de angioplastia transluminal percutânea: um estudo observacional longitudinal prospectivo

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ABSTRACT

Introduction: Peripheral arterial disease (PAD) is caused by atherosclerosis, which induces structural and functional alterations in the arteries, inducing modifications in arterial stiffness (AS) properties and consequently obstructs blood flow to the lower limbs. This condition represents an independent risk factor for mortality from obstructive cerebrovascular and coronary diseases. Early diagnosis and targeted treatment can increase the survival of patients affected by PAD. Due to the significant predictive value of AS in the development of cardiovascular events and the strong association of PAD with cardiovascular diseases, longitudinal studies are necessary to confirm the improvement in AS indices post-procedures and its relation to enhancement of arterial circulation in the lower limbs. **Objective:** To evaluate the potential improvement in AS parameters in patients with PAD undergoing percutaneous transluminal angioplasty (PTA) procedure. **Methods:** This is a prospective longitudinal observational study being conducted in two hospitals in Belo Horizonte. The expected sample consists of 44 patients with PAD with critical lower limb ischemia who will undergo PTA procedure. Clinical, epidemiological data, and hemodynamic measurements are being collected before the PTA procedure and 3 to 6 months thereafter. These data are collected using the Mobil-O-Graph device, which is capable of measuring Pulse Wave Velocity (PWV) and other AS indicators, among other hemodynamic parameters considered predictors for cardiovascular diseases. **Results:** So far, 5 complete evaluations have been conducted. From the partial analysis of the data, it is possible to observe an increase in the average variations of BMI, systolic blood pressure, pulse pressure, and PWV, and a reduction in the variations of diastolic blood pressure, mean heart rate, and Augmentation Index. However, statistics are yet not able to infer significance. **Conclusion:** Due to a reduced sample of patients evaluated, it's not yet possible to correlate the variation in hemodynamic indices and AS indicators to the PTA procedure.

Descriptors: Vascular Stiffness; Peripheral Arterial Disease; Percutaneous Transluminal Angioplasty.

Financial support: The research upon which this abstract is based received financial support from the Faculdade de Ciências Médicas de Minas Gerais and from FAPEMIG.

ORIGINAL STUDY SUMMARY

Assessment of eating behavior and risk of eating disorders in female patients at a university hospital in Belo Horizonte

Avaliação do comportamento alimentar e risco de transtornos alimentares em pacientes do sexo feminino de um hospital universitário de Belo Horizonte

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ABSTRACT

Introduction: Eating disorders are persistent disturbances in eating that can have significant consequences for an individual's physical and mental health. According to the DSM-5, there are three main disorders: Anorexia Nervosa, Bulimia Nervosa, and Binge Eating Disorder. Currently, the literature indicates a higher prevalence of these disorders in women than in men. This disparity may be related to biological, psychological, and socio-cultural factors. Additionally, lack of symptom recognition, social stigma, and difficulties in accessing specialized services contribute to the underdiagnosis of these disorders. **Objective:** This study aimed to assess eating behavior and the risk of eating disorders in female patients treated in a university hospital ward. **Methods:** A questionnaire based on the Eating Attitudes Test (EAT-26) was administered to 83 female patients, aged 18 to 70 years, located in the hospital ward, from June to November 2023. **Results:** According to the EAT-26 scale, 22% of the patients indicated a high risk for eating disorders. It was also identified that the highest percentages of these symptoms are found in the age group of 61 to 70 years, with 34% of patients at high risk. The second highest proportion of risk was in patients aged 18 to 30 years, with a high-risk rate of 25%. **Conclusion:** These results point to a growing prevalence of risky eating behaviors among elderly women, comparable to that observed in young adult women. Thus, the importance of adopting effective screening is emphasized in order to assess the possible risk of eating disorders, given the tendency for these conditions to be underdiagnosed and undertreated in these age groups.

Descriptors: Prevalence; Binge eating disorder; Anorexia nervosa; Bulimia nervosa.

ORIGINAL STUDY

Assessment of knowledge about palliative care among medicine students from a Brazilian college

Avaliação do conhecimento sobre cuidados paliativos entre acadêmicos de medicina de uma faculdade brasileira

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ABSTRACT

Introduction: Palliative care (PC) is defined as assistance provided by a multidisciplinary team that aims to improve the quality of life of patients and their families when faced with a diagnosis of a life-threatening disease. This care model has become increasingly important and has shown promise in supporting the Brazilian population. However, there are still quantitative and qualitative deficiencies related to assistance and palliative care in Brazil, which is the result of an educational model centered on the incessant search for health and cure. Given this, the lack of PC skills is evident in the curricular of health majors. **Objective:** To evaluate the knowledge in PC among medical students at a Brazilian college. **Methods:** This is a cross-sectional, descriptive and quantitative study, involving the voluntary participation of 241 students of both sexes, regularly enrolled in a Brazilian medical school. For data collection, a sociodemographic questionnaire and another already standardized questionnaire regarding knowledge about CP were used. R software was used, with version 3.2.1, Excel for manipulating the database and Word for editing the report and G*Power version 3.1.9.7 to perform data analysis and for sizing the sample size. **Results:** It was obtained a description of knowledge about PC among medical students at this institution. Furthermore, the number of students who had contact with palliative care during their academic training was quantified. **Conclusion:** Through this study, it became clear that academics at this educational institution have a deficit in knowledge about palliative care and that the medical school does not have a specific subject on PC in its curriculum, in addition to having a limited number of extracurricular activities on the subject.

Keywords: Palliative care; Knowledge; Students; Medicine.

Financial Support: This project received support from the Faculdade de Ciências Médicas de Minas Gerais (FCMMG) through the granting of scientific initiation scholarships from the Programa de Bolsas Científicas da Faculdade de Ciências Médicas de Minas Gerais (PROBIC).

ORIGINAL RESEARCH

Association between anti-mullerian hormone dosage and embryo quality in patients undergoing in vitro fertilization

Associação entre a dosagem de hormônio antimülleriano e a qualidade embrionária em pacientes submetidas a fertilização in vitro

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ABSTRACT

Introduction: To achieve success with fertility treatment, it is necessary to consider two main factors: ovarian reserve and oocyte quality. Oocyte quality is difficult to assess due to limited tools. Therefore, to evaluate it, we can resort to assessing the quality of embryos formed in the laboratory after in vitro fertilization (IVF) using morphokinetic parameters or rates of blastocyst euploidy. Anti-Mullerian hormone (AMH) has been significantly associated with natural fertility. However, given the controversies in the literature, it is apparent that more studies are still needed associating AMH with embryonic quality to better guide patients regarding the prognosis of IVF treatment. **Objective:** Evaluate the relationship between HAM dosage and egg quality, reflected in embryonic quality, in patients undergoing in vitro fertilization cycles. **Methods:** This research is a retrospective cohort study using data from medical records of patients undergoing in vitro fertilization from June/2019 to March/2023 in an assisted reproduction clinic. Data was collected using a standardized table created by the researchers. The patients were divided into two groups based on their HAM dosage. The cutoff point for HAM dosage was 1.1 ng/ml. The embryo quality of the two groups will be compared based on the percentage of euploid embryos, calculated through gamete biopsy with Pre-Implantation Genetic Testing (PGT_a); embryo morphokinetic score, calculated using Time Lapse; and Gardner classification of the blastocyst. **Results:** The HAM dosage is expected to have a statistically significant relationship with the quality of eggs in patients undergoing IVF. **Conclusion:** Successful fertility treatment relies on ovarian reserve and oocyte quality. Evaluating embryos formed in vitro offers insight, though assessing oocyte quality is challenging. Anti-Mullerian hormone (AMH) relates to natural fertility, but more research is needed on its association with embryonic quality.

Keywords: Anti-Mullerian Hormone. Assisted Reproductive Techniques. Ovulation Induction.

Financial support: This research was supported by Faculdade Ciências Médicas de Minas Gerais, through the PROBIC scholarship.

RESUMO DE ESTUDO ORIGINAL

Association between sleep disorders and depression among children and adolescents

Associação entre distúrbios do sono e depressão em crianças e adolescentes.

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ABSTRACT

Introduction: The incidence of sleep disorders among children and adolescents diagnosed with depression is on the rise. As electronic media exposure also increases, concerns regarding its impact on sleep quality and mental well-being are of scientific interest. **Objective:** This study seeks to examine the correlation between electronic media usage, sleep disorders, and depression in children and adolescents with a confirmed diagnosis of depression. **Methods:** A cross-sectional observational design was employed involving 52 clinically diagnosed depressed pediatric outpatients. All participants and their legal guardians provided consent to complete a clinical and demographic questionnaire followed by screening for depressive symptoms through the Children's Depression Inventory (CDI) and sleep disorders with the Sleep Disturbance Scale for Children (SDSC). The study received ethical approval (CAAE: 69870323.1.0000.5134). Statistical analysis was performed using correlation and independent sample t-tests. **Results:** The sample was predominantly female (86.5%), with an average age of 15±1.27 years. Participants reported an average of two episodes of depression, with a mean CDI score of 20.7 (IC95% 18.8-22.5). SDSC revealed a mean total score of 62.3 (IC95% 58.2-66.3), indicating significant sleep disturbances. A significant correlation was found between SDSC and CDI scores ($r = 0.366$; IC95% 0.10-0.58; $p = 0.008$), suggesting that greater sleep disturbances are associated with increased depressive symptoms. Notably, participants demonstrated high engagement with electronic devices, with 78.8% using devices for over 5 hours daily, and the majority using smartphones (96.2%). However, we found no significant impact of electronic device usage on sleep disturbance scores. **Conclusion:** This study provides evidence of a strong association between depression and sleep disorders in children and adolescents. Contrary to common assumptions, electronic device usage did not significantly impact sleep quality within this sample. These findings highlight the importance of effective depression management as a potential means to improve sleep quality in the pediatric psychiatric population.

Descriptors: Depression; Sleep quality; Electronic media; Childhood and adolescence.

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL ABSTRACT

Characterization of the patient included in the outpatient gastrointestinal care line and the correlation between depression and changes in gastrointestinal habits

Caracterização do paciente inserido na Linha de Cuidado Gastrointestinal ambulatorial e a correlação entre depressão e alterações de hábito gastrointestinal

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ABSTRACT

Introduction: The relationship between gastrointestinal infections and depression is complex and relevant to understanding the interconnection between the body and mind. This study aimed to investigate this relationship by characterizing patients treated in a gastrointestinal care line in Belo Horizonte, Minas Gerais.

Objective: The main objective was to correlate the characteristics of patients in this care line with their gastrointestinal habits and investigate the relationship between these habits and Major Depressive Disorder. **Method:**

This study was a retrospective cross-sectional observational study, conducted between August 2023 and May 2024. Data were collected from the electronic records of 195 patients enrolled in this Care Line, dated between 2021 and 2022, in an outpatient clinic dedicated exclusively to SUS users in Belo Horizonte, Minas Gerais.

Data analysis included simple frequency and percentage for qualitative variables, as well as the chi-square test of independence and the Wilcoxon rank-sum test to detect differences between groups. **Results:** The results revealed a significant association between gastrointestinal habit alteration and Major Depressive Disorder, with a higher incidence in patients using antidepressant medications. However, no correlations influenced by sex or age were found. Additionally, the analysis highlighted a high prevalence of Gastroesophageal Reflux Disease (GERD) in the sample, as well as a correlation between antidepressant use and altered intestinal habits.

Conclusion: These results underscore the complex interaction between pharmacological, social, and emotional factors in the gastrointestinal health of patients. Understanding these correlations is crucial for improving the treatment and quality of life of patients with gastrointestinal disorders and depression.

Keywords: Gastrointestinal tract; Depression; Gastrointestinal disorders.

RESUMO DE ESTUDO ORIGINAL

Quality indicators in gastrointestinal care line of an outpatient clinic in Belo Horizonte, Brazil

Indicadores de Qualidade de Assistência da Linha de Cuidados Gastrointestinal de um Ambulatório em Belo Horizonte

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ABSTRACT

Introduction: The SUS healthcare Care Line model is designed to establish technical standardizations that effectively organize healthcare services for patients. This model is expected to significantly improve the quality of care through agile and integrated assistance within the healthcare network. **Objective(s):** To describe the characteristics of patients treated by the gastrointestinal care line at an outpatient clinic and assess the diagnostic processes. **Methods:** A retrospective cohort study was conducted, analyzing medical records of patients who began treatment between August 2022, and October 2022, with follow-up over one year. Data collected included anthropometric measurements, lifestyle habits, clinical symptoms, and requested examinations. Descriptive statistics and chi-square tests determined the impact of investigated variables on outcomes. Ethical approval was granted (CAAE: 67124822.0.0000.5134). **Results:** We studied 76 patients, with a mean age of 58.9 years (57.3% female). Among those who returned for follow-up (77.6%), most remained within the care line (74.2%), indicating a significant need for continued care. Gastroesophageal reflux disease (K21) was the most common disorder, affecting 27.6% of patients. Most digestive endoscopies (85.3%) were performed, with 96.6% revealing abnormal findings. In contrast, fewer colonoscopies and abdominal ultrasounds were conducted (56.3% and 46.2%, respectively), with abnormal findings reported in 55.6% of colonoscopies and 58.3% of abdominal ultrasounds. Waiting times for digestive endoscopy varied widely, with an average of 85.48 days, though 25% of examinations were completed within 5 days. Colonoscopy had a shorter average wait of 26.11 days, with most (75%) completed within 22 days. Conversely, abdominal ultrasounds showed a much longer average wait time of 175.17 days. **Conclusion:** The study underscores the necessity of timely diagnostic procedures and tailored lifestyle interventions to enhance patient outcomes in gastroenterology.

Keywords: Quality Indicators, Health Care; Gastroenterology; Ambulatory Care

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Evaluation of adherence to anti-hypertensive drug treatment in the cardiology and internal medicine outpatient clinic of a medical school

Avaliação da adesão ao tratamento medicamentoso anti-hipertensivo nos ambulatórios de Cardiologia e Clínica Médica de uma faculdade de medicina

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ABSTRACT

Introduction: Arterial hypertension (SAH) is a disease characterized by persistent elevation of blood pressure (BP). SAH silently damages target organs, delaying the start of treatment, and is associated with cardiovascular complications, such as heart failure. When uncontrolled, SAH harms the patient and the healthcare system, which suffers an economic impact related to increased medication, hospitalizations and procedures. The main reason for inadequate BP control appears to be non-compliance with pharmacological and non-pharmacological treatment. Lack of adherence to treatment is defined as using less than 80% of medications prescribed to hypertensive patients, and there are direct and indirect methods to assess it. In this study, the Morisky Eight-Item Therapeutic Adherence Scale will be used. According to a literature review, factors that influence adherence were identified: related to the patient, the therapeutic regimen and the health care system. Therefore, it is necessary to understand the reasons that lead patients to non-adherence. **Objective:** To evaluate adherence to medication treatment for hypertension in patients of the outpatient clinic of a medical school and identify factors associated with non-adherence. **Methods:** This is a quantitative descriptive cross-sectional study using the Morisky Eight-Item Therapeutic Adherence Scale and also a questionnaire developed by the authors based on literature to understand the factors associated with low adherence to the treatment in the Cardiology and Internal Medicine outpatient clinic of a medical school. **Results:** It is expected that the research may clarify the main reasons associated with non-adherence to antihypertensive medication treatment by patients. **Conclusion:** Analysis of the research results is going to be vital to know which previously identified factors are most related to non-adherence to the medication regimen. That way, it will be possible to develop a more effective approach to these people.

Key words: Hypertension. Cooperation and Adherence to Treatment. Pharmacological Treatment. National Health Service.

Financial support: PIBIC/FAPEMIG

ORIGINAL RESEARCH

Evaluation of early signals and risk factors for amblyopia in children of public education network

Avaliação de sinais precoces e fatores de risco para ambliopias em crianças da rede pública de ensino.

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ABSTRACT

Introduction: Amblyopia is a developmental disorder in which there is a unilateral or bilateral reduction in the functional capacity of vision. It is secondary to conditions that prevents the proper development of the eye's health during childhood, such as palpebral ptosis, strabismus and large ametropias, which justifies the need for screening of the school age group in order to detect early this alteration and treat it during the so-called window of opportunity. **Objectives:** To evaluate visual acuity and risk factors for the development of amblyopia in the target population, as well as discuss ways of preventing and early detection of developmental visual disorders. **Methodology:** Observational study in which the evaluation of visual acuity by the Snellen eye chart is applied in children of the public education network of a city in Brazil between 5 and 12 years. The data found was analyzed to assess the detection of early signs or risk factors for the development of amblyopia. **Results:** Out of the 212 children evaluated, 54 (25.47%) had low visual acuity, while 20 (9.43%) showed reading difference greater than or equal to two lines in the Snellen chart, setting suspicious cases for amblyopia. **Discussion:** The population studied presented index of suspicious cases above those found in similar studies, indicating a high sensitivity of the test applied, but highlighting the need for expert assessment in order to make the proper diagnosis and treatment. **Conclusion:** Amblyopia is a vision developmental disorder that needs to be addressed early. For prevention and early diagnosis to be effective, actions that promote eye's health and screening are needed, especially in socially vulnerable populations, as they have less access to specialized services.

Keywords: Amblyopia; Low vision; Neurodevelopmental Disorders

Financial support: Faculdade de Ciências Médicas de Minas Gerais (FELUMA)

ORIGINAL STUDY

Factors associated with arterial stiffness in patients with chronic obstructive pulmonary disease

Fatores associados à rigidez arterial em pacientes com doença pulmonar obstrutiva crônica

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ABSTRACT

Introduction: The pathophysiology of chronic obstructive pulmonary disease (COPD) is characterized by a reduction in airflow in the bronchi, trapping and systemic inflammation in the body. These factors also have repercussions on the cardiovascular system, such as arterial stiffness. Thus, it is assumed that there are common risk factors between these two diseases, which should be investigated in view of the limitations of the studies already investigated. **Purpose:** To identify the factors associated with arterial stiffness in patients with chronic obstructive pulmonary disease. **Methods:** Systematic review of the literature with the descriptors “Chronic Pulmonary Obstructive Disease” and “Vascular Stiffness” and their synonyms in the MEDLINE (by PubMed), VHL and Ebsco databases. The types of studies considered for analysis will be case-control and cross-sectional studies in English, Portuguese and Spanish with no restriction for the year of publication. Before the final analysis, the search strategy will be repeated to identify the new studies that may be included. The literature search found 202 articles. The selection of studies is being carried out by two reviewers independently, and conflicts will be resolved by a third reviewer. Arterial stiffness indices (cVOPf, AIX, SBPC, PPC, PPP) in individuals with COPD of both sexes will be evaluated. Individuals with α -1-antitrypsin deficiency, bronchiectasis, pulmonary fibrosis, pulmonary embolism, chronic renal failure, diabetes, patients undergoing cardiorespiratory and vascular rehabilitation will be excluded. The results between patients with and without arterial stiffness will be compared. The systematic review protocol was registered in PROSPERO under code CRD42024518072.

Descriptors: Chronic Obstructive Pulmonary Disease, Vascular Stiffness, Aortic Pulse Wave Analysis.

ORIGINAL STUDY

Effects of the inhibition of the renin-angiotensin system on the clinical manifestations and comorbidities in chronic obstructive pulmonary disease patients

Efeitos da inibição do sistema renina-angiotensina sobre as manifestações clínicas e comorbidades da doença pulmonar obstrutiva crônica

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ABSTRACT

Introduction: The available literature highlights the association between chronic obstructive pulmonary disease (COPD) pathophysiology and the renin-angiotensin system (RAS). **Objective:** To investigate the effects of inhibiting the RAS on COPD's clinical manifestations and comorbidities. **Methods:** Systematic review of the literature with the descriptors "Chronic Pulmonary Obstructive Disease" and "Renin-Angiotensin System" in the MEDLINE (by PubMed), BVS, and Embase databases. Registration on the PROSPERO platform has the ID CRD42024518062. The bibliographic search found 1,852 articles. A selection of studies found so far was started by reading titles and abstracts. Only observational studies will be included, and cohort studies will only have data extracted at baseline and published in English, Spanish, and Portuguese. Before the final analysis, the search strategy will be repeated to identify new studies. Study characteristics, such as design and data generation method, sociodemographic variables, details of exposure to RAS inhibitors, and primary (comorbidities) and secondary (clinical manifestations) stage measurements, will be presented. Articles are selected by two independent reviewers, with a third reviewer called in case of discrepancies in the results. **Results:** From the preliminary results, 1,852 studies were found, 390 duplicates and 53 articles were excluded, and six were included. **Conclusion:** After reviewing the articles, it is expected that the use of AT1 receptor antagonists and/or ACE inhibitors will reduce the number of exacerbations and comorbidities in patients with COPD.

Keywords: Chronic pulmonary obstructive disease; Renin-angiotensin system; Renin inhibitors; Angiotensin-converting enzyme inhibitors.

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Analysis and control of muscle mass loss after bariatric surgery and its possible implications in sleep-disordered breathing: a randomized controlled trial

Análise e controle da perda de massa muscular após a cirurgia bariátrica e as possíveis implicações nos distúrbios respiratórios do sono: um estudo randomizado controlado

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ABSTRACT

Introduction: Bariatric surgery (BS) is an important resource for the treatment of obesity. However, the post-operative period can have surgical, psychological, or nutritional complications, requiring specialized monitoring. Studies show loss of lean body mass after BS, possibly due to nutritional restriction and lack of physical activity. Exercise can positively influence fat loss and can be a great ally in preserving muscle mass. Sleep respiratory disorders, such as apnea, are common in obese individuals and should be monitored before and after BS. Weight loss can significantly improve these disorders, but hypotonia of the pharyngeal muscles may limit this improvement. **Purpose:** To compare three physical training protocols (walking, light weight training, and standard weight training) regarding the maintenance of muscle mass and improvement of apnea/hypopnea indexes (AHI) in patients post-BS. **Methods:** This is a randomized clinical trial to be conducted in 126 participants divided into 3 groups depending on the type of prescribed physical activity. Each group consists of one type of physical training started after 5 days of hospital discharge post-BS. Evaluation occurs at 3 different times (before physical activity protocol, one and 3 months after the start of the protocols). Participants have been evaluated for body composition by bioimpedance, polysomnography for AHI evaluation, quality of life (SF-36 and Epworth Sleepiness Scale). Airway tomography is also requested before/after the physical activity protocols. This study is registered in the Brazilian Clinical Trials Registry (RBR-2h3tz6f) and approved by the FCMMG Ethics Committee (report 6.161.747). **Results:** So far, 43 patients have been included in the study, of which 5 have already completed all study phases. As the study is still in the data collection, it is not possible to make comparisons of results for different groups. **Conclusion:** As the study is still ongoing, it is not possible to draw conclusions based on our results.

Keywords: Cirurgia Bariátrica; Sarcopenia; Apneia e Hipopneia Obstrutiva do Sono.

Financial support: Faculdade de Ciências Médicas de Minas Gerais; Vilma Institute and OMNILOGIC.

ORIGINAL STUDY

Gastrointestinal diseases and the use of psychotropic medication: an analysis between diseases of the gastric system and psychiatric disorders

Doenças gastrointestinais e uso de psicofármacos: uma análise entre as doenças do aparelho gástrico e transtornos psiquiátricos

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ABSTRACT

Introduction: The causes of gastrointestinal disorders (GID) are multifactorial, including genetic, protozoan, bacterial and viral infections and variables related to lifestyle factors, such as diet, stress and anxiety levels.

Objective: To describe the use of psychotropic medication in people with gastrointestinal disorders. **Methods:** This is a descriptive, exploratory and retrospective pilot study. For this cross-sectional study, we retrieved data from medical records of patients treated at a university outpatient clinic in the area of Gastroenterology in Belo Horizonte, using the Soulmv system. Patients 18-years old or older diagnosed with GID were included. A sample calculation was conducted considering the number of 540 medical records available and a 95% confidence interval. Thus, 224 patients were eligible. The variables collected were age, sex, skin color, address, profession, marital status, lifestyle habits, diagnostic hypothesis, continuous medication use and comorbidities. This study was approved by the research ethics committee under number CAAE: 67124822.0.0000.5134. **Results:** 151 patients were female and 73 male. 38 patients stated that they were smokers and 71 confirmed that they were alcoholics. Sixty-nine people (30.8%) use some type of psychotropic drug. The classes of psychotropic medication were antidepressants (50, 22.3%), benzodiazepines (26, 11.60%), antipsychotics (13, 5.8%), sedative-hypnotics (5, 2.23%) and mood stabilizer (1, 0.44%). **Conclusion:** The study shows that around a third of these patients use psychotropic medication. However, it was not possible to identify whether the use of these medications is related to the treatment of anxiety, depression, and other psychiatric disorders or if the medications are being used to treat GIDs. Thus, it is suggested that longitudinal randomized clinical trial research be conducted in order to better understand the association between mental health and gastrointestinal system diseases.

Keywords: Digestive Tract; Gastrointestinal Disorders; Mental Disorders; Psychotropic Drugs

Financial support: This study had financial support from the Faculdade de Ciências Médicas de Minas Gerais

Is there a relationship between diet and recurrent aphthous stomatitis? A scoping review

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ABSTRACT

Background: Recurrent aphthous stomatitis (RAS) is a prevalent condition characterized by the formation of painful ulcerations within the non-keratinized oral mucous membranes. This disorder impacts approximately 25% of the world's population, yet its etiology remains imperfectly understood. **Objective:** This scoping review aimed to investigate the role of diet in RAS. **Methods:** The review followed Cochrane methodology, reported via PRISMA extension for Scoping Reviews, and registered at Open Science Framework (<https://osf.io/gq7fs/>). The searches covered four databases (Medline, Embase, Web of Science, Lilacs) with no date or language limits, and the studies were screened, extracted, and compiled narratively for eligibility. **Results:** 22 studies were analyzed, 17 cross-sectional and 5 cohorts. Of the 36,183 patients, 15.47% were male and 18.24% female, although 5 articles did not report gender. The study covered participants aged between 13 and 108 years, with a mean age of 33.99 ± 4.85 years and only 23.35% ($n=8,447$) had a diagnosis of aphtha. The majority of studies were developed in countries with a high Human Development Index (81.8%). RAS patients reported the consumption of 77 food items. We classified and categorized it according to the Brazilian Population Food Guide. Of them, 43 (55.8%) were ultra-processed, processed and minimally processed products, finally, 28 (36.36%) were fresh foods. **Conclusion:** RAS was more frequent in female patients, with mean age 33.99 ± 4.85 years. The majority of the studies were cross-sectional (77.3%). Although this design limits assessing causality, we observed a higher prevalence of processed food (55%) than fresh food consumption (36.3%) in this population.

Keywords: Diet; Recurrent Aphthous Stomatitis; Nutrition; Stomatology.

ORIGINAL STUDY

Oral manifestations of inflammatory bowel diseases

Manifestações orais das doenças inflamatórias intestinais

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ABSTRACT

Introduction: Inflammatory Bowel Diseases (IBDs), such as Crohn's Disease (CD), Ulcerative Colitis (UC), and Celiac Disease (CED), can present oral manifestations that are important for early diagnosis. **Objective:** To survey cases of oral manifestations of patients with IBDs by analyzing the medical records of an outpatient clinic in Belo Horizonte. **Methods:** Retrospective study, in which medical records from the database of an outpatient clinic in Belo Horizonte were analyzed. Patients diagnosed with inflammatory diseases of the gastrointestinal tract, specifically CD, UC, and CED, which had records containing information about oral cavity lesions were included in the study. Patients were treated between 2021 and 2022. Exclusion criteria: incomplete medical records, uncompleted history, or diagnoses of non-gastrointestinal inflammatory diseases. **Results:** The outpatient database records 40,306 patients treated in 2021 and 2022. Of these, 189 medical records that met the inclusion criteria were selected and analyzed. Of the 41 patients with a confirmed diagnosis of gastrointestinal inflammatory diseases, 21 had CD, 17 had UC, and 3 had CED. Of this total, one presented oral manifestations. The patient was a female, 61 years old, and was diagnosed with CD in 1995. The patient presented multiple episodes of oral lesions such as ulcers, recurrent aphthae, pseudomembranes, increased sensitivity to food, dysphagia, odynophagia, glossitis, and cheilitis, with good response to the use of fluconazole. **Conclusion:** Oral lesions in patients with IBD may be the result of extraintestinal manifestations of the diseases themselves or secondary complications of their treatment, as in the case in question—probable oral candidiasis. Therefore, it is essential to know these diseases, their manifestations, and the effects of their treatments, as it helps in early diagnosis and therapeutic approaches to patients.

Descriptors: Inflammatory Bowel Diseases; Oral Manifestations; Crohn Disease; Proctocolitis; Celiac Disease.

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Profile of post-stroke patients attended at an outpatient agreement of the single health system

Perfil dos pacientes pós acidente vascular cerebral atendidos em um ambulatório conveniado do sistema único de saúde

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ABSTRACTS

Introduction: Stroke is a public health problem that has a high prevalence and disability resulting from the injury. Therefore, investigating the profile of post-stroke individuals using the Sistema Único de Saúde (SUS) is important to improve the planning of health strategies. **Objective:** To investigate the profile of post-stroke individuals treated at a SUS outpatient clinic in Belo Horizonte. **Methods:** Data taken from the medical records of post-stroke individuals treated at a SUS outpatient clinic in Belo Horizonte were analyzed and categorized, such as: sociodemographic data, stroke categorization, associated comorbidities and secondary complications arising from the health condition. **Results:** 86 medical records were analyzed, of which 55 were included in the study. The prevalence of men (73%) was observed, with an average age of 41 (11) years, accounting for 74% of ischemic stroke episodes. Modifiable stroke risk factors such as high blood pressure (HBP) (69%), diabetes (65%), alcoholism (32%) and smoking (18%) were also observed. The most common complications were paresis (41%), delirium (25%), and dysarthria (21%). **Conclusion:** The profile of post-stroke individuals treated at a SUS outpatient clinic showed a predominance of male adults, affected by ischemic stroke, with (HBP), diabetics and presenting paresis as the most common post-stroke sequelae. However, it was possible to identify the permanence of risk factors in individuals who had already had their first stroke, requiring actions to stop this involvement, seeking to prevent the incidence of a new episode.

Descriptors: Stroke, Risk factors, Health profile.

Financial support: We would like to thank the Faculdade de Ciências Médicas de Minas Gerais for their support and promotion.

ORIGINAL STUDY

Beyond survival: Assessing quality of life and sociodemographic determinants in head and neck cancer patients

Além da sobrevivência: Avaliação da qualidade de vida e determinantes sociodemográficos em pacientes com câncer de cabeça e pescoço

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ABSTRACT

Introduction: Head and neck cancer (HNC), in particular squamous cell carcinoma, is a global health problem that notably impacts patients' quality of life (QoL) due to its aggressive nature and treatment side effects. **Objectives:** To evaluate the psychosocial impact of HNC on patients' quality of life compared to other types of cancer and to examine the sociodemographic and clinicopathological influence of the disease on patients' quality of life. **Methods:** The present study is observational, cross-sectional and was carried out with patients assisted by a High Complexity Oncology Unit of a Hospital, between the months of March and October 2023. The questionnaire, validated in Portuguese, Functional Assessment of Cancer Therapy–Head and Neck (FACT-H&N) was applied to 24 individuals with HNC and its general version (FACT-G) to 31 individuals with other types of cancer (non-HNC). Sociodemographic and clinicopathological data were collected to explore associations with QoL outcomes. **Results:** Patients with HNC were predominantly male (62%), over 50 years old (83%), with low education and low income, in addition to high consumption of alcohol (81%) and tobacco (75%) when compared to the group of individuals with other neoplasms. Patients with employment reported a higher QoL index. Physical, social, emotional and functional well-being, especially nutritional autonomy, was directly related to a better quality of life. There was no significant difference in overall quality of life scores between individuals with head (77.2%) and neck cancer and other types of cancer (74.5%). **Conclusion:** This study reveals important social vulnerabilities in the group of individuals treated by CCP. Thus, CCP emerges as a central public health concern, requiring efforts focused on preventive approaches and early diagnostic interventions.

Descriptors: Head and Neck Neoplasms; Psychological Distress; Quality Of Life; Patient Reported Outcome Measures.

ORIGINAL STUDY

Evaluation of the teaching of oncology in medical school at three moments: association between student expectations and effective learning

Avaliação do ensino da oncologia no curso de medicina em três momentos: associação entre as expectativas dos alunos e o aprendizado efetivo

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ABSTRACT

Introduction: According to projections from the National Cancer Institute (INCA), it is estimated that by 2029, cancer will become the leading cause of death in Brazil, surpassing cardiovascular diseases. Therefore, it is crucial to discuss and debate the teaching of Oncology in medical schools, considering the impact of this disease on the population. **Purpose:** Analyze the expectations of first-year medical students regarding the teaching of Oncology during their training, as well as to investigate the level of knowledge reported by fourth and sixth-year students on cancer-related topics, in the same institution. **Methods:** This is a cross-sectional and quantitative study, assessed through two questionnaires: the initial one aims to measure the expectations of students regarding their knowledge about oncology, applied to first-year students; the second aims to evaluate their actual acquisition throughout the course, targeting fourth and sixth-year students. **Results:** So far, 396 participants have responded to the questionnaires, with 181 (45.7%) being first-year students. The vast majority of this group (95.6%) have expectations of interacting with oncology patients during their training. Additionally, 86 (47.5%) agree and 58 (32%) totally agree that graduation will provide adequate knowledge about cancer. When evaluating actual learning about oncology in their training, the approach to topics related to cancer treatment was considered essential, with emphasis on oncologic surgery (93%), radiotherapy (87%), and chemotherapy (86%), even if it is taught in a fragmented manner across various disciplines. This same group reported not having completed internships in oncology services, especially in clinical (85%) and surgical (91%) areas. **Conclusion:** Although there are expectations of learning in oncology during the course, there are still theoretical limitations (lack of a specific oncology discipline) and practical limitations (internships). This situation could be minimized by providing internships and rotations, and discussing the incorporation of this discipline into medical education.

Keywords: Health Education; Public Health; Oncology; Medicine.

Financial support: Programa de Bolsas de Iniciação Científica (PROBIC-FCMMG).

ORIGINAL ABSTRACT

Profile of caregivers of children aged between 6 months and 4 years who refuse or hesitate to vaccinate their children against COVID-19 in Belo Horizonte

Perfil de cuidadores de crianças de 6 meses a 4 anos em situação de hesitação ou recusa vacinal para COVID-19 em Belo Horizonte

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ABSTRACT

Introduction: In Brazil, vaccination against Covid-19 for children aged 6 months to 4 years was incorporated into the National Immunization Program in September of 2022. However, vaccination coverage in this age group was lower than expected. **Purpose:** To discuss preliminary results of the research “Correlation between child vaccine refusal for Covid-19 and confidence in science of parents in Belo Horizonte”, characterizing the profile of caregivers of children aged between 6 months and 4 years who refuse or hesitate to vaccinate their children. **Methods:** The study was a cross-sectional study with a quantitative approach, conducted between August 2023 and April 2024. The data was collected by applying a questionnaire to a group of parents and caregivers of children aged 6 months to 4 years old, at an outpatient clinic dedicated exclusively to public healthcare users in Belo Horizonte. **Results:** There were 206 answers collected and 3 of them were excluded, due to not being the main caregiver (1) and being a minor (2). Females were 89% of the respondents (181) and males were 11% (22). 52% of the participants did not start vaccination for Covid-19, and 51% of them do not intend to do it anytime, with 40% of fathers presenting this behavior, compared to 23% of the mothers. Vaccination rates seem to increase according to children’s age. Causes of vaccine refusal and hesitations may include fear of side effects, lack of time and the children having flu during the campaign. There were no significant findings about caregiver’s age and marital status. Correlation between parent’s confidence in science and vaccine refusal is still under analysis. **Conclusion:** More studies about behavior and motivation to vaccination should be runned in order to understand the obstacles to efficient vaccination coverage.

Keywords: COVID-19 Vaccines; Vaccination Coverage; Vaccination Refusal

ORIGINAL STUDY

Relation between the number of pregnancies and the prevalence of polyps in women undergoing diagnostic hysteroscopy in a university hospital

Relação entre número de gestações e a prevalência de pólipos em mulheres submetidas à histeroscopia diagnóstica em hospital universitário

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ABSTRACT

Introduction: Endometrial polyps (EP) are benign cellular proliferations composed of stroma, glands and vessels that create a projection in the uterine cavity. They are one of the most common findings in hysteroscopic examinations in women of childbearing age, and especially in the peri and postmenopausal period. The pathophysiology is still uncertain, but it is believed that the main factor included is the involvement of mutations in the BCL-2 gene. Furthermore, the connection between female sex hormone receptors and cell proliferation in the lesion are suspected. This type of hormonal association is common, such as in malignant endometrial neoplasms, in which the main risk factor is overexposure to the estrogen hormone. In these cases, an interesting relationship is noted, regarding nulliparity and greater exposure to estrogen than in multiparous women. This association arises mainly from the fact that during the gestational period, progesterone is the main hormone, and it has a certain protective action against the cellular effects of estrogen. Thus, hypotheses are raised about the real influence of sexual hormones and the fluctuation of exposure by the number of pregnancies on other cellular changes, such as PE. **Purpose:** Analyze the relation between the number of pregnancies and the prevalence of endometrial polyps. **Methods:** Prospective, analytical and observational study that will take place at a University Hospital, during nine months, collecting data from patients undergoing diagnostic hysteroscopy. **Results:** 296 samples were obtained and will be further analyzed based on the purpose of the research, crossing data of pregnancies and polyp findings in the carried out hysteroscopies. **Conclusion:** By the end of the project, it is expected to confirm the role of hormonal variance during pregnancies and the possible protection of the endometrium from polypoid lesions.

Keywords: Hysteroscopy; Adenomatous Polyps; Uterine Diseases; Pregnancy.

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL RESEARCH

Impact of the COVID-19 pandemic on the diagnosis and treatment of cutaneous melanoma in a public health service in Brazil

Impacto da pandemia da COVID-19 na incidência, espessura do tumor e início do tratamento de pacientes com melanoma cutâneo no sistema público de saúde no Brasil

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ABSTRACT

Introduction: Melanoma is the leading cause of death from skin cancer despite representing only 3% of skin neoplasms and its incidence is increasing globally. Tumor thickness and ulceration are the main prognostic factors, with early diagnosis determining the increase in survival. The COVID-19 pandemic has impacted health services worldwide, making it difficult for the population to access specialized medical care, which may have contributed to the delay in cancer diagnosis. **Objective:** To evaluate the impact of the COVID-19 pandemic on the incidence, tumor thickness and time between diagnosis and initiation of treatment in patients with cutaneous melanoma. **Methods:** Retrospective observational study based on the analysis of electronic medical records of patients treated with a diagnosis of cutaneous melanoma in three periods: i) pre-pandemic (January/2019 to March/2020), ii) pandemic 1 (April/2020 to June/2021) and iii) pandemic 2 (July/2021 to September/2022). Sociodemographic characteristics, tumor characteristics and time interval between diagnosis and first treatment were evaluated. **Results:** 76 patients were evaluated, 25 (32.89%) diagnosed in the pre-pandemic period, 22 (28.94%) in pandemic period 1 and 29 (38.15%) in pandemic period 2. No differences were observed between the sociodemographic characteristics of the population, tumor thickness ($p=0.338$) and presence of ulceration ($p=0.838$) in the three periods analyzed. There was also no delay between diagnosis and first treatment during the pandemic. **Conclusion:** With the data from this study, no impact of the COVID-19 pandemic on the incidence, thickness of melanomas or the time between diagnosis and first treatment was observed. This study demonstrated the importance of adapting the routine of health services and adapting the flow of oncology care in times of health crisis.

Descriptors: COVID-19; Melanoma; Pandemic; SARS-COV-2.

Financial support: Faculdade de Ciências Médicas de Minas Gerais

ORIGINAL STUDY

Cardiovascular profile of women in a university outpatient clinic in Minas Gerais

Perfil cardiovascular das mulheres em um ambulatório universitário de Minas Gerais

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ABSTRACT

Introduction: Climacteric, occurring between the ages of 40 and 65, is characterized by the transition from the reproductive to the non-reproductive cycle, while menopause is defined as the last menstrual cycle. Both phases entail hormonal and physical changes in women, including an increased risk of cardiovascular diseases (CVD), which stand out as the leading cause of death among women, with 1 in 9 women aged 45-65 having some form of CVD and 1 in 3 after 65^{1,2,3}. In this context, it is relevant to profile patients from an Outpatient Clinic in Minas Gerais, as it allows for personalized care and effective resource planning. **Objective:** To report the experience of the Scientific Initiation Scholarship Program (PROBIC) in the Women's Cardiovascular Care Line in an Outpatient Clinic in Minas Gerais. **Methods:** Review of an original article developed from 2023 to 2024 through a database of medical records of female patients aged between 40 and 65 years attended from 2021 to 2023. Gynecological and cardiac consultations with a specialist were used. Afterward, through an Excel table created by the authors, descriptors significantly impacting an increased cardiovascular risk profile in women were selected. **Results:** The research, conducted by a scholarship holder and a volunteer, encountered obstacles that impacted the project's development. Delays occurred in the availability of the database, medical records were incomplete, some patients lacked complete care segments, and there were difficulties in mentor assistance. These issues resulted in a delay in the research delivery time and a more complex experience. Additionally, more meetings were required, totaling thirty to collect 159 patients. **Conclusion:** PROBIC offers a valuable opportunity for academics to develop research skills, highlighting crucial topics such as the cardiovascular profile of women, the main cause of death in Brazil. This emphasizes the importance of implementing preventive measures to improve health outcomes.

Keywords: Climacteric; Menopause; Cardiovascular Risk.

Financial support: Faculdade Ciências Médicas through the scientific initiation scholarship.

RESUMO DE ESTUDO ORIGINAL

Noise-induced hearing loss in the year 2022: research by the academic league of otorhinolaryngology and neck-facial surgery

Perda auditiva induzida por ruído no ano de 2022: pesquisa da liga acadêmica de otorrinolaringologia e cirurgia cérvico-facial

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ABSTRACT

Introduction: Noise-Induced Hearing Loss (NIHL) is characterized by the gradual loss of hearing and can be caused by sound or chemical exposures. The evolution of this hearing loss can lead to irreparable losses. **Objective:** To examine the economic sectors that impact notifications and contextual factors related to this condition. **Methodology:** This is a retrospective, observational and cross-sectional study using data collection from the “Tabnet” tool (DATASUS). **Results:** 580 notifications, 522 males and 58 females and the majority are between 40 and 60 years old. Noises accounted for 60% of exposure and 70% of the exposure time was years. The main symptoms were tinnitus and difficulty speaking, with 52% not being laid off from work. 43% of workers developed partial permanent disability and the main approach used was personal protection. In relation to occupations, the one that was most repeated in all states was related to transport (drivers) and the use of machines in industries. **Discussion:** There was little information about the North and Northeast. NIHL has the preventable nature of risk exposure, meaning that it is not necessary to remove the individual, but rather to promote the use of protective equipment. There is a lack of knowledge of the disease by professionals, as they do not adopt necessary measures and fill out the notification incorrectly/inadequately. There is a profile of occupations in each state, raising the need for specific actions for each state. There were cases in which noise was not the main factor, raising the discussion about the risks with chemical and biological materials. **Conclusion:** NIHL in Brazil is still an underreported condition, little understood by health professionals, workers and employers. More studies like this are necessary for the strategic formulation of government and business intervention projects focused on the particularities of each State.

ORIGINAL STUDY SUMMARY

Could telemedicine facilitate the monitoring of patients with chronic pancreatitis? A retrospective analysis

A telemedicina poderia facilitar o acompanhamento de portadores de pancreatite crônica? Uma análise retrospectiva.

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ABSTRACT

Introduction: Chronic pancreatitis (CP) is a fibroinflammatory disease that leads to irreversible damage to pancreatic tissue. The occurrence of this pathology is closely related to substance abuse, especially alcohol and other drugs. Its main symptom is chronic pain and, as it is an incurable condition, its treatment mainly consists of changing lifestyle habits, ceasing addiction and using analgesic medications. Taking into account the clinical stability of this condition, people with CP can greatly benefit from Telemedicine in monitoring their symptoms and the evolution of the disease, as it allows for easier, more practical and faster doctor-patient contact. **Purpose:** To evaluate in a retrospective study the evolution of patients with chronic pancreatitis, its complications and complications; and evaluate whether, in any of the phases of pancreatitis, patients could benefit from interventions through telemedicine. **Methods:** Initially, data was collected from patients with CP who attended the outpatient clinic, to draw up an epidemiological profile. Next, a literature review was carried out on chronic pancreatitis and Telemedicine, using the PubMed, Scielo, UpToDate and Cochrane databases, using the following **descriptors:** Chronic Pancreatitis, Telemedicine and Treatment; 17 articles were selected, written in both English and Portuguese, published between 2014 and 2023. Articles that did not deal with the topic and that were published outside the determined period were excluded. Finally, a critical analysis was carried out of the possible applicability of using telemedicine in the treatment of chronic pancreatitis. **Results:** The data found are in line with other research on chronic pancreatitis. Furthermore, alcohol intake is also a common factor among study patients and epidemiological reports. A differential fact was that the most prevalent symptom in our study was involuntary weight loss, while the literature points to pain as the main symptom. **Conclusion:** Telemedicine could be beneficial by facilitating contact for patients with CP with a multidisciplinary team, involving psychological care, which could improve their outcome. Closer monitoring and psychological support can help patients to maintain the cessation of addiction and improve the condition, as alcoholism and smoking contribute to worsening the condition of chronic pancreatitis.

Keywords: Telemedicine; Pancreatitis, Chronic; Therapeutics;

Financial support: PROBIC–Faculdade de Ciências Médicas de Minas Gerais–FELUMA

ORIGINAL STUDY

Advance directives in geriatrics

Diretivas Antecipadas de Vontade em Geriatria

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ABSTRACT

Introduction: The Brazilian Federal Council of Medicine regulated the performance of healthcare providers regarding terminal patients through the Advance Directives (ADs), that allow a person to convey decisions about end-of-life situations in case of inability to speak. However, in Brazil there is no legislation about these directives, which makes it difficult for applying ADs in healthcare environment. **Objectives:** The research aims to evaluate the knowledge of elderly patient's companions about ADs in a hospital. **Methods:** This is a cross-sectional study conducted with elderly companions in a reference hospital for chronic and palliative care, who were administered a questionnaire assessing their knowledge of ADs. **Results:** From October 2023 to March 2024, 42 companions answered the questionnaire, and a preliminary analysis was performed. Among them, 33.3% are caregivers, 19% sons or daughters, 14.3% grandsons or granddaughters, 9.5% spouses. The average age of patients was 78.5 years, and the main diagnosis of hospitalized patients was stroke (73.8%). Among the companions, 88% did not know what ADs are and only 12% answered "I have an idea". When they were asked about respecting their family member's decision to die at home, 85.7% answered that would respect the decision and only 9.5% would opt to take care of the patient in a hospital, regardless of his wish. In addition, 40.5% of companions answered that they prefer to die at home and 38% answered "I do not know". **Conclusion:** Although most companions respect the decision of family members to receive end-of-life care at home, most do not know where their own care would be in the terminal phase of life. Therefore, ADs still need to be more debated in society, especially in areas of education and healthcare.

Descriptors: Advance directives; Palliative care; Chronic Diseases; Elderly.

Financial support: This research is supported by Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG).

ORIGINAL STUDY

Advance directives: knowledge by healthcare providers

Diretivas Antecipadas de Vontade: conhecimento por profissionais da saúde

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ABSTRACT

Introduction: Advance directives (ADS) include the Living Will (LW) and the Durable Power of Attorney for Health Care (DPAHC) which are documents that allow patients to plan and establish end-of-life wishes or to state who should speak for them in the event of being unable to communicate their own will and are used for giving instructions for healthcare providers. In Brazil, there is still no legislation on the subject and the existing provisions were not sufficient for starting the use of the documents. **Objectives:** Analyze the knowledge of healthcare providers about ADS and their practical use at a hospital. **Methods:** This is a cross-sectional study carried out with healthcare providers in a reference hospital for chronic and palliative care, who were submitted to a questionnaire evaluating their knowledge about ADS and use in their practice. **Results:** 100 questionnaires were administered between June 2023 and March 2024, evaluating, among other factors, the knowledge about ADS. Among the professionals interviewed, 53% are nursing technicians, 11% doctors, 8% nurses and 28% other healthcare professionals. Most respondents were female (79%), under the age of 41 (68%) and had little professional experience, with 53% having less than 7 years of experience. Among the factors analyzed, only 7% demonstrated that they did not know the definition of ADS, however, when asked questions about the types of ADS and their characteristics, such as when TV goes into effect, 45% were unable to answer or were incorrect and 26% demonstrated that they were completely unaware of the existence of MD. **Conclusion:** Although most professionals know the definition of ADS, they do not have deeper knowledge about it, which demonstrates the need to disseminate knowledge about advance directives between healthcare providers given the current scenario of growth in the proportion of older persons in the population.

Descriptors: Advance directives; Palliative care; Health personnel.

Financial support: This research is supported by Faculdade de Ciências Médicas de Minas Gerais (FCMMG) through the Programa de Bolsas de Iniciação Científica (PROBIC-FCMMG).

ORIGINAL STUDY

Association between hip and knee extensor muscle strength with the 30-second sit-to-stand test and the 1-minute sit-to-stand test in patients with Parkinson's disease

Associação entre a força muscular de extensores de quadril e joelho com o teste de sentar e levantar de 30 segundos e com o teste de sentar e levantar de 1 minuto em pacientes com Doença de Parkinson

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ABSTRACT

Introduction: Parkinson's disease (PD) is a neurodegenerative disease that leads to a decrease in dopamine in the substantia nigra. Dopaminergic reduction results in the severe motor disturbances that characterize the most common symptoms of the disease, such as resting tremor, bradykinesia, stiffness and postural instability. In addition to the classic symptoms, muscle weakness has been indicated as an important motor symptom of this disease. This deficit impairs basic activities such as sitting and standing, which are very important for mobility, independence and performing tasks. Realizing the importance of this movement in daily activities, it is necessary to investigate the relationship between muscle strength and performance in the sit-to-stand test. **Objective:** To investigate the association between hip and knee extensor muscle strength with the 30-second sit-to-stand test (30s-STs) and the 1-minute sit-to-stand test (1'STs) in patients with Parkinson's disease. **Methods:** This is a cross-sectional study in which the 30s-STs, 1'STs and the modified Sphygmomanometer Test were applied to investigate a relationship between strength and sitting to standing. Pearson's correlation coefficient was used. Patients over 50 years old, diagnosed with PD and who did not have other diseases that could influence the tests applied were included in the study. **Results:** The sample included 13 patients, of which 61% were men with a mean age of 66.8 ± 6.0 years, scoring between 1 and 3 on the Hoehn and Yahr scale and diagnosis time of 10.5 ± 7.6 years. No significant association was observed between hip and knee extensor strength and 30s-STs and 1'STs. **Conclusion:** Based on the analysis, no significant association was observed between the tests. As this is a preliminary data analysis, it is necessary to complete the data collection to verify the correlation.

Descriptors: Parkinson Disease; Muscle Strength; Evaluation Study.

RESUMO DE ESTUDO ORIGINAL

The impact of health education on diabetic patients treated at an ambulatory care of a university hospital

O impacto da educação em saúde em pacientes diabéticos em serviço ambulatorial de um hospital universitário

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ABSTRACT

Introduction: Diabetes Mellitus (DM) is a chronic disease that stands out for being a growing health problem worldwide. Diabetes education is a way of empowering patients to self-manage their disease and improve their glycemic control. Therefore, the use of evaluative questionnaires, such as Diabetes Knowledge Scale Questionnaire (DKN-A), allows measuring the effectiveness of teaching procedures in obtaining knowledge about the disease and knowing individuals demands of each diabetic. In this way, it becomes possible to carry out effective interventions to understand better the pathology of DM and, consequently, improve the quality of life of those affected by it. **Purpose:** Identify the impact of theoretical-practical education measures in acquiring knowledge about DM in diabetics. **Methods:** Cross-sectional descriptive study with a sample of 67 patients with DM treated at an ambulatory care of a University Hospital. The DKN-A questionnaire was applied before and after educational actions and the proportion of correct answers and errors were evaluated in each phase of the study. **Results:** Of the 67 participants evaluated, 48 (72%) were female and 19 (28%) were male. There is a predominance of patients with type 2 DM (94%) and 89% have concomitant systemic arterial hypertension. Nine items present correct answer rates greater than 90% in the second phase of the study compared to the first phase. Question 9, referring to the main cause of hypoglycemia in diabetic patients, presented the highest number of errors in both phases, demonstrating the severity of the lack of knowledge about this important acute complication with high associated morbidity and mortality rates. **Conclusion:** In this study it was possible to increase knowledge about DM. Since access to information is one of the pillars of diabetes therapy, it is necessary to invest in the structuring and implementation of educational strategies aimed at diabetic patients to improve metabolic control and survival.

Keywords: Diabetes Mellitus; Health Education; Surveys and Questionnaires.

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL RESEARCH

Impact of class on cellular protection of Sodium-Glucose Cotransporter 2 inhibitors against Doxorubicin toxicity

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ABSTRACT

Introduction: Inhibitors of the Sodium-Glucose Cotransporter2 (isGLT2) are used in the treatment of Diabetes. In addition to reducing glucose, isGLT2s have cardioprotective effects and may reduce the toxicity of Doxorubicin (Dox). However, validation of the class-dependent effect of three widely used isGLT2s has not yet been carried out. **Objective:** To investigate the cardioprotective effects of Canagliflozin (CANA), Dapagliflozin (DAPA) and Empagliflozin (EMPA) against Dox in cellular assays. **Methods:** Cardiac cells were exposed to different concentrations of Dox (0.01-1000uM, 48h). Subsequently, cell death was quantified with Trypan blue assay to select the Dox concentration to be used. To analyze cell viability, a new exposure was added to isGLT2 under the same conditions (0.01-100uM; 48h). A fluorescence assay was carried out to analyze the mechanisms, verify the production of nitric oxide (NO) and reactive oxygen species (ROS). Contractile/relaxation characteristics were assessed in isolated cardiomyocytes exposed to the same drugs. Comparisons between groups were made using the Kruskal-Wallis test and Dunn's test. **Results:** There was a reduction in cell viability at Dox concentrations of 10, 100 and 1000uM, and the 100uM concentration was selected for the remaining experiments. It was noted that CANA and EMPA were more efficient in preserving cell viability over a wide range of concentrations (0.01-100uM), while the attenuation of cell mortality at 1uM was greater with DAPA. DAPA and EMPA decreased NO and ROS production, with DAPA excelling in reducing ROS. Only CANA attenuated the contractile deficit induced by Dox, despite delaying contraction kinetics. **Conclusion:** The mechanisms and degree of cardioprotection vary according to the isGLT2 class. These findings elucidate the potential of isGLT2 as an adjuvant treatment to mitigate chemotherapy-induced cardiotoxicity.

Keywords: Sodium-Glucose Transporter 2 Inhibitors; Integrative Oncology; Heart; Doxorubicin; Combination Chemotherapy.

Financial support: PROBIC scholarship offered by Fundação Educação Educacional Lucas Machado; FAPEMIG (scholarship no.: APQ-01680-23 for Artur Santos Miranda) and Serrapilheira Institute (APQ-05839-23091/2023–Competition to support young scientists–no. 06/2022 for Artur Santos Miranda).

ORIGINAL STUDY

Epidemiological profile of fire brigades members of the state of Minas Gerais: a pulmonological evaluation

Perfil epidemiológicos de brigadistas do estado de Minas Gerais: uma avaliação pneumológica

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ABSTRACT

Introduction: The Fire Brigades are a group of volunteers who, in partnership with Civil Firefighters, contribute to the prevention and fighting of conflagrations. Therefore, exposure to smoke, high temperatures and combustion gases presents a potential risk of developing lung disease, including respiratory symptoms such as dyspnea, cough, wheezing and chest pain. **Objectives:** Outline the epidemiological profile of fire brigades members with the aim of determining a possible association between exposure to smoke and respiratory symptoms. **Methods:** This study is an epidemiological profile of fire brigades members of the state of Minas Gerais. Fifty participants were given an online questionnaire containing personal and health data. In this study, emphasis was placed on the time and frequency of exposure to smoke and respiratory symptoms presented by firefighters. **Results:** The study included fifty firefighters of both genders aged 19 and above. Findings suggest a higher prevalence of smoke exposure among male firefighters. Prolonged exposure exceeding six months correlates with medication usage in both genders. However, there appears to be no statistically significant correlation between exposure frequency and the incidence of respiratory symptoms. **Conclusion:** This epidemiological study sheds light on the health profile of firefighters in the state of Minas Gerais. These findings underscore the importance of implementing preventive measures to protect the respiratory health of firefighters, considering the inherent risks associated with their work environment.

Descriptors: Firefighters; Epidemiological Profile; Inhalation Exposure.

ORIGINAL STUDY

Analysis of hysteroscopic findings in patients with abnormal uterine bleeding undergoing diagnostic hysteroscopy at a university hospital: a cross-sectional study

Análise dos achados histeroscópicos em pacientes com sangramento uterino anormal submetidas à histeroscopia diagnóstica em hospital universitário: um estudo transversal

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ABSTRACT

Introduction: Abnormal uterine bleeding (AUB) is a disorder that affects over 40% of women. It involves modifications to the usual parameters of bleeding, impacting many aspects of patient's life. Diagnosing the underlying condition implies evaluation through clinical examination, followed by imaging exams, and in some cases, direct evaluation of the uterine cavity, with hysteroscopy being the gold standard. Apart from being a well-established method for secondary diagnostic evaluation, it enables guided biopsy and therapeutic intervention in certain cases. **Objectives:** To analyze the prevalence of hysteroscopic findings in patients with abnormal uterine bleeding undergoing Ambulatory Hysteroscopy at a university hospital. **Methods:** Cross-sectional observational prevalence study in progress that will analyze hysteroscopic findings in patients with AUB from October 2023 to June 2024. Data are being collected from a pre-examination questionnaire and a document detailing hysteroscopic findings. A table with relevant information is being compiled and, once data collection is over, it will be statistically interpreted. **Expected Results:** Until now, the study has an N=71, with 51% participants in the reproductive age and 49% in post-menopause. Among the other complaints, besides AUB, pelvic pain was the most prevalent (45%). Regarding AUB, 31% of patients reported post-menopausal bleeding, 30% complained of menorrhagia, and 20% reported intermenstrual bleeding. In 48% of participants, bleeding occurred frequently (<24 days), clots were present in 70% of cases, and it impacted the quality of life of 76% patients. The main finding on hysteroscopy was endometrial polyp (64%), followed by submucosal myoma (9%). Lesions suggestive of malignancy were visualized in 4%. **Conclusion:** Structural etiologies are responsible for a significant prevalence in patients with AUB. As expected and in accordance with the literature, the endometrial polyp has so far been shown to be the primary pathology found in the hysteroscopy of these patients.

Descriptors: Hysteroscopy; Abnormal Uterine Bleeding; Endometrium.

ORIGINAL STUDY

Correlation between fatigue and pelvic floor dysfunctions in individuals with multiple sclerosis: preliminary analysis

Correlação entre fadiga e disfunções do assoalho pélvico em indivíduos com esclerose múltipla: análise preliminar

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ABSTRACT

Introduction: Multiple Sclerosis (MS) is a neurodegenerative, autoimmune and progressive disease. It is one of the most disabling diseases among young adults and affects several systems, which has a major impact on the individual's life. However, studies that correlate the interaction between fatigue and the four domains of the pelvic floor: urinary, intestinal, prolapse and sexual, are still scarce. **Objective:** To investigate the correlation between fatigue and pelvic floor dysfunction in individuals with Multiple Sclerosis. **Methods:** Observational study, approved by the Research Ethics Committee (CAAE: 72862123.8.0000.5134). Carried out from October 2023 to the present, in an outpatient clinic in Belo Horizonte, Minas Gerais. Fatigue was assessed using the Modified Fatigue Impact Scale (MFIS) and the Fatigue Severity Scale (FSS), while pelvic floor dysfunctions were assessed using the Pelvic Floor Bother Questionnaire (PFBQ). The correlation was analysed using the Spearman Correlation Coefficient, in the SPSS software, version 23. **Results:** 12 individuals were included, with an average age of 44 years and an average time since diagnosis of 8 years. The correlation between fatigue, assessed using the MFIS, and pelvic floor dysfunction, showed a positive correlation coefficient ($r=0.75$ —high magnitude) and a statistically significant p-value of 0.005. The correlation between the severity of fatigue, assessed by the FSS, and pelvic floor dysfunctions, was positive, with a moderate correlation magnitude ($r=0.642$) and a significant p-value of 0.024. **Conclusion:** The results of the present study demonstrated a positive and statistically significant correlation between fatigue and pelvic floor dysfunction in individuals with MS. Continued research, with an increase in the sample, is necessary to consolidate this conclusion.

Keywords: Multiple Sclerosis; Fatigue; Pelvic Floor.

Financial support: Fundação de Amparo à Pesquisa de Minas Gerais FAPEMIG and Faculdade de Ciências Médicas de Minas Gerais FCMMG.

ESTUDO ORIGINAL

“Discovering yourself”: the knowledge of the hypertensive patients of ambulatório ciências médicas about hypertension: how information impacts on adherence to the treatment

“Conheça-te a ti mesmo”: O conhecimento dos pacientes do hipertensos do ambulatório Ciências Médicas acerca da hipertensão arterial sistêmica e dos medicamentos que usa regularmente: como a informação impacta na adesão ao tratamento medicamentoso

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ABSTRACT

Introduction: Systemic arterial hypertension represents the most significant modifiable risk factor for global all-cause morbidity and mortality and is correlated with an elevated risk of cardiovascular disease. Management primarily relies on lifestyle modifications and pharmacotherapy to mitigate associated complications. Various factors influence patient adherence to treatment, with knowledge emerging as a pivotal modifiable determinant. Investigating the correlation between hypertensive patients' disease knowledge and treatment adherence is therefore imperative. **Purpose:** To assess the understanding of hypertensive patients concerning their condition and therapeutic regimen and to delineate its relationship with treatment adherence. **Methods:** This cross-sectional observational study included patients previously diagnosed with hypertension who were on antihypertensive medication. Following recruitment, participants underwent an evaluation administered by researchers utilizing a designated questionnaire. **Results:** A total of 236 patients were enrolled, with 25% aged between 51-60 years and 37% between 61-70 years. Females constituted 58% of the cohort. A statistically significant correlation was observed between lower scores in the knowledge questionnaire and lower educational attainment, misconceptions regarding hypertension definition, inaccurate blood pressure readings for diagnosis, irregular medication adherence, and inadequate information provision about their condition. Among the participants, 57% exhibited irregular treatment adherence, and 53% failed to review their prescriptions. Notably, in the group with lower knowledge scores, 66% demonstrated poorer scores on the adherence questionnaire, underscoring the pivotal role of patient understanding of their health condition in treatment adherence. Within the subset of patients exhibiting lower adherence scores, 82% reported not receiving adequate disease-related explanations from healthcare professionals (p value = 0.001). **Conclusion:** Effective adherence to the prescribed pharmacotherapy hinges on a confluence of social, economic, individual, and systemic factors. Within the hypertension context, our findings elucidate that medication adherence correlates with patients' comprehension levels concerning their clinical condition.

Descriptors: Information and Communication, Adherence to Treatment, Systemic Arterial Hypertension.

Financial support: Faculdade Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

COVID-19 infection in cardiac and non-cardiac patients in a metropolitan hospital in Belo Horizonte: a cross-sectional descriptive study.

Infecção por COVID-19 em pacientes cardiopatas e não-cardiopatas em hospital de grande porte em Belo Horizonte/MG: um estudo descritivo transversal.

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ABSTRACT

Introduction: The COVID-19 pandemic was a milestone in the global health and economy histories. With the spread of the disease caused by SARS-CoV2, the manifestations that were initially marked by lung involvement, also demonstrated a relationship with the cardiovascular system. The available evidence demonstrates worse outcomes in individuals with diseases of this system, in addition to increased levels of markers of myocardial injury during its course, both through mechanisms that are still incompletely established. **Purpose:** To investigate the hypothesis that COVID-19 has worse outcomes in heart conditions patients and identify other clinical parameters that are notable in the presentation of the disease in this population. **Methods:** A descriptive cross-sectional study was established by collecting data from medical records of patients treated at a metropolitan Belo Horizonte/MG hospital between March 2020 and December 2021. Patients diagnosed with COVID-19 through PCR-RT method tests (real-time polymerase chain reaction) or antigen tests were both included. The information analyzed comprehends clinical presentation of the disease, associated comorbidities, presence or absence of structural heart disease, clinical outcome of hospitalization, and mortality. In the next stage, patients will be divided into those with previous heart disease or diagnosed upon admission and those without established heart disease. The variables between the groups will then be analyzed using the R program version 4.0.5. **Results:** The study is in the data analysis phase and has preliminary results. Data were collected from approximately 300 patient records compatible with the inclusion criteria. **Conclusion:** This study's results are expected to follow the international literature, showing worse prognoses for patients with heart disease and SARS-CoV2 infection. However, more studies are needed to verify the magnitude of this association in the Brazilian population.

Descriptors: COVID-19; Heart Diseases, SARS-CoV2.

Financial support: supported by the Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL RESEARCH STUDY

Epidemiological and toxicological profile of children who were victims of manslaughter in a Brazilian state

Perfil epidemiológico e toxicológico de crianças vítimas de homicídio em um estado brasileiro

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ABSTRACT

Introduction: lethal violence rates in Brazil remain high despite their decrease in some areas of the country, which includes violence against children and teenagers. From 2016 to 2020, there was an estimate of 34.918 of them who died from manslaughter in Brazil. Apart from causing direct damage to said demographic, the mortality of young individuals has impacts on the wellbeing of the victims' loved ones, as well as the public health, the economy, and the medical system. There are several factors that make these crimes more likely. Thus, this academic work assesses these patterns in cases of child and teenager homicides. **Methods:** A cross-sectional retrospective study was performed on homicide victims in one year with a sample in which toxicology had been performed in an Official Forensic Laboratory (Minas Gerais- Brazil). **Results:** the sample used was composed of 124 homicide victims with an age range between 10 and 17 years old, with an average age of 16,08 years and with a standard deviation of 1.24 years. Of those, 81% tested positive for drug use. Also, 74% presented with Cannabis in urine and in 45% of them, cocaine was found. Also, 77% of all the manslaughter cases analysed occurred in Belo Horizonte. In addition, 95% of the victims were men, 67% were brown-skinned and 48% were 17 years old. When it comes to the causes of death, 95% were killed by firearm related injuries. **Conclusion:** there is an evident relationship between drug use and young people homicide cases in Brazil. Most victims included in the present study were mixed men and a great portion of cases occurred in the biggest urban area in Minas Gerais. Thus, this work indicates the urgent need for better public safety and social actions focused in preventing drug use and access to firearms amongst young people.

Keywords: homicide, childhood, toxicology, forensic medicine

Financial Suport: Faculdade de Ciências Médicas de Minas Gerais

ORIGINAL STUDY

Evaluation of knowledge and stigma among medical students regarding epilepsy at a Brazilian institution

Avaliação do conhecimento e do estigma dentre estudantes de medicina diante da epilepsia em uma instituição brasileira

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ABSTRACT

Introduction: Epilepsy is a common serious neurological disorder, affecting more than 50 million people globally. This disorder carries great stigmatization, affecting patients in their social context and quality of life, to the point where a possible association between depression, suicide and epilepsy has been reported. Studies have demonstrated the existence of a dichotomy between this epidemiologically relevant pathology and the lack of preparation of students and health professionals in dealing with epilepsy, with a noticeable lack of knowledge and the reproduction of stigma, even among medical students. **Purpose:** To evaluate the knowledge and presence of stigma among medical students at a renowned Brazilian institution regarding epilepsy through a questionnaire, analyzing the level of theoretical knowledge and the degree of stigma regarding the disease. **Methods:** Cross-sectional and observational study. Data will be obtained through an online questionnaire via Google Forms. Medical students will be divided into academics of the basic cycle (1st to 4th period), clinical cycle (5th to 8th period) and medical internship (9th to 12th period). **Results:** It is expected to find some degree of lack of knowledge regarding epilepsy and also attitudes that corroborate the stigma in our sample. Furthermore, we intend to compare the data between the three groups of academics, expecting to demonstrate that lower levels of knowledge are related to greater reproducibility of the stigma of the disease. **Conclusion:** Epilepsy is a relevant disorder that still carries an important stigma, even among the medical students and the medical community. It is also a subject usually little discussed, which is possibly an explanation to the maintenance of the burden of the disease. This being said, the present study aims to evaluate the knowledge and presence of stigma among medical students at a renowned institution in order to expand the literature about epilepsy.

Keywords: Epilepsy. Neurology. Knowledge. Attitude. Social stigma. Medical students.

Financial support: Faculdade de Ciências Médicas de Minas Gerais, PROBIC.

ORIGINAL STUDY

Barriers to access to health care for minority populations in Belo Horizonte, Minas Gerais

Barreiras para o acesso à saúde pela populações minoritárias em Belo Horizonte, Minas Gerais

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ABSTRACT

Introduction: Primary Health Care is the first level of health care, constituted through a set of collective actions that promote comprehensive care. The term “minority” has a qualitative function and refers to groups that face social disadvantages and discrimination because they do not conform to the current standard and, despite what the name suggests, represent the largest portion of the population in Brazil. It is necessary to approach the existing gaps in the support network for the minority population in the SUS, highlighting the public policies aimed at the health of minorities. **Purpose:** To understand the barriers to accessing health services by minority populations, namely: homeless people and people in prostitution situation. **Methods:** This is a descriptive, qualitative study realized between August 2023 and June 2024. The saturation criterion was respected and it is estimated that, by the end of the study, 7 representatives of each population will be interviewed. The research followed the procedures: pre-analysis, exploration of the material, processing of results, inference and interpretation, according to Bardin’s Content Analysis. **Results:** So far, 2 sex workers and 7 representatives of the homeless population have been interviewed. Based on the data acquired until now, it is clear that the groups interviewed may face difficulties in the SUS, due to their social vulnerability. Homeless individuals highlighted the impediment to assistance, if they do not have an identity document, and also the lack of Community Agents who go to them. Sex workers reported that the delay in receiving care and the distance to specialized health centers are often reasons for giving up. **Conclusion:** The interviews carried out to date corroborate that individuals who belong to these minority groups face challenges in accessing Primary Care. It is important to highlight that additional studies are essential for the final analysis of the study.

Keywords: Public policy; Primary Health Care; Minority health.

Financial support: This original study was supported by Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Clinical and epidemiological profile of breast cancer patients in public and private health services in Belo Horizonte, Minas Gerais

Perfil clínico e epidemiológico de pacientes com câncer de mama nos serviços de saúde público e privado em Belo Horizonte, Minas Gerais

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ABSTRACT

Introduction: Breast cancer constitutes a significant global public health challenge due to its elevated incidence and associated morbidity and mortality rates. In Brazil, breast cancer stands as the predominant malignancy affecting women across all regions, with the exception of non-melanoma skin tumors. Several factors contribute to the heightened risk of breast cancer development, including age, endocrine and reproductive history, environmental and behavioral influences, as well as genetic predisposition. While the Unified Health System (SUS) serves as the primary provider of cancer care in Brazil, a notable proportion of individuals covered by private health plans still rely on the public sector for cancer treatment. **Purpose:** This study aims to examine the clinical and epidemiological profiles of patients with breast cancer in public and private health services in Belo Horizonte, Minas Gerais. **Methods:** A retrospective, descriptive cross-sectional analysis was conducted, utilizing data extracted from electronic medical records of patients diagnosed with breast cancer between April 2018 and April 2019. **Results:** Among 25 patients diagnosed with breast cancer in the private healthcare sector, 89% were identified as white women, with the remaining 11% being of brown ethnicity, with the average age of 48 years among these patients. Approximately 52% of these patients lacked a family history of breast cancer, while 78% were not undergoing hormonal therapy. Total mastectomy was the most common surgical intervention, accounting for 52% of cases, with sentinel lymph node biopsy being performed in 88% of patients. Among the patients analyzed, 12% presented metastases. **Conclusion:** These initial findings suggest a predominance of white female patients diagnosed with breast cancer within the private healthcare sector, with total mastectomy emerging as the most prevalent surgical procedure.

Keywords: Breast cancer; Clinical data; Epidemiological study.

Financial support: This research project received support from the Research Support Foundation of the Minas Gerais State (FAPEMIG) through the granting of a scientific initiation scholarship from the Institutional Scientific Initiation Scholarship Program (PIBIC-FAPEMIG).

ORIGINAL RESEARCH STUDY

The association between deaths by traffic accidents and illicit drugs: a medical legal perspective

A associação entre óbitos por acidentes de trânsito e o uso de drogas ilícitas: perspectiva médico legal

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ABSTRACT

Introduction: Traffic accidents are one of the main causes of death in Brazil, classifying the country as one of the most dangerous for driving, according to the World Health Organization. Studies show that psychoactive drugs negatively affect the ability to drive, but despite the legal prohibition, the detection of these substances is limited, as there are only preventive actions for ethanol detection. This creates a gap in statistical data on the impact of these drugs on traffic accidents. Therefore, this study analyzes cases of fatal victims of traffic accidents, investigating the presence of substances such as cocaine and tetrahydrocannabinol (THC) through toxicological tests carried out in medical examinations. **Objective:** To analyze the use of psychoactive substances in lethal victims of traffic accidents referred to a legal medical unit. **Methods:** A retrospective descriptive study was carried out based on autopsy reports in which toxicological analyzes were requested in an official forensic toxicology laboratory, over a period of one year. **Results:** 87 deaths resulting from traffic accidents were included. Of these, only 24% of the toxicological tests carried out on the victims were negative, that is, a significant portion of the traffic accidents analyzed had the presence of illicit drugs. Among the samples, 46% tested positive for cocaine and 43% tested positive for THC. **Conclusion:** Illicit substances may be indirectly related to a large number of traffic accidents in the country due to their effects on the central nervous system. Therefore, it is important to raise awareness among the scientific community and the general population about the consequences of using drugs and driving due to their association with fatal traffic accidents.

Keywords: accidents, death, toxicology, forensic medicine

Financial Support: Faculdade de Ciências Médicas de Minas Gerais

ORIGINAL STUDY

Inclusion of community outreach activities in the curriculum and its contribution in development of social responsibility in the medical formation

A contribuição da curricularização da extensão no desenvolvimento da responsabilidade social na formação médica

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ABSTRACT

Introduction: Medical training has evolved rapidly in recent decades and new challenges have emerged. To overcome these new challenges, there is a demand for a new type of medical professional, more focused on the subject's integrality and subjectivity, with a greater awareness of the social responsibility derived from the medical profession. From this context, this work describes how the inclusion of community outreach activities of a university into the medical course curriculum impacts on the development of social responsibility in the students. **Purpose:** To evaluate if the new implementations of community outreach activities to the university curriculum helps the students to form a sense of social responsibility in relation to their medical formation. **Methods:** This qualitative research was guided by Bardin (1979) content analysis following the procedures: pre-analysis, exploration of material, result processing, inference, and interpretation. Thirteen interviews were carried out with medical students of a private institution who participated in the extension curriculum and 7 interviews were carried out with medical students who did not have the mandatory extension. The interviews were recorded and all participants signed a term of free informed consent. **Results:** So far, this work is in the pre-analysis phase. The students interviewed ranged from the first to the eleventh semester and those who had community outreach activities included in the curriculum and those who had not. The preliminary data indicates that the inclusion of community outreach activities into the medical curriculum has an influence in the development of the concept of social responsibility in the medical students, especially by promoting diverse experiences of health education in different socioeconomic settings. **Conclusion:** University extension seems to contribute to the development of a sense of social responsibility in medical training.

Keywords: Social responsibility; Community-Institutional Relations; Medical Education.

Financial support: This original study was supported by the Faculdade de Ciências Médicas de Minas Gerais

ESTUDO ORIGINAL

Análise dos efeitos do ciclo menstrual no desempenho esportivo de atletas de alto rendimento

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RESUMO

Introdução: Sabe-se que o ciclo menstrual é um processo fisiológico controlado pelo eixo hipotálamo-hipófise-ovário que ocorre durante a idade reprodutiva feminina, tendo uma duração esperada de 21 a 35 dias. Ademais, é dividido em duas fases, folicular e lútea, mediante as variações dos hormônios sexuais—estrogênio e progesterona. Tais hormônios causam alterações no funcionamento dos sistemas cardiovascular, respiratório e até metabolicamente, o que modifica o desempenho físico ao longo do ciclo. Nesse contexto, com o aumento significativo da participação feminina nos esportes de alto rendimento, faz-se necessário aprimorar os estudos sobre o impacto do ciclo menstrual na performance das atletas, a fim de aperfeiçoar o preparo destas por meio da periodização e da adaptação dos treinos. **Objetivo:** Avaliar as repercussões do ciclo menstrual na prática esportiva de atletas profissionais. **Metodologia:** Foram realizados testes de repetição máxima (1RM) utilizando o leg press horizontal, juntamente a aplicação de um questionário autoavaliativo do esforço nas três fases do ciclo (menstrual, lútea e folicular). **Resultados:** Espera-se que haja diminuição da performance física durante o período menstrual, bem como quantificar o impacto do ciclo no desempenho das atletas. **Conclusão:** O ciclo menstrual gera modificações no aspecto físico e emocional da mulher, devido às alterações hormonais que ocorrem. Concomitantemente, a participação feminina no mundo esportivo tem crescido, o que ressalta a imprescindibilidade dessa temática. Sendo assim, é de extrema importância que haja estudos mais vultosos e direcionados sobre os efeitos do ciclo menstrual no desempenho de atletas profissionais, com o intuito de aperfeiçoar a performance e valorizar o espaço da mulher no esporte.

Palavras-chave: Ciclo Menstrual; Atletas; Desempenho Atlético.

Apoio financeiro: Programa de Bolsas de Iniciação Científica da Faculdade de Ciências Médicas de Minas Gerais (PROBIC/FCM).

ORIGINAL STUDY

Analysis of menstrual cycle effects on the sports performance of elite athletes

Análise dos efeitos do ciclo menstrual no desempenho esportivo de atletas de alto rendimento

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ABSTRACT

Introduction: The menstrual cycle is a physiological process controlled by the hypothalamic-pituitary-ovarian axis that takes place during the female reproductive age, with an expected duration of 21 to 35 days. Furthermore, it is divided into two phases, follicular and luteal, based on variations in the hormones—estrogen and progesterone. These hormones cause changes in the functioning of the cardiovascular, respiratory, and even metabolic systems, which modify physical performance throughout the cycle. In this context, with the significant increase in female presence in high-performance sports, it is necessary to improve studies on the impact of the menstrual cycle on athletes' performance, in order to enhance their preparation through periodization and training adaptation. **Purpose:** To assess the effect of the menstrual cycle on the sports performance of elite athletes. **Methods:** One-repetition maximum (1RM) testing were performed using a leg press machine, along with the application of a self-assessment questionnaire of effort made during the three phases of the cycle (menstrual, luteal, and follicular). **Results:** It is expected that there will be a decrease in physical performance during the menstrual period, as well as quantifying the impact of the cycle on athletes' performance. **Conclusion:** The menstrual cycle generates changes in the physical and emotional aspect of women due to hormonal alterations that occur. Simultaneously female presence in the sports world has grown, highlighting the indispensability of this topic. Therefore, it is extremely important to have more extensive and targeted studies on the effects of the menstrual cycle on the performance of professional athletes, with the aim of improving performance and valuing women's space in sports.

Keywords: Menstrual Cycle; Athletes; Athletic Performance.

Financial support: Scientific Initiation Scholarship Program of Faculdade de Ciências Médicas de Minas Gerais (PROBIC/FCM).

RESUMO DE ESTUDO ORIGINAL

Prescription of nutraceuticals in a gastroenterology outpatient clinic in Belo Horizonte, Brazil

Prescrição de nutracêuticos em um ambulatório de gastroenterologia em Belo Horizonte, Brasil

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ABSTRACT

Introduction: Nutraceuticals are compounds derived from natural foods that have gained recognition as potential health promoters. However, the lack of knowledge about their prescription profile in specialized outpatient care settings hinders an in-depth understanding of how these products are integrated into clinical management. **Objective:** This study aimed to describe the prescription patterns of nutraceuticals in adult patients diagnosed with liver disease or dyspepsia attending a gastroenterology outpatient clinic in Belo Horizonte, Brazil. **Methods:** The study was conducted as a cross-sectional, retrospective, single-center analysis of medical records from all first outpatient appointments between August 2022 and September 2023. **Results:** Of the 688 consultations investigated, 141 patients were eligible for the study, with the majority diagnosed with dyspepsia (68.1%) and the rest with liver disease (31.9%). Most included patients were female (63.1%), with an average age of 58.7 years, and systemic arterial hypertension was the most common comorbidity (52.5%). Nutraceuticals were prescribed in 26.2% of cases, with 28.9% of patients with liver disease and 25% with dyspepsia. Vitamin D was the most frequently prescribed nutraceutical (11.3%), followed by psyllium (5%). The study identified significant differences in nutraceutical prescriptions according to diagnosis. **Conclusion:** Nutraceuticals are frequently prescribed in specialized gastroenterology care, highlighting the need for more clinical trials to evaluate their therapeutic efficiency.

Keywords: Dyspepsia; Liver Diseases; Nutraceuticals; Prescriptions.

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Renal glomerular, tubulointerstitial, and vascular diseases: epidemiological, clinical, laboratory, morphological, and immunophenotypic characteristics

Doenças glomerulares, tubulointersticiais e vasculares renais: características epidemiológicas, clínicas, laboratoriais, morfológicas e imunofenotípicas

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ABSTRACT

Introduction: There has been a significant increase in the prevalence of chronic kidney diseases worldwide in recent decades, emphasizing the importance of early detection and appropriate treatment to mitigate deleterious effects on nephropathic patients. Percutaneous renal biopsies play an essential role in managing renal diseases, providing precise diagnoses based on the clinical, epidemiological, and laboratory characteristics of patients. However, comprehensive studies on these diseases in Brazil are limited, hampering the characterization and adequate treatment of nephropathies. **Objective:** This study aimed to analyze and describe the epidemiological, clinical, laboratory, morphological, and immunophenotypic characteristics of renal biopsy reports. **Method:** An analytical cross-sectional observational study was conducted based on the analysis of 1135 histopathological reports of renal diseases performed between January 2016 and June 2019 and sent to the Nephropathology Institute. **Results:** Gender-based analysis revealed a significantly higher incidence of focal segmental glomerulosclerosis (FSGS) in male patients compared to female patients. Conversely, lupus nephritis was more prevalent in women than in men. A higher prevalence of proteinuria was observed in men, while hematuria was more common in women. The diagnosis of Berger's disease (IgA nephropathy) was more prevalent in men, whereas membranous glomerulopathy was more common in women. **Conclusion:** Significant gender disparities were observed, with some diseases being more prevalent in men and others in women. These findings underscore the importance of considering gender factors in the diagnostic and treatment strategies for renal diseases, aiming to provide personalized and effective care for all nephropathic patients.

Keywords: Nephropathies, Glomerulonephritis, Membranous Glomerulonephritis

ORIGINAL STUDY

Analysis of the impact of the infusion volume of intraoperative intravenous solutions on the length of hospital stay

Análise do impacto do volume de infusão de soluções endovenosas intraoperatória no tempo de permanência hospitalar

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ABSTRACT

Introduction: Intraoperative intravenous solutions are crucial to a patient's homeostasis—optimizing preload, oxygen carriage capacity, maintaining hemodynamic stability, correcting pre-existing deficits due to preoperative fasting, etc. However, the volume infused often deviates from recommended protocols like Enhanced Recovery After Surgery (ERAS) and Accelerated Postoperative Total Recovery (ACERTO), potentially leading to complications caused by excessive replacement, such as reduced blood flow, renal cortical hypoperfusion, tachyarrhythmia, worsening of respiratory pattern, with potential progression to sepsis and multiple organ failure. **Purpose:** To evaluate the association between intraoperative intravenous infusion volume and hospital stay length in elective surgeries. **Methods:** A retrospective cross-sectional study analyzed 385 medical records of elective abdominal wall herniorrhaphy and videolaparoscopic cholecystectomy (vLC) at a quaternary hospital. **Results:** Fifty four percent of the patients were female, with a median age of 57. The most prevalent surgeries were unilateral inguinal hernioplasty (26%) and vLC (50%). All received saline infusion; only one percent received lactated Ringer's solution. Intraoperative infused volume (TIV) ranged from 600 to 2600 mL. Fourteen percent of the patients were discharged on surgery day, 79.8% on the first postoperative day, and 6.2% stayed over 2 days. For detailed analysis, the variable was categorized between patients with TIV between 500 and 1100 mL (48% of the sample) and those between 1150 and 2600 mL (59%). Among the lower TIV group, 13% of patients were discharged on the day of surgery and 81% the next day. The higher TIV group had 15% of patients discharged on the surgical day and 78% the following day ($P > 0.05$). **Conclusion:** No statistical relation between total infused volume and hospital stay length was found in elective hernioplasty or vLC surgeries with volumes ranging 600-2600 mL. Further studies are encouraged to explore intraoperative volume's impact on recovery in different surgeries and settings.

Keywords: Surgery Department; Enhanced Recovery After Surgery; Intraoperative Period.

Financial support: Faculdade Ciências Médicas de Minas Gerais.

Anti-glomerular basement membrane disease: epidemiological, clinical, laboratory, morphological, and immunophenotypic characteristics.

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ABSTRACT

Introduction: Anti-glomerular basement membrane (anti-GBM) disease is a rare condition, classified as rapidly progressive glomerulonephritis (RPGN), with an annual incidence of less than 2 cases per million inhabitants. It is confirmed by renal biopsy showing crescents on light microscopy, associated with diffuse linear IgG immunostaining along the glomerular basement membrane on immunofluorescence. Prognosis depends on the severity of renal dysfunction at initial presentation, with timely diagnosis and early therapy responsible for renal survival rates. **Objectives:** To analyze and describe the epidemiological, clinical, laboratory, morphological, and immunophenotypic characteristics of renal biopsy reports of patients with anti-GBM disease. **Methods:** Cross-sectional observational study conducted through data collection from medical records of 124 patients with RPGN. **Results:** The collected sample enabled the study to obtain a p-value <0.05 with significant associations. Patients with anti-GBM RPGN are predominantly male (72%). The mean age found was 46 years (Type I). Regarding the distribution of crescents, Class I showed crescents predominantly within the same evolutionary stage (proliferative or sclerosing). Regarding vascular thickness, vessels of normal thickness or slightly thickened prevailed. The degree of fibrosis was pronounced in 44% in Type I. **Conclusion:** New scientific data on this rare and poorly understood disease, especially in Brazil, were obtained. The morphological pattern showed that anti-GBM disease presents with severe evolutionary stages and pronounced tubulointerstitial involvement, requiring prompt treatment in an attempt to improve renal and overall survival.

Keywords: Glomerulonephritis; Kidney Diseases; Anti-Glomerular Basement Membrane Disease.

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ESTUDO ORIGINAL

Knowledge and application of active learning methodologies by healthcare faculty members at a private college: instrument validation and pre-test

Conhecimento e aplicação de metodologias ativas de aprendizagem por docentes da área da saúde de uma faculdade privada: validação de instrumento e pré-teste

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ABSTRACT

Introduction: The National Curriculum Guidelines for undergraduate health courses advocate active methodologies as educational resources for the development of critical-reflexive professionals. However, the use of these learning strategies requires the development of competencies and skills by the teaching staff. **Objective:** To describe the validation and pre-test process of an instrument aimed at investigating the knowledge and application of active learning methodologies by faculty members in the healthcare field at a private college in Belo Horizonte. **Methods:** A cross-sectional, descriptive, and quali-quantitative study was conducted. An online semi-structured questionnaire was developed, containing 19 questions distributed across the dimensions: teaching profile, teaching experience, experience with active methodologies, and perception regarding the use of these methodologies. Validation took place in February 2024. Eight faculty members who did not participate in the instrument development process were invited to evaluate the understanding of the statements, the relevance between proposed content and research objectives, and to provide suggestions for modifications. A pre-test was conducted in March 2024. The instrument link was sent via email and WhatsApp until a response rate of 10% of the calculated sample (n=243) was obtained, totaling 24 participating faculty members. **Results:** During validation, only one question received a suggestion for including a closed alternative. The pre-test participation profile was 79.2% female and 20.8% male, with ages between 31 and 40 years (62.5%). The predominant areas of formation were physiotherapy (29.2%), medicine (20.8%), and nursing (20.8%), with maximum qualifications of master's degree (50%) and doctorate (29.2%), and teaching experience ranging from 6 to 10 years (41.7%). **Conclusion:** Validation and pre-testing of instruments are essential for achieving research objectives and for predicting participant profiles. Faculty members' adherence to the validation and pre-test process demonstrated a commitment to continuous improvement of pedagogical practice and an interest in learning about and adopting innovative teaching methodologies.

Descriptors: Health Human Resource Training; Surveys and Questionnaires; Universities; Active Learning; Faculty.

Financial support: Faculdade de Ciências Médicas de Minas Gerais

ORIGINAL RESEARCH

Association between anti-mullerian hormone dosage and embryo quality in patients undergoing in vitro fertilization

Associação entre a dosagem de hormônio antimülleriano e a qualidade embrionária em pacientes submetidas a fertilização in vitro

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ABSTRACT

Introduction: To achieve success with fertility treatment, it is necessary to consider two main factors: ovarian reserve and oocyte quality. Oocyte quality is difficult to assess due to limited tools. Therefore, to evaluate it, we can resort to assessing the quality of embryos formed in the laboratory after in vitro fertilization (IVF) using morphokinetic parameters or rates of blastocyst euploidy. Anti-Mullerian hormone (AMH) has been significantly associated with natural fertility. However, given the controversies in the literature, it is apparent that more studies are still needed associating AMH with embryonic quality to better guide patients regarding the prognosis of IVF treatment. **Objective:** Evaluate the relationship between HAM dosage and egg quality, reflected in embryonic quality, in patients undergoing in vitro fertilization cycles. **Methods:** This research is a retrospective cohort study using data from medical records of patients undergoing in vitro fertilization from June/2019 to March/2023 in an assisted reproduction clinic. Data was collected using a standardized table created by the researchers. The patients were divided into two groups based on their HAM dosage. The cutoff point for HAM dosage was 1.1 ng/ml. The embryo quality of the two groups will be compared based on the percentage of euploid embryos, calculated through gamete biopsy with Pre-Implantation Genetic Testing (PGTA); embryo morphokinetic score, calculated using Time Lapse; and Gardner classification of the blastocyst. **Results:** The HAM dosage is expected to have a statistically significant relationship with the quality of eggs in patients undergoing IVF. **Conclusion:** Successful fertility treatment relies on ovarian reserve and oocyte quality. Evaluating embryos formed in vitro offers insight, though assessing oocyte quality is challenging. Anti-Mullerian hormone (AMH) relates to natural fertility, but more research is needed on its association with embryonic quality.

Keywords: Anti-Mullerian Hormone. Assisted Reproductive Techniques. Ovulation Induction.

Financial support: This research was supported by Faculdade Ciências Médicas de Minas Gerais, through the PROBIC scholarship.

ORIGINAL STUDY

Nephropathies and kidney transplantation: a study on patients from the cardiovascular care lines of a university outpatient clinic in Minas Gerais

Nefropatias e transplante renal: um estudo em pacientes da Linhas de Cuidado Cardiovascular de um ambulatório universitário em Minas Gerais

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ABSTRACT

Introduction: The cardiovascular care line represents continuous care that aims to meet the demands of patients with diseases of the cardiovascular system in a comprehensive and multidisciplinary way. It focuses on several comorbidities, for example, hypertension, diabetes mellitus and nephropathies. The present study analyzed diseases that affect the nephrological system, which, if left untreated, can progress and cause chronic kidney disease (CKD), an important cardiovascular risk factor. **Objective:** To analyze cardiological and nephrological data, relating them to patients diagnosed with comorbidities, using medication, smokers and/or alcoholics, aged 3 to 91 years. **Methods:** Cross-sectional epidemiological study was carried out through the analysis of medical records obtained from a university outpatient clinic in the state of Minas Gerais of patients treated from January 2021 to June 2023. The research analyzed epidemiological data (gender, date of birth/age and place of birth), clinical data (ICD, medications in use, previous surgeries and hospitalizations, smoking and/or alcohol consumption), cardiological data (vital data from the physical examination on the day of care) and nephrological data (laboratory data on kidney function). Patients from other lines of care were excluded, restricting the sample to cardiovascular patients. The study was approved by the CEP, upon evaluation of the comprehensive cardiovascular care line of the outpatient clinic in question. **Results:** Data from 170 patients were analyzed, with a sample consisting of 75 male and 95 female individuals, and the average age was 62.1 years. It was also observed that 50 patients are smokers and 42 are alcoholics, highlighting a serious cardiovascular and consequently nephrological risk factor. Another variable evaluated was kidney transplantation, with 2 patients undergoing this surgery. **Conclusion:** The article is expected to be completed in July 2024, but it is notable how risk factors and cardiovascular diseases directly influence kidney health.

Descriptors: Nephropathies; Kidney transplant; Cardiovascular diseases.

Financial support: Scientific Initiation Scholarship Program (PROBIC) linked to the Master's Degree Faculdade de Medicina Ciências Médicas de Minas Gerais in 2023.

ORIGINAL STUDY

Challenges faced by healthcare professionals in the care for deaf people

Desafios enfrentados por profissionais da saúde para o atendimento de pessoas surdas

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ABSTRACT

Introduction: Deafness is characterized by a decreased ability to perceive sounds and the Brazilian Sign Language (Libras) is legally recognized as a form of communication for deaf individuals. Furthermore, it is established that public healthcare for deaf people must be conducted or mediated by professionals trained in the use of Libras. However, the lack of preparation of healthcare professionals to communicate in ways that go beyond orality is a reality in the Brazilian healthcare system. **Purpose:** To identify the challenges faced by healthcare professionals when attending to deaf people. **Methods:** The study was conducted as a quantitative-qualitative research, it targeted healthcare professionals that teach in a medical course in Belo Horizonte-MG. The quantitative portion is an observational study with a cross-sectional method, carried out using a questionnaire constructed by the researchers, based on the “Attitudes to Deafness Scale” instrument. The qualitative part of the research is exploratory-descriptive in nature, consisting of semi-structured interviews. **Results:** 88% of the participants declared that they did not feel prepared to care for deaf people. 78% of the teachers admitted that they did not have any knowledge of Libras, and 91% of respondents had never received any training to attend to deaf people. During the interviews, the professionals reported facing significant communication challenges, making it necessary to use alternative forms of communication, such as writing. Participants also highlighted that difficulties are intensified by the lack of protocols in healthcare services. Finally, they emphasized the importance of creating strategies to avoid the reproduction of prejudices and misinformation, especially taking into account their role as educators. **Conclusion:** The results reveal an alarming deficit in the training of healthcare professionals to properly care for deaf people. This scenario is worsened by the reduced knowledge of Libras and the absence of protocols in healthcare services.

Keywords: Public health; barriers to access of health services; deafness.

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL ARTICLE

Demographic profile and cardiovascular-related hospitalization among patients with arterial hypertension

Perfil demográfico e hospitalizações relacionadas a eventos cardiovasculares de pacientes portadores de hipertensão arterial sistêmica

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ABSTRACT

Introduction: Arterial hypertension (AH) significantly increases the risk of developing cardiovascular diseases, which are the leading cause of death and disability globally. AH affects 32.3% of the Brazilian population, posing challenges in primary care regarding diagnosis, treatment adherence, and control. In this regard, the understanding of the population's specific characteristics plays a crucial role in this effective management, emphasizing frequent monitoring, therapy, and individualized care for better outcomes. **Objectives:** Evaluate the demographic profile and cardiovascular-related hospitalizations among patients treated in an outpatient clinic and analyze the impact of ambulatory cardiac care pathways on managing hypertensive patients. **Method:** A retrospective study from the medical records of 98 AH patients from August 2022 to October 2023 in a cardiology outpatient clinic was conducted. Data analysis included demographics, hypertension stage, complications, cardiovascular-related hospitalizations and medication classes. **Results:** The study included 98 patients, data were retrieved from 72 (26 records had missing information). The patients were mostly male (57%) with a mean age of 69 years. Stage 1 hypertension was most common (68%), followed by stage 2 (16.6%) and stage 3 (15.2%). Diuretics were the most prescribed drug class (76%), followed by angiotensin receptor blockers (52%) and beta-blockers (47%). About 57% of patients experienced cardiovascular complications requiring hospitalization. The correlation between medication count and hypertension stage showed higher medication use with more severe hypertension stages. However, the study noted a non-normal distribution in patient numbers across stages. **Conclusion:** The study emphasizes the importance of applying obtained data to primary care, providing insights into demographic profiles, AH stages, hospitalizations, and treatment diversity. This is crucial for developing personalized, region-specific strategies to enhance outpatient care, prevent cardiovascular complications, and optimize AH control. These findings may inform public health policies to better address the needs of affected populations.

Keywords: Arterial hypertension; Outpatient care; Cardiovascular diseases

ORIGINAL STUDY

100 Patients treated with phenol-croton peel: short and long term outcomes

100 pacientes tratados com o peeling de fenol-cróton: resultados em curto e longo prazo

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ABSTRACT

Introduction: Phenol-croton peels have been widely recommended for skin rejuvenation. The surgeon Gregory Hetter demonstrated that the main component is croton oil and varying its concentration affects the depth of the peeling. This marked the beginning of a new era of phenol-croton peels, allowing customization of formulas based on the degree of aging and the specific area of the face being treated. Consequently, there has been an increase in indications for this type of treatment. Otherwise, there is a lack of data regarding percentages of short and long term complications, as well as the patient's satisfaction index. **Objective:** We aimed to evaluate 100 patients submitted to phenol-croton peel in order to ascertain short and long-term complications types and percentages following the procedure, as well as patient's satisfaction. **Methods:** This is a retrospective cohort study, approved by the Ethical Committee. The study involved 100 female patients with phototypes I-III, who received phenol-croton peels between 2015-2022. They were organized into groups according to the area where the peeling was performed (partial or full face) and years of evolution after the procedure. **Results:** The study comprised female patients aged 31-76 years. 92% of the patients gave a rating score above 4 (on a scale of 1 to 5), and 70% of patients rated the peeling with maximum satisfaction score. Short-term complications persisted in 17% of patients up to 3 months, while 12% experienced complications lasting over 3 months. Notable short and long-term complications included hypochromia and hyperchromia. **Conclusion:** The vast majority of patients were very satisfied with the procedure. Phenol croton peel, despite prolonged recovery time, leads to a high degree of satisfaction when well indicated among patients with phototype I-III.

Descriptors: Phenol; Croton Oil; Chemical Face Peeling; Skin Resurfacing; Photoageing.

Financial support: Medical Sciences Faculty of Minas Gerais (FCMMG): Medical Students, PROBIC–Science Initiative Student Program funded medical study with PROBIC grants for 1 year, with the supervision of Professor Gisele Viana de Oliveira.

ORIGINAL STUDY

Clinical and lifestyle characterization of people with Crohn's disease seen by the gastrointestinal care line of an outpatient clinic in Belo Horizonte

Caracterização clínica e de estilo de vida de pessoas com Doença de Crohn atendidas pela linha de cuidados gastrointestinais de um ambulatório em Belo Horizonte

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ABSTRACT

Introduction: Crohn's disease (CD) is a chronic pathology characterized by intestinal inflammation that can affect the entire gastrointestinal tract (Feuerstein et al, 2017). In recent years, the incidence and prevalence of CD have increased in Western countries, while knowledge about the pathophysiology of the disease remains scarce. (Yamamoto-Furusho et al, 2017). **Purpose:** To describe the clinical and lifestyle profile of people living with CD in order to improve their clinical management and quality of life. **Methods:** This is a case series that includes 39 patients diagnosed with Crohn's Disease, who were treated at an outpatient clinic in Minas Gerais. **Results:** 55.3% were female and the average age was 47.6 years. Most of the patients evaluated denied smoking (n=21) and drinking (n=23). 55.2% claimed to be sedentary, the average weight was 67.4 kg and the average height was 159.6 cm. Half of the sample had no BMI data. The average heart rate was 68.9bpm, 39.4% of patients were classified as normotensive, 44.7% used less than 3 classes of medication. Mean HDL was 53.5, mean LDL 112.5, mean triglycerides 129.8, mean TGO 25.7, mean TGP 24.5, mean fasting glucose 95.4 and mean glycated hemoglobin 6.3. **Conclusion:** The patients analyzed have a clinical profile that aligns with studies published in the national literature. Moreover, there is a need for further national studies.

Keywords: Crohn's Disease; Epidemiology; Lifestyle.

Financial support: This study received financial support from a scientific initiation scholarship offered to the main author by the Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Current perspective of robotic myomectomy compared with laparoscopic and laparotomy myomectomy: a original study

Perspectiva atual da miomectomia robótica comparada com miomectomia laparoscópica ou laparotômica: um estudo original

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ABSTRACT

Introduction: Uterine fibroids are benign tumors most common in women in the reproductive phase. Myomectomy is indicated for women who wish to preserve the uterus and can be performed using the following techniques: Laparotomic Myomectomy (LTM), Conventional Laparoscopic Myomectomy (MLC), and Robotic-Assisted Laparoscopic Myomectomy (MR). Despite the high cost, MR has gained prominence within minimally invasive techniques due to the three-dimensional view of the surgical field, greater flexibility/precision of operative movements, and a lower learning curve. **Objective(s):** Compare MR, MLT, and MLC surgical techniques. **Methods:** A retrospective cohort was carried out by evaluating 13 medical records of patients from a private hospital in Belo Horizonte who underwent MLT, MLC, and MR between January and May 2023. The criteria analyzed included epidemiology, clinical picture, and surgical description. Patients who had other uterine diseases treated in the same procedure were excluded. **Results:** The data are partial results of research that has not yet been completed. One patient underwent MR, two MLCS, and 10 MLT from the medical records analyzed. The average age of the patients was 37.1 years, and the main reason for surgery was abnormal uterine bleeding, followed by infertility. Only one patient was G1P1A0; the others were all G0P0A0. Six patients underwent previous treatments, three of which were myomectomies, two hysteroscopies, and one in vitro fertilization. The average number of fibroids was 12.3, and most fibroids were submucosal in location. Regarding surgical time, MR had a longer duration than MLT and MLC. There were no complications in any surgery; there was no need for postoperative opioids or blood transfusions. **Conclusion:** As the research is still incomplete, the results do not yet allow for a conclusion, but there is expected to be a discussion about the advantages and disadvantages of MR when compared to MLC and MLT.

Descriptors: Leiomyoma; Uterine Myomectomy; Robotics.

Financial support: Esse projeto de pesquisa recebeu apoio do Programa de Iniciação Científica do Hospital Felício Rocho e Faculdade de Ciências Médicas de Minas Gerais (PIC- HFR/FCMMG) por meio de concessão de bolsa de iniciação científica.

Maternal mortality in Brazil in the last 10 years (2013-2023): a review of the literature

A mortalidade materna no brasil nos últimos 10 anos (2013-2023): uma revisão da literatura

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ABSTRACT

Introduction: Maternal mortality is a powerful health indicator that reflects socioeconomic and life quality determinants. The approximate number of 1960 maternal deaths in 2020 in Brazil reflects inequalities in access to healthcare and is a major challenge in the country. In this context, it is important to highlight Brazil as one of the participants in the 2030 Agenda, which targets 3.1 of the Sustainable Development Goals (SDGs) to reduce the maternal mortality ratio (MMR). **Objective:** Review the literature on MMR, its fluctuations and variables over the last 10 years in Brazil. **Method:** This is a literature review in the Scielo and PubMed databases and data from Epidemiological Bulletins provided by the Ministry of Health. Inclusion criteria: articles in English and Portuguese, published in the last 10 years, using the descriptors maternal mortality, mortality rate and pregnancy. Duplicates and studies that did not meet the criteria were excluded. **Preliminary result:** The main causes of maternal mortality were hypertension, hemorrhage, puerperal infection, abortion, AIDS, infectious and parasitic diseases and diseases of the circulatory and respiratory system. The most recent Epidemiological Bulletin (2022) showed that MMR has increased in practically all units of the Federation in recent years. The regions with the highest MMR were the North, Northeast and Central-West. There was exponential growth in maternal deaths from 2019 due to infectious and parasitic diseases, and it is important to highlight COVID-19 when analyzing the data. The majority of women who died from maternal causes were single, mixed race, with low education and under 35 years old. **Conclusion:** Despite the actions to comply with the 2030 Agenda, Brazil appears to have difficulty reducing the MMR. In this sense, it is important to review actions that guarantee equity in support for pregnant women, both in prenatal care and in the treatment of pre-existing comorbidities.

Descriptors: Maternal mortality, Mortality rate, Pregnancy.

ORIGINAL STUDY

Application of the ishihara test for color blindness screening in students from a private higher education institution in Belo Horizonte: a cross-sectional observational study

Aplicação do teste de ishihara para triagem de daltonismo em alunos de uma instituição privada de ensino superior de Belo Horizonte: um estudo observacional transversal

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ABSTRACT

Introduction: Color vision deficiencies (CVD) are defined by the absence or dysfunction of at least one type of retinal cone, commonly manifesting as a deficit in perceiving green or red colors. Students with color blindness face difficulties in differentiating colors in mandatory disciplines such as Cytology, Histology, and Pathology in courses like Medicine, Nursing, Dentistry, and Physiotherapy, and this differentiation is particularly important during practical classes. Therefore, it is relevant for the higher education institution to identify students with a positive screening for color blindness to provide equitable teaching strategies and guide them towards ophthalmologic assessment. **Objective:** To demonstrate the number of students with altered color vision, as determined by the Ishihara test, in a private higher education institution in Belo Horizonte. **Methodology:** This is a cross-sectional observational study with a descriptive nature, approved by the Research Ethics Committee, involving the administration of the Ishihara Color Test to students in the Medicine, Nursing, Dentistry, and Physiotherapy courses of the private higher education institution, using a Google Forms survey conducted by members of the Human Genetics Academic League (LAGEN). **Results:** According to the survey responses, 402 students participated in the study, of which 341 (85%) were from the Medicine course, 38 (9.5%) from Nursing, 18 (4.5%) from Physiotherapy, and 5 (1.2%) from Dentistry. The results indicated altered color vision in 19 (4.7%) students, with 16 from Medicine, 2 from Nursing, and 1 from Physiotherapy, while 383 (95%) obtained results consistent with normal vision. At the end of the research, brochures on color blindness were distributed to the students. **Conclusion:** There is a significant proportion of students with a positive screening for color blindness who require support within the private higher education institution in Belo Horizonte.

Keywords: Color Blindness; Genetics; Color Vision Defects; Color Vision Defect.

ORIGINAL ARTICLE

Benefits and limitations of chat gpt in basic care: influence on the diagnosis and treatment of neuromyelitis optica

Benefícios e limitações do Chat GPT em cuidados básicos de saúde: Influência no diagnóstico e tratamento da neuromielite óptica

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ABSTRACT

Introduction: Artificial intelligence (AI) is a source of information in development and it has also been used in medical practice. The Chat Generative Pre-Trained Transformer (ChatGPT), is an open access AI that interacts with users, and is observed that it can be a tool in recognition of some diseases, which facilitates early diagnosis. This program has shown to be promising in the dissemination of knowledge, since it presents, in most cases, correct answers and in accessible language to the lay public. **Objectives:** Analyze the veracity of the information about the Neuromyelitis Optica Spectrum Disorder (NMOSD), rare autoimmune astrocytopathy, provided by the software and compare the responses with the current medical literature. **Methods:** Several questions were asked in English and Portuguese about NMOSD on June 19, 2023, to explore how this programme would answered what was proposed about the disease. Then a comparison was made with responses from the most updated literature. **Results:** The questions proposed to Chat GPT were regarding the pathophysiology, symptomatology, and diagnosis of the disease. The answers provided by it demonstrated that the information is coherent and follows a logical sequence. It already draws attention that the concept of Neuromyelitis Optica (NMO) has expanded to include a broader spectrum of disorders called neuromyelitis optica spectrum disorder (NMOSD). When Chat is asked using only NMO it still uses old criteria not taking into account AQP4IgG. **Conclusion:** This artificial intelligence has shown responsibility in their responses, with regard to diseases, clarifying that, as an artificial intelligence is not capable of providing medical diagnoses, it therefore recommends consultation with a health professional. Regarding the treatment and prevention of NMO, the program does not specify doses or duration of the proposed drugs. Chat GPT will be able to assist in the basic assistance of NMO, helping in the diagnosis and treatment.

Keywords: Neuromyelitis Optica, Artificial Intelligence, Basic Health Services

Financial Support: This research received financial support by Faculdade de Ciências Médicas de Minas Gerais, under the programme of PROBIC/FCMMG

ORIGINAL STUDY

Impact of menstrual poverty on quality of life: translation and cross-cultural adaptation of instruments for pilot study with students from Belo Horizonte's public school system

Impacto da pobreza menstrual na qualidade de vida: tradução e adaptação transcultural de instrumentos para estudo piloto com estudantes da rede pública de Belo Horizonte

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ABSTRACT

Introduction: Menstrual poverty is characterized by a lack of access to hygiene products, infrastructure, and information about menstrual health, which can affect the teaching-learning process and other dimensions that impact students' quality of life. In Belo Horizonte, Law 11.407/22 guarantees the distribution of sanitary pads in public schools. **Purpose:** To present the process of translation and cross-cultural adaptation of instruments used in a pilot study investigating the impact of menstrual poverty on the quality of life of students in the public school system of Belo Horizonte. **Methods:** Two foreign instruments were used: the Menstrual Bleeding Questionnaire (MBQ), which assesses the quantitative aspect of blood loss and quality of life, and the Pictorial Blood Assessment Chart (PBAC), a pictorial graph for assessing menstrual blood loss. The MBQ has a translated and validated version in Brazil, containing 20 questions from the domains of quantity, pain, irregularity, and quality of life, which were evaluated according to the research objectives of this study. For the PBAC, which includes a table for indicating flow days, the number of sanitary pads used, and indications of leakage, a back-translation technique of the original instrument was performed, aiming for cultural, semantic, technical, content, criterion, and conceptual equivalence. The two versions (original and translated) were compared with the assistance of a bilingual translator. **Results:** It was decided to use the eight questions from the MBQ that aim to investigate the impact on quality of life. Regarding the PBAC, the column on internal sanitary pads was removed, and an item about monthly spending on sanitary pads and whether the pad was provided at school was added to the instrument, aiming to measure monthly economic impact and compliance with Law 11.407/22. **Conclusion:** The process of translating and adapting foreign instruments is essential for adopting methodologically appropriate procedures and achieving research objectives, requiring subsequent validation.

Keywords: Menstruation; Adolescent; Quality of life; Surveys and Questionnaires;

Financial support: Faculdade de Ciências Médicas de Minas Gerais

ORIGINAL RESEARCH STUDY

Epidemiological profile of a population on cardiovascular care

Perfil epidemiológico da população atendida na linha de cuidado cardiovascular

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ABSTRACT

Introduction: Cardiovascular diseases (CVD) have been the main cause of mortality since the 1960s, being responsible for a substantial percentage of hospitalizations in Brazil. Structuring health systems into networks with different technological densities was a promising path towards achieving comprehensiveness as a fundamental principle of Sistema Único de Saúde (SUS), a public health system, which is the exclusive means of health care for 80% of the Brazilian population. **Purpose:** Evaluate the epidemiology and care demand of patients on cardiovascular care at a public outpatient clinic. **Methods:** A cross-sectional study was carried out, in which variables were collected by consulting medical records of patients admitted into cardiovascular care at a public outpatient clinic from September 12, 2022 to September 11, 2023. **Results:** The data from a sample of 6,484 patients were analyzed, with 3,561 (55%) being female and 2,923 (45%) male. The main observed International Classification of Diseases (ICD) were I10 (Primary Hypertension) with 217 (32%) cases, I50 (Heart Failure) with 42 (6.2%) cases, and E10 (Insulin-dependent Diabetes Mellitus) with 27 (4.0%) cases. For ICD I10, 130 (35%) cases were recorded in female patients and 87 (28%) in male patients. Regarding ICD I50, 26 (8.5%) cases were attributed to male patients and 16 (4.3%) cases to female patients. In terms of patients region of origin, 1,033 (16%) were from Venda Nova. It was observed that the age range of 64 to 73 years had the highest frequency, totaling 1,970 (31%) cases. **Conclusion:** The cardiovascular care program rationalizes and optimizes the therapeutic course of users, expressing the assistance flows that must be guaranteed to them. Furthermore, with health public system structuring it becomes possible to reduce morbidity and mortality due to CVD, by defining actions for each level of risk.

Keywords: Comprehensive health care; Cardiovascular system; Chronic disease.

Financial support: This research project received support from Fundação Educacional Lucas Machado (FELUMA) of Faculdade de Ciências Médicas de Minas Gerais (FCMMG) through the granting of scientific initiation scholarship from the Scientific Initiation Scholarship Program (PROBIC-FCMMG).

ORIGINAL STUDY

Snake bites in the state of Minas Gerais between 2017 and 2022: an epidemiological analysis.

Acidentes ofídicos no estado de Minas Gerais entre 2017 e 2022: uma análise epidemiológica.

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ABSTRACT

Introduction: Snake Bites (SB) are life-threatening injuries that may need quick intensive care. Minas Gerais (MG) has one of the highest incidences of SB in Brazil. The main problems related to SB are underreporting and treatment delay. **Objective:** To analyze epidemiological data from 2017 to 2022 about SB in MG. **Methods:** Data was taken from the “Sistema de Informação de Agravos de Notificação” linked to “DATASUS” about SB in MG. Chi-Square and Mann-Whitney tests were used to conduct the statistical analysis. **Results:** There were 19,395 cases of SB in MG between 2017 and 2022, with an average of 3,333 accidents per year (standard deviation (SD) = 246.22), with an incidence of 94 cases per 100,000 population, and a lethality rate of 0.33%. Men (74.89%) and Brown (53.18%) were the most attacked sex and race, respectively. The total number of deaths were 64, with an average of 9.5 per year (SD = 4.50). There was a correlation between the genus and the outcome of the accident ($p = 0.002$), with *Bothrops* being the most frequent. Additionally, there was also a correlation between time of the year and number of accidents, with greater incidence between October and March ($p = 0.045$). The time between snakebite and treatment was correlated with the outcome of the case ($p < 0.001$), and the lethality rate increased with greater time to treatment. **Conclusion:** SB in MG shows some stability during the analyzed time frame, with increasing numbers until 2020 and a drop afterwards, possibly due to underreporting during the pandemic. There was no clear trend related to the deaths reported, but time between SB and treatment showed a positive correlation on the outcome of the case.

Descriptors: Snake Bites; Tropical Medicine; Epidemiology, Descriptive.

Financial support: Programa de Bolsas de Iniciação Científica da Faculdade de Ciências Médicas de Minas Gerais (PROBIC/FCMMG).

ORIGINAL STUDY SUMMARY

The relationship between medical student's personality traits and the perception and coping of stress

A relação entre os traços de personalidade dos estudantes de medicina e a percepção e enfrentamento do estresse

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ABSTRACT

Introduction: Medicine is an extensive course with a lot of pressure, generating stress on students. Coping strategies used to deal with stress can be more or less healthy and be influenced by individuals' personality traits. In this sense, personality can be divided into five types, each of which can influence in different ways the coping strategies used to face stress. **Objective:** To describe the relationship between personality types, stress and coping strategies among students at a private medical school. **Methods:** A sample of 22 students filled a questionnaire and specific scales that assessed the perception of stress, coping strategies, levels of stress, anxiety and depression, sleep quality, well-being, mindfulness and personality traits. The research was approved by the ethics committee. **Results:** The sample predominantly included the fifth, sixth and tenth periods. It was found that among those with agreeableness traits there is a negative correlation with stress, avoidant coping and anxiety, while neuroticism has a positive correlation. Furthermore, in relation to sleep, agreeableness is more positively related than neuroticism among students and those who have a more developed state of mindfulness also have better sleep. Sleep was worse among those who use avoidant and emotional coping, together with those who have higher levels of anxiety, stress and negative affectivity in their subjective well-being. Furthermore, females showed more use of confrontational, but also emotional and avoidant, coping than males, in addition to having higher levels of stress. **Conclusion:** The findings support existing literature, indicating that people with high neuroticism experience more stress, lower well-being, and poor stress management. Conversely, those high in agreeableness exhibit an opposite trend. Stress exacerbates sleep issues, especially in females, who also display less effective coping mechanisms. Moreover, trait mindfulness enhances well-being, offering a potential strategy for intervention.

Keywords: Life stress; Personality; Coping Behavior; Mindfulness.

ORIGINAL STUDY SUMMARY

Mobility index and sarcopenia in patients undergoing total knee and hip arthroplasty

Índice de mobilidade e sarcopenia em pacientes submetidos à artroplastia total de joelho e quadril

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ABSTRACT

Introduction: Total knee arthroplasty (TKA) and total hip arthroplasty (THA) are procedures for treating degenerative joint diseases. Mobility and the presence of sarcopenia are crucial factors in determining postoperative outcomes and patient quality of life. This study investigated the relationship between mobility, sarcopenia, and the effectiveness of preoperative educational interventions in patients undergoing TKA and THA. **Methodology:** Forty-four patients were evaluated at a university hospital, with 27 undergoing TKA and 17 undergoing THA. Mobility was assessed using the Parker Mobility Score, while the presence of sarcopenia was determined by the SARC-F Sarcopenia Score. Additionally, patients underwent preoperative educational interventions, including videos and pamphlets. **Results:** In this pilot study, 44 patients were evaluated, with 27 undergoing total knee arthroplasty (TKA) and 17 undergoing total hip arthroplasty (THA). Of these patients, 26 were female and 18 were male. At the time of surgical intervention, 11 were between 50 and 59 years old; 18 were between 60 and 69; 13 were between 70 and 79 years old, and only 2 were over 80 years old. The average age of patients undergoing these procedures was 65.3 years. **Purpose:** The purpose of this study was to investigate the relationship between mobility, sarcopenia, and the effectiveness of preoperative educational interventions in patients undergoing TKA and THA. **Conclusion:** This study highlights the importance of assessing mobility and the presence of sarcopenia in patients undergoing TKA and THA.

Keywords: Hip arthroplasty, Knee arthroplasty, Sarcopenia

HEALTH EDUCATION

Exploring the potential of artificial intelligence in imaging diagnostics: an integrative review

Explorando o potencial da inteligência artificial em diagnósticos por imagem: uma revisão integrativa

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ABSTRACT

Introduction: Artificial intelligence (AI), including natural language processing (NLP), has developed significantly, enabling the understanding and integration of large amounts of data, such as text and images. This makes it easier to identify complex patterns for use in multiple tasks. In healthcare, AI has shown advances in the interpretation of image exams, often surpassing experts. Therefore, conducting an integrative review is essential to highlight the most important perspectives and discoveries of AI in healthcare. **Purpose:** To analyze the accuracy of software developed to use AI/deep learning in detecting pathologies diagnosed through imaging exams. **Methods:** An integrative review was carried out in the PubMed database, with the selection of three articles published between 2019 and 2024. These articles, focused on randomized clinical trials, are associated with the keywords 'Artificial Intelligence', 'Medicine' and 'deep learning'. The research provided a comprehensive and up-to-date overview, revealing different perspectives on the application of AI in medicine and healthcare. **Results:** In the three articles examined, deep learning algorithms demonstrated equal or greater effectiveness in diagnosing aneurysms and skin cancer through imaging tests. However, the sensitivity of algorithms for detecting breast cancer remains relatively low, indicating the need for further improvements. Despite the promising results, it is crucial to utilize software based on deep learning/AI as auxiliary tools for specialists, ensuring greater accuracy in image diagnosis. **Conclusion:** Developing clinical mastery through artificial intelligence (AI) is a crucial challenge in healthcare, as this integration requires meticulous analysis of ethical considerations. Although, it is critical to carefully evaluate the reliability of these automated analyses, ensuring that the benefits outweigh the risks, to maintain patient-centered decision-making that is guided by clinical experience.

Keywords: Artificial Intelligence (AI); Digital mammography; Interpretation of exams; Deep learning.

SUMMARY OF ORIGINAL STUDY

Evaluation of the clinical and epidemiological profile of patients with heart failure treated at a university outpatient clinic

Avaliação do perfil clínico e epidemiológico dos pacientes com insuficiência cardíaca atendidos em um ambulatório universitário

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ABSTRACT

Introduction: Heart failure (HF) involves complex heart changes that affect ventricular function and lead to increased mechanical stress. Alongside coronary artery disease (CAD), hypertension (HTN), dyslipidemia, and type II diabetes (DM) are major comorbidities related to increased HF risk. **Objective:** To evaluate the clinical and epidemiological profile of patients with HF monitored in a university outpatient clinic. **Methods:** This retrospective cross-sectional study analyzed medical records of HF patients treated at an outpatient clinic of a private university from January 2021 to July 2023. The sample was selected for convenience, and statistical analysis was conducted through data characterization, not compared to a control group. **Results:** This study enrolled 103 participants, mean age of 67 years old, with similar gender distribution. The most prevalent clinical features found in HF patients were HTN (84%), DM (33%), and CAD (35%). Congestive heart failure signs were not prevalent such as lower limb edema (14%) and valvular heart disease (21%). Third heart sounds and lung crackles were rare. Chagas etiology accounted for 5.9% of cases, while dilated and other causes represented 58%. Hypertensive patients represented 16%, and ischemic etiology accounted for 20% of all cases. **Conclusion:** Sex-based differences were not observed, contradicting literature data that indicate greater susceptibility among women. Unlike recent findings that indicate CAD as the primary associated comorbidity in HF followed by HTN, our study showed opposite findings. Additionally, while other studies report the incidence of HF 2-4 times higher for patients with DM and 2.6 higher for those with HTN, our study showed a greater number of HTN cases than DM. Our findings suggest a complex interplay between CAD, HTN, and DM in the context of HF.

Keywords: Heart Failure; Clinical Epidemiology; Comorbidity.

Financial support: This work was supported by The Scientific Initiation Scholarship Program (PROBIC) of the Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Analysis of the ability and preparation of medical students in communicating bad news

Análise das habilidades e do preparo dos estudantes de medicina para comunicar más notícias.

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ABSTRACT

Introduction: Proper communication of bad news is crucial for establishing an effective relationship between doctors and patients. However, this complex communication involves aspects such as spirituality, empathy, therapeutic or palliative options, and patient privacy. Therefore, acquiring such skill requires training and prior knowledge, ideally integrated into the medical curriculum. **Objective:** The aim of the study was to evaluate the knowledge and communication skills of medical students in delivering bad news to patients and their families. **Method:** This is a cross-sectional and observational study conducted through a questionnaire developed by the researchers, consisting of 32 questions addressing topics related to protocols for communicating bad news and the theoretical and practical knowledge necessary for such communication. Participants signed an Informed Consent Form (ICF), and the form filling was voluntary. The target audience consisted of medical students from a private college in Minas Gerais, enrolled in the 8th to 12th periods. **Results:** Three hundred students participated, with over 70% of participants reporting having received didactic instruction on communicating bad news, mainly during the Humanization and Integrality discipline (54.7%), and during medical consultation follow-ups (70.3%). The most recognized questionnaire was SPIKES (93%). Among students who received theoretical and/or practical instruction, only 32.8% claimed to feel confident in communicating bad news. An overwhelming majority of participants (95.7%) deemed it of utmost importance to be adequately prepared for this type of communication, with 92% expressing a keen interest in having a dedicated discipline on the subject during medical school. **Conclusion:** The results reveal a significant discrepancy between the number of students who received instruction on communicating bad news and those who feel confident in this skill. This data highlights the imperative to enhance the curriculum in order to effectively develop such skills during undergraduate studies.

Descriptors: Education, Medicine, Bad news

Financial support: Faculdade de Ciências Médicas de Minas Gerais – FELUMA

RESUMO DE ESTUDO ORIGINAL

Association between sleep disorders and depression among children and adolescents

Associação entre distúrbios do sono e depressão em crianças e adolescentes.

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ABSTRACT

Introduction: The incidence of sleep disorders among children and adolescents diagnosed with depression is on the rise. As electronic media exposure also increases, concerns regarding its impact on sleep quality and mental well-being are of scientific interest. **Objective:** To examine the correlation between electronic media usage, sleep disorders, and depression in children and adolescents with a confirmed diagnosis of depression. **Methods:** A cross-sectional observational design was employed involving 52 clinically diagnosed depressed pediatric outpatients. All participants and their legal guardians provided consent to complete a clinical and demographic questionnaire followed by screening for depressive symptoms through the Children's Depression Inventory (CDI) and sleep disorders with the Sleep Disturbance Scale for Children (SDSC). The study received ethical approval (CAAE: 69870323.1.0000.5134). Statistical analysis was performed using correlation and independent sample t-tests. **Results:** The sample was predominantly female (86.5%), with an average age of 15 ± 1.27 years. Participants reported an average of two episodes of depression, with a mean CDI score of 20.7 (IC95% 18.8-22.5). SDSC revealed a mean total score of 62.3 (IC95% 58.2-66.3). A significant correlation was found between SDSC and CDI scores ($r = 0.366$; IC95% 0.10-0.58; $p = 0.008$), suggesting that greater sleep disturbances are associated with increased depressive symptoms. Participants demonstrated high engagement with electronic devices, with 78.8% using devices for over 5 hours daily. However, we found no significant impact of electronic device usage on sleep disturbance scores. **Conclusion:** There is a strong association between depression and sleep disorders in children and adolescents. Contrary to common assumptions, electronic device usage did not significantly impact sleep quality. These findings highlight the importance of effective depression management as a potential means to improve sleep quality in the pediatric psychiatric population.

Keywords: Depression; Sleep quality; Electronic media; Childhood and adolescence.

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Validity and reliability of the modified sphygmomanometer test to measure grip muscle strength in individuals with multiple sclerosis: preliminary results.

Validade e confiabilidade do teste do esfigmomanômetro modificado para mensurar a força de preensão manual de indivíduos com esclerose múltipla: resultados preliminares.

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ABSTRACT

Introduction: Multiple sclerosis can cause muscle weakness, which affects functionality. The dynamometer is considered the reference criterion for measuring muscle strength. However it is not available in all clinical contexts. The Modified Sphygmomanometer Test (MST) is a low-cost alternative. However, no study has investigated its validity and reliability for measuring muscle strength in people with multiple sclerosis. **Purpose:** Investigate the reliability and validity of the MST to measure grip muscle strength in individuals with multiple sclerosis. **Methods:** The study was carried out in an outpatient clinic of a university hospital. Men and women diagnosed with multiple sclerosis, over 18 years of age, were included. Grip muscle strength was assessed using the MST, to investigate inter-rater and test-retest reliability, and to investigate the concurrent validity, a manual dynamometer was used. The test consists of three maximal contractions, with verbal stimuli. **Results:** Eight participants have been included so far, aged 45 ± 9 years and with a diagnosis duration of 8 ± 5 years. The assessment of muscular strength, measured by the dynamometer, presented an average of 23.75 ± 5.20 kg, while the assessment by the MST was 130.25 ± 29.69 mmHg. A statistically significant correlation was found regarding the MST validity ($r=0.75$; $p=0.03$), interrater ($r=0.94$; $p<0.001$) and test-retest reliability ($r=0.81$; $p=0.02$). **Conclusion:** Preliminary results showed that the MST demonstrated to be a tool with adequate validity, test-retest and interrater reliability for assessing grip strength in people with multiple sclerosis, corroborating previous studies that validated its application in other populations. Continuing this research, with an increase in the sample, is necessary to consolidate this conclusion.

Keywords: Multiple Sclerosis; Muscle Strength; Data Accuracy; Reproducibility of Results; Physiotherapy.

ORIGINAL STUDY

Factors associated with the risk of sarcopenia in hospitalized elderly people undergoing surgery for femoral fractures

Fatores associados ao risco de sarcopenia em idosos hospitalizados submetidos à cirurgia por fratura de fêmur

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ABSTRACT

Introduction: According to the European Working Group on Sarcopenia in Older People (EWGSP²), sarcopenia is a generalized and progressive musculoskeletal condition associated with aging. It is characterized by a reduction in muscle strength, quantity, and/or quality, and its severity is determined by a loss of functionality. Sarcopenia is also associated with an increased risk of falls, hospitalizations, and functional impairment. Falls among the elderly are common events and are often related to intrinsic factors associated with aging. Femoral fractures resulting from falls represent a significant public health issue, contributing to high morbidity and mortality rates, as well as imposing substantial costs on the healthcare system. **Objective:** To verify the factors associated with the risk of sarcopenia in hospitalized elderly people undergoing surgery for femoral fractures. **Methods:** These preliminary data are from an exploratory cross-sectional study conducted at a university hospital in the city of Belo Horizonte. The study included elderly individuals (n=30; aged ≥ 60 years) who were hospitalized after experiencing a femoral fracture. The risk of sarcopenia was assessed using the SARC-F Calf tool, while the Short Comprehensive Geriatric Assessment (AGA-10) evaluated the participants' clinical context, physical functioning, and social support prior to the fracture. **Preliminary results:** The descriptive analysis, stratified by age group, revealed signs of sarcopenia in all age groups, with the highest prevalence (47%) observed among individuals aged 76 to 80 years. Furthermore, the performance of the elderly participants in the AGA was 0.40, indicating an overall frailty status that may potentially increase the likelihood of sarcopenia. **Conclusion:** Elderly individuals who have experienced a femoral fracture may be at risk of sarcopenia prior to surgery. It is important to implement assessment and rehabilitation measures for sarcopenia both before and after surgery to ensure the success of the surgical procedure and preserve functionality.

Descriptors: Sarcopenia; Aging; Femoral fracture

Financial support: this study had financial support from the scientific initiation scholarship program—PIBIC/FAPEMIG

ORIGINAL STUDY

Correlation between electronic system monitoring, adequacy of prenatal care, and adverse pregnancy outcomes

Correlação entre monitorização por sistema eletrônico, adequação de assistência pré-natal e desfechos desfavoráveis na gravidez

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ABSTRACT

Introduction: Pregnancy is a crucial physiological process in women's lives. Prenatal care aims to prevent complications and ensure the health of both mother and baby. However, inadequate access, lack of knowledge about necessary care, and service coordination can lead to adverse outcomes. Prenatal planning, education, and empowering women play a crucial role in improving outcomes during this period. **Objective:** To analyze the correlation between the utilization of an electronic system for prenatal monitoring, the effectiveness of prenatal care, and the impact of these factors on the occurrence of unfavorable outcomes during the gestational period. **Methods:** The study will utilize data collected by a platform, developed for a private hospital in Belo Horizonte. Pregnant women will be evaluated according to an institutional protocol, with regular medical appointments according to gestational age. The platform will collect structured information during each prenatal consultation, recording clinical evolution and planned health commitments. All prenatal-related information and birth outcomes will be entered into the platform by healthcare professionals. Upon completion of the pregnant woman's care pathway, researchers will collect platform data for analysis and comparison with existing literature. **Results:** It is expected that this study will encompass 60 pregnant women and provide solid information on the effectiveness of prenatal care for pregnant women with gestational age ≤ 20 weeks using an electronic prenatal monitoring system. It is believed that this system will enhance prenatal care by expanding positive perinatal outcomes, evaluated by the Kessner score and parameters of the Program for Humanization of Prenatal and Birth (PHPN). **Conclusion:** Through this research, we hope to contribute to the improvement of prenatal care practices by exploring the influence of technology and adequate monitoring on the overall health of pregnant women and their babies, as well as expanding the existing knowledge base in this field.

Keywords: Prenatal Care; Women's Health; Digital Health.

Financial support: This study received Financial support from the Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG) and from Faculdade de Ciências Médicas de Minas Gerais (FCMMG)

ORIGINAL STUDY

Correlation between the 6-minute walk test with the 30-second and 1-minute sit-to-stand tests in individuals with parkinson's disease

Correlação entre o teste de caminhada de 6 minutos com os testes de sentar-levantar 30 segundos e 1 minuto em indivíduos com Doença de Parkinson

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ABSTRACT

Introduction: Parkinson's disease (PD) is a progressive neurodegenerative disease, characterized by tremors, muscle rigidity, imbalance and bradykinesia, which is considered the most disabling symptom of the disease. Bradykinesia negatively impacts the functional capacity of individuals with PD, with a consequent reduction in the distance covered as assessed by the six-minute walk test (6MWT). In addition the 30-second sit-to-stand test (30sSTS) and the 1-minute sit-to-stand test (1MSTS) are also recommended to assess functional capacity. Therefore, it is interesting to verify whether there is an association between the 6MWT, 30sSTS and 1MSTS. **Purpose:** To verify whether there is a correlation between the 6MWT with the 30sSTS and 1MSTS in individuals with PD. **Methods:** Cross-sectional study, carried out on patients with PD, over 50 years old and without other dysfunctions that could influence the tests. The 30sSTS, 1MSTS and 6MWT were applied, with 1-minute interval between each. Pearson's correlation coefficient was used, classifying the magnitude of association: 0.70-0.89 high; 0.90-1.00 very high. **Results:** Data were collected from 13 patients, ranging from 1 to 3 on the Hoehn and Yahr scale and time since diagnosis of 10.5±7.6 years; 61% of whom were men, with a mean age of 66.8±6.0 years. A direct, significant and high magnitude correlation was observed between all variables, with the following results: between the 30sSTS tests and the 6MWT ($r=0.83$; $p=0.000$); between 1MSTS and 6MWT ($r=0.80$; $p=0.001$); between the predicted percentage of the 30sSTS and 6MWT ($r=0.86$; $p=0.000$) and the 1MSTS and 6MWT ($r=0.77$; $p=0.002$). **Conclusion:** It is noteworthy that results are partial, requiring completion of the collection, however, through them it is possible to observe there is a positive correlation between the tests.

Keywords: Parkinson Disease; Cardiorespiratory Fitness; Evaluation Study.

Financial support: This project had financial support from the Scientific Initiation Scholarship Program (PROBIC) of the Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL ARTICLE

Evaluation of the main causes of deferral of blood in Belo Horizonte, Brazil: retrospective analysis

Avaliação das principais causas de inaptidão clínica dos doadores de sangue de Belo Horizonte: análise retrospectiva

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ABSTRACT

Introduction: Methodologies for diagnosing blood-transmitted diseases and adequate clinical screening in the selection of candidates for blood donation have made hemotherapy practice safer. The candidate must go through clinical screening that includes a socio-epidemiological interview in order to select the one who is healthy, so that the best possible blood therapy product is produced, minimizing undue disposal, in addition to assessing risks for the donor. **Purpose:** The present study aims to identify the main causes of inability of candidates to donate blood at the Vita Hemoterapia hemonucleus located in Belo Horizonte. **Methods:** It is a retrospective, descriptive and with a quantitative character cohort study. Made with an analysis of the data from January, 2019 to December, 2022, collected from an information system of the institution. **Results:** In the time selected by the study 88,027 blood donation candidates attended the hemonucleos. Of these, 18,891 individuals were defined as unfit after clinical screening, which makes up 21.4% of attendances, 9584 (50.7%) were male and 9307 (49.2%) aged between 16 and 70 years, with the predominant age group being between 19 and 29 years. The five main causes of refusal during this period were: occasional sexual contact (12.91%), temporary behavior (12.21%), medication use (10.23%), aesthetic procedures [acupuncture, piercing, tattooing and permanent makeup] (7.69%) and security exclusion (6.04%). **Conclusion:** The causes of deferral of blood must be analyzed to grant interventions to minimize the impacts of the lack of donations to the institution and the possible donors. Each blood collection center must know the donor's profile and propose coordinated actions to prevent e reduce the prevalence of blood deferral.

Keywords: Blood donors; Blood donation; Hemotherapy Service.

Financial Support: The project received financial support by the Faculdade de Ciências Médicas de Minas Gerais via the PROBIC Scholarship.

ORIGINAL RESEARCH

Use of virtual chromoendoscopy for predicting the histological type of colonic lesions with the NICE classification

Uso de cromoendoscopia virtual para predição do tipo histológico de lesões colônicas com o protocolo NICE

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ABSTRACT

Introduction: Colorectal cancer is a major health concern worldwide. Colonoscopy, with polypectomy, is an effective screening tool that can reduce its incidence. While most polyps are benign, their removal is still necessary for histopathological confirmation, posing risks and higher exam costs. Digital chromoscopy, such as Narrow-band-imaging, has emerged to better characterize lesions, minimize risks related to resection, and reduce histopathological study costs in cases where it is deemed unnecessary. However, many classifications rely on endoscopic magnification, which may not always be available. This study proposes using the Narrow-Band Imaging International Colorectal Endoscopic Classification - NICE without magnification to predict histological lesions during colonoscopy. **Objective:** To demonstrate that digital chromoendoscopy using the NICE, without magnification, accurately predicts the histological type of polyps before resection, compared to histopathological analysis. **Methods:** Patients who were already scheduled for colonoscopy were invited to participate in the project after an explanation of the research proposal and its risks. The polyps identified during the colonoscopy underwent digital chromoendoscopy. The NICE type, size, and location were recorded for subsequent database construction. Subsequently, after anatomopathological examination, a comparison was made to verify the accuracy of the chromoendoscopy classification. **Results:** The overall accuracy was 70.1%. Accuracy by segment: 70.8% in the right colon, 65.6% in the transverse and left colons, and 83.6% in the rectum. According to lesion size: 65.2% for those less than 4 mm, 72.0% between 4-10 mm, 86.0% for those larger than 10 mm. **Conclusion:** The use of the NICE classification helps in the identification of the histology of the lesions, but it isn't enough to guide treatment. It was noted that the proficiency of the examiners with the classification increased. Thus, it's suggested that there will be an improvement in performance with prolonged use.

Keywords: Colonoscopy; Colorectal neoplasms; Prevention.

ORIGINAL ARTICLE

FCMMG medical students' perception of artificial intelligence and its repercussions on their medical career

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ABSTRACT

Introduction: The artificial intelligence (AI) is revolutionizing healthcare, providing benefits such as efficient diagnosis, personalized treatment, and reduction of medical errors. However during medical training, students have a limited contact with the AI on their standard curriculum. That generates a situation in which future professionals feel uneasy with the advancements of the AI in healthcare, fearing that their jobs might be taken by machines, despite all the benefits that this technology might bring to them and their patients. Thus, it is important to assess the perception that medical students have of the AI, since it will be part of their profession in the future. **Objective:** To assess the perception of the AI by the medicine students of the Faculdade de Ciências Médicas de Minas Gerais. **Purpose:** To assess the perception of AI by the medicine students of the Faculdade de Ciências Médicas de Minas Gerais. **Methods:** This research consists of an observational study, in which the a priori sample of interest will be sized through a one-way ANOVA, obtaining a total of 288 students in the sample. The sample will then be divided accordingly along the semesters of graduation that they divided into, with the objective of measuring the perception of the medicine students about the the impact of AI on their careers. The main statistical tests of associations will be used in the qualitative variables and in the main parametric tests quantitative assessments. **Results:** The accomplishment of this research will allow to enhance our knowledge about what the medical students think on average about the AI on their careers, as well as providing a tool for educators to know how to better approach this topic on medical school.

Keywords: Artificial Intelligence in Healthcare; Perception; Impact of the AI in the medical field; Challenges and Opportunities; AI in medical education.

ORIGINAL ARTICLE

The function of ChatGPT in overseeing cardiovascular health

A função do ChatGPT na supervisão da saúde cardiovascular

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ABSTRACT

Introduction: ChatGPT is an artificial intelligence (AI) designed to enable virtual interactions with humans, a capability increasingly harnessed in healthcare practice. Nonetheless, there persists a deficiency of empirical inquiries corroborating the efficacy of ChatGPT as a tool within cardiovascular healthcare practice. **Objective:** To assess the utility of ChatGPT in managing cardiovascular health, specifically by comparing its performance against medical records. **Methods:** Patient data from an outpatient service, including diagnostic hypotheses, complementary exams and medication prescriptions, were compiled from March to December 2023. Following this, we presented inquiries related to these aspects to ChatGPT and assessed its responses. A comparative analysis was performed between ChatGPT's suggestions and those of physicians, with ChatGPT's correct responses tallied. Additionally, we assessed whether accuracy or errors in responses correlated more closely with different patient conditions, taking into account factors such as severity, rarity, risk of mortality, and urgency of medical attention, as determined by a clinician. We employed basic frequencies and percentages to outline the primary variables in our sample. The chi-square test and Fisher's Exact Test examined associations between variables. Cramer's statistics gauged the degree of association among key variables. **Results:** Our results indicate that 43% of accurate responses generated by ChatGPT are associated with diagnostic hypotheses, 5% with suggesting additional examinations, and 10% with laboratory tests. This suggests that ChatGPT demonstrates superior performance when applied to diagnostic hypotheses. However, it is essential to note that within the domain of diagnostic hypotheses, the AI demonstrated comparable levels of accuracy and inaccuracy. **Conclusion:** While ChatGPT holds significant promise within the medical field, it still exhibits limitations in clinical practice, particularly in diagnostic analysis and procedural guidance. It is clear that the idea of replacing physicians with this AI tool remains a distant prospect. Despite these limitations, ChatGPT presents transformative opportunities for cardiovascular healthcare.

Keywords: Computational intelligence; Cardiovascular System; Delivery of Health Care.

Financial support: This research received financial support by Faculdade de Ciências Médicas de Minas Gerais, under the programme of PROBIC/FCMMG.

ORIGINAL STUDY

Relationship between the timi risk score and the angiographic severity of atherosclerosis in patients with acute coronary syndrome without st elevation: a cross-sectional study

Relação entre o escore de risco TIMI e a gravidade angiográfica da aterosclerose em pacientes com síndrome coronariana aguda sem supradesnível do segmento ST: um estudo transversal

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ABSTRACT

Introduction: Cardiovascular diseases are a cause for concern due to their high morbidity and mortality. Among these diseases, non-ST-segment elevation acute coronary syndrome (NSTEMI-ACS) stands out. The prognosis of this pathology can be predicted by using the TIMI (Thrombolysis In Myocardial Infarction), which evaluates seven variables and has a score from 0 to 7. Furthermore, this score is decisive for the decision to perform coronary angiography, which allows evaluating the angiographic severity of coronary artery disease (CAD) and defining management. **Objectives:** To identify the possible association between the TIMI risk score and the severity of CAD of patients with NSTEMI-ACS. **Methods:** Cross-sectional study based on the analysis of medical records and coronary angiography reports of eligible patients admitted to an university hospital due to NSTEMI-ACS in the years 2023 and 2024 and who underwent coronary angiography by the team of a hemodynamics service. **Results:** With data from 210 of the 270 minimums planned for the study, the median age of patients is 66 years old, with 58% being male. Regarding the TIMI score, 49% of the sample has a classification of 4 or 5, with 54% of patients with severe injuries having one of these classifications ($p^2 = 0.14$). Furthermore, it is noted that 100% of patients with TIMI score 2 or 3 do not have obstruction $\geq 50\%$ in the main coronary arteries ($p^2 < 0.001$). **Conclusion:** It is possible to understand that, apparently, the lowest clinical score is associated with mild to moderate obstructions, while severe injuries seem to be associated with an intermediate to high TIMI classification. However, considering data collection is still ongoing, conclusions about the association between TIMI and the severity of CAD can only be drawn at the end of this research, which is scheduled for the end of 2024.

Keywords: Non-ST Elevated Myocardial Infarction; Unstable Angina; Coronary Angiography.

Financial support: Faculdade de Ciências Médicas de Minas Gerais (FCMMG) and Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG).

ORIGINAL STUDY

Does diabetes mellitus interfere with the quality of life of the elderly?

A Diabetes Mellitus interfere na qualidade de vida dos idosos?

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ABSTRACT

Introduction: The quality of life in elderly individuals with diabetes mellitus is a topic of growing importance and concern in the healthcare field. With the aging of the population and the increasing prevalence of diabetes, understanding the impacts of this chronic disease on the quality of life of the elderly becomes essential for the development of care strategies and the promotion of well-being in this specific population.

Objective: To analyze the quality of life of the elderly in a Hospital in relation to the presence of diabetes mellitus. **Methods:** A quantitative and qualitative observational cross-sectional study is being conducted using the Control, Autonomy, Self-realization, and Pleasure (CASP-19) questionnaire. Data collection was carried out in March 2024, under the approval of the Research Ethics Committee, CAAE 72913223.5.0000.5134. Data analysis was performed using the Jamovi Software with calculations of frequency distribution, effect sizes, confidence intervals, and Mann-Whitney test. Lastly, the qualitative analysis of the results will involve an investigation into the quality of life in elderly individuals with diabetes mellitus and its potential interference in the values obtained from the CASP-19 questionnaire. **Results:** The quality of life of elderly individuals with diabetes mellitus (26.4 ± 10.1) is significantly lower (p -value < 0.05) than that of the elderly without the disease (31.4 ± 11.3). **Conclusion:** Although the project has not been finalized, it is concluded that the disease in question negatively affects the quality of life of the elderly, interfering with basic and instrumental Activities of Daily Living (ADL) and/or their mental health.

Keywords: Diabetes Mellitus. Elderly Health. Quality of Life Indicators.

Financial support: The aforementioned research received funding from the Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG) through the PIBIC 2nd/2023 call from FCMMG.

ORIGINAL STUDY

Hearing loss and related etiologies in patients treated in a public otolaryngology clinic in Belo Horizonte

Perda auditiva e etiologias relacionadas em pacientes atendidos em um ambulatório de otorrinolaringologia da rede pública de Belo Horizonte

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ABSTRACT

Introduction: Hearing loss consists of a reduction in hearing to any degree that interferes with the intelligibility of a spoken message. It is a condition that affects more than 8 million Brazilians and has a multifactorial pathogenesis. Among its subclassifications, presbycusis stands out, a condition of reduced acuity and hearing capacity related to aging due to the degeneration of inner ear structures. **Purpose:** To evaluate the main etiologies of complaints related to hearing loss and the clinical-epidemiological profile and interventions adopted for patients treated at a public otorhinolaryngology outpatient clinic in Belo Horizonte. **Methods:** Cross-sectional study with retrospective analysis of medical records of patients treated on an outpatient clinic in 2022 who presented a main complaint of hearing loss. After applying the inclusion and exclusion criteria, the medical records were analyzed according to the variables age, sex, risk indicators for hearing loss, audiometry results, final diagnosis, ICD10 and adopted conduct. **Results:** Of the 182 medical records consulted, 48 met the established inclusion and exclusion criteria. The average age of the sample was 59.1 years, with 28 (58%) female individuals and 20 (42%) males. The main complaints presented were hearing loss (75%) and tinnitus (63%). The most prevalent final diagnosis was represented by ICD10 H91.1 - presbycusis - with 21%. The main conduct taken was the adoption of hearing aids in 58% of cases and the presence of chronic diseases was the main risk indicator presented by the sample. There was a significant association between age over 64 years and hearing aid use. **Conclusion:** Presbycusis proved to be the main etiology of complaints of hearing loss in this outpatient clinic, which reinforces the importance of this condition in the reality of the elderly. Assertive diagnostic and rehabilitation measures are imperative to correctly manage the impacts of this condition.

Keywords: Hearing loss; Presbycusis; Diagnosis.

Financial support: This research was supported by the Faculdade de Ciências Médicas de Minas Gerais through the PROBIC funding.

RESUMO DE ESTUDO ORIGINAL

Does grip strength reflect the global strength of the upper limbs, lower limbs and trunk of individuals with Parkinson's disease?

A força de preensão palmar reflete a força global dos membros superiores, membros inferiores e tronco de indivíduos com doença de Parkinson?

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ABSTRACT

Introduction: Muscle weakness is a common among individuals with Parkinson's Disease (PD). Assessing the strength of a single muscle group can provide a fast measure of the limb's global strength. However, the relationship between grip measurement and the global strength of individuals with PD have not been investigated.

Objective: To investigate whether the grip strength, obtained with the Modified Sphygmomanometer Test (MST) and the dynamometer, presents a correlation with the global strength of the upper limbs, lower limbs and trunk of individuals with PD. Additionally, to investigate whether the measurements obtained by the MST are similar to those obtained by the dynamometer. **Methods:** Cross-sectional study. The global strength of the upper limbs was described by the sum of the strength of the shoulder and elbow flexors/extensors. The global strength of the lower limbs by the sum of hip, knee and ankle flexors/extensors and the global trunk strength by the sum of trunk flexors/extensors. The assessment methods were the same for the MST and the dynamometer. Spearman's correlation coefficient was used.

Results: 30 individuals, 50% men (n=15), aged 65±8 years. Grip strength showed a significant correlation of moderate to high magnitude with the global strength of the upper limbs, lower limbs and trunk when assessed by the dynamometer ($0.62 \leq r \leq 0.80$; $p < 0.05$) and high magnitude by the MST ($0.70 \leq r \leq 0.84$). The results obtained with the MST were similar to those with the dynamometer.

Conclusion: The values obtained by the MST were similar to those obtained by the dynamometer. The grip strength assessed with the dynamometer and the MST can be used to characterize the global strength of the upper, lower limbs and trunk in individuals with PD. This contributes to a reduction in assessment time and the effects of fatigue on these individuals.

Keywords: Grip Strength; Parkinson Disease; Upper Extremity; Lower Extremity; Trunk

Financial support: This work was supported by the Programa Institucional de Bolsas de Iniciação Científica (PIBIC) of the Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG).

ORIGINAL STUDY

Aerobic exercise preferences and barriers reported by individuals with parkinson disease in a developing country: preliminary results

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ABSTRACT

Introduction: Parkinson disease (PD) is the second most common cause of neurodegenerative impairment. Aerobic exercise can slow down the progression of the disease, reduce disabilities, and improve the quality of life of people with PD. Thus, clinical guidelines recommend people with this disorder to practice aerobic exercises. Despite that, studies in developed countries show that there are barriers that limit the implementation of this exercise to these people. However, no studies have investigated aerobic exercise preferences and barriers in individuals with PD in developing countries. **Objective:** To examine the preferences and barriers related to aerobic exercise identified by individuals with PD in a developing country. **Methods:** This was a cross-sectional observational study approved by the Ethics Committee (69902623.6.0000.5134) carried out with adult individuals with PD. Data were collected by using a standardized questionnaire based on previous studies. **Results:** 22 participants (64 (9) years old, 12 years since diagnosis, and with a mean Hoehn-Yahr scale of 3) were included. Most of them prefer to exercise in groups (90.9%). All participants agree that aerobic exercise improves and maintains heart health, does not worsen the effects of PD, and is a necessary part of rehabilitation. The most frequent barriers to aerobic exercise were lack of information (95.5%), physical disability (90.9%), severe weather (72.7%), heart problems (68.18%), and communication difficulties (50%). **Conclusion:** Individuals with PD in a developing country consider it important to perform aerobic exercise. Nevertheless, there are barriers related to lack of information, physical disability, cardiovascular diseases, social support, and climatic conditions. These are preliminary results, so it is necessary to wait for the completion of the study before drawing conclusions.

Keywords: Parkinson disease; Aerobic Treatment; Barriers to Access to Health Care; Patient Preferences.

ORIGINAL STUDY

Evaluation of the impact of endometriosis on sexual function in patients and their partners

Avaliação do impacto da endometriose na função sexual de pacientes e seus parceiros

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ABSTRACT

Introduction: It is known that sexuality is driven by physical, mental and social dimensions. The inability to engage in sexual activity satisfactorily can affect self-esteem as well as relationships with partners. This issue deserves special attention in the case of endometriosis, a disease that can harm the sexual domain, and the decision-making process for treatment is based mainly on the patients' symptoms and priorities. Thus, the project "Evaluation of the impact of endometriosis on the sexual function of patients and their partners" was created to demonstrate a general overview of the quality of life and sexual function of patients with endometriosis, as well as the perception of the sexual function of their partners. **Purpose:** The present study aims to demonstrate a general overview of the impact that endometriosis and its treatments have on the sexual function of women and their sexual partners through interviews collected with patients at a reference treatment center in Belo Horizonte. **Methods:** This is a longitudinal observational study. Patients diagnosed with endometriosis will be included, undergoing treatment at a reference center in Belo Horizonte from November 2023 to April 2024, with an active sexual life in the last 6 months. Standardized questionnaires on quality of life and sexual function will be administered. Data analysis will be conducted using dedicated statistical software. **Results:** The study is expected to help identify determining factors in the quality of life and sexual function of individuals involved in the diagnosis of endometriosis. Such results may help to define more individualized and safe treatments for patients with endometriosis. **Conclusion:** By analyzing the results and all the variables involved, it is possible to better establish the impact of endometriosis on sexuality and thus assist in the clinical management and improvement of the quality of life of these patients.

Keywords: Endometriosis; Sexual Health; Sexuality; Quality of Life

ORIGINAL STUDY

Evaluation of obesity diagnosis in a tertiary university center: a retrospective study

Avaliação Do Diagnóstico De Obesidade Em Um Centro Universitário Terciário: um estudo retrospectivo

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ABSTRACT

Introduction: Obesity is a complex multifactorial disease that affects around 650 million people worldwide, being linked to significant inflammatory, immunological, mechanical and endocrine changes in the body. Furthermore, this pathology has important psychosocial and economic impacts on the lives of these individuals, in addition of being directly related to the greater morbidity and mortality presented by this population. The literature highlights the existence of an incorrect and inefficient approach to obesity due to the lack of multidisciplinary support, lack of preparation regarding the complex therapeutic management of chronic diseases and a blaming perspective towards these patients. Therefore, despite its magnitude, obesity appears to be invisible in the work routine of health professionals, constantly not being diagnosed and managed appropriately. **Objective(s):** To evaluate the diagnosis and approach to obesity by doctors specialists in endocrinology, cardiology, gastroenterology and rheumatology of a tertiary university center. **Methods:** This is an observational cross-sectional study with data obtained through the retrospective evaluation of 606 medical records referring to the care of adult patients of a tertiary university center, completed between February and December 2022. **Results:** Of the total of 606 medical records analyzed, 183 recorded weight, height and/or BMI. The diagnosis of obesity was registered in 118 medical records and, of these, only 39 included CID E66. Furthermore, it was found that only 33 of the patients diagnosed with obesity reported this pathology as their main complaint. Finally, of the total number of patients affected by obesity, only 58 had interventions proposed to treat this comorbidity. **Conclusion:** It is concluded that the diagnosis of obesity is not adequately executed and addressed, making it necessary to reinforce the importance of correct recognition and management of this pathology by professionals who work in the aforementioned service center.

Keywords: Evaluation; Diagnosis; Obesity.

Financial support: This study was financially supported by Faculdade de Ciências Médicas de Minas Gerais.

PROBIC - FELÍCIO ROCHO

Accelerated post-operative recovery program applied to patients treated surgically for endometriosis

Programa de recuperação acelerada pós-operatória aplicado às pacientes abordadas cirurgicamente por endometriose

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ABSTRACT

Introduction: Endometriosis is a disease defined by the presence of endometrial tissue outside the uterine cavity. Patients who suffer from it may experience severe impairment of quality of life, requiring pharmacological and/or surgical treatment to improve pelvic pain, infertility, and functional impairment of adjacent organs. These surgeries are multidisciplinary, can be complex, and can cause significant postoperative fragility. Therefore, it is necessary to improve assistance and accelerate postoperative recovery. Enhanced Recovery After Surgery (ERAS) is an european initiative that supports this idea, proposing a modern perioperative care protocol based on scientific evidence. Based on this study, the Brazilian project “Acelerando a Recuperação Total Pós-operatória” (ACERTO) was created, a multimodal care protocol that accelerates the postoperative recovery of patients undergoing its guidelines. **Objectives:** To promote faster and safer recovery of patients operated on for endometriosis and accelerate the return to daily activities without increasing complications, hospital readmission rates, or costs, through the ACERTO protocol. **Methods:** This pilot project used pre/intra-hospital guidelines and interventions from the ACERTO for 24 patients, aged 18 to 50, undergoing endometriosis surgery at a specific hospital during a certain period. Patients were divided into the ACERTO group, which underwent accelerated recovery interventions (N=11), and the control group, subjected to traditional care (N=13). Patients were randomized between the groups and evaluated for intra-hospital response related to the interventions. **Results:** Patients in the ACERTO group had shorter hospital stays, less pain the day after surgery, fewer nausea and vomiting episodes, and a quicker start to a bland diet. **Conclusion:** We believe that all the variables we addressed and evaluated in the study act synergistically to establish better patient recovery and that these interventions are valid for patients undergoing surgery for endometriosis.

Keywords: endometriosis; adjustment, ERAS, gynecological surgery, surgery minimally invasive, post-operative

ORIGINAL STUDY SUMMARY

Is there a relationship between diet and oral cavity squamous cell carcinoma?: A scoping review

Existe relação entre dieta e carcinoma epidermóide de cavidade oral?: Uma revisão de escopo

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ABSTRACT

Introduction: The oral squamous cell carcinoma (OSCC) ranked as the sixth most common type of cancer globally and particularly prevalent in Latin America, predominantly accounting for over 90% of cases of oral cancer (SECCHI, 2019). This cancer significantly impairs patients' quality of life, and poor or excessive nutritional habits are some of the risk factors, which affect the ability to swallow and speak, as well as causing other problems in the oral cavity. (RAZAVI, 2023). **Objective:** This scoping review aimed to investigate the role of diet in OSCC. **Methods:** The review followed Cochrane methodology, reported via PRISMA extension for Scoping Reviews and registered at Open Science Framework (<https://osf.io/f4ndm/>). The searches covered four databases (Medline, Embase, Web of Science, Lilacs) with no date limits and the studies were screened, extracted and compiled narratively for eligibility. **Results:** A total of 17 studies were analyzed with a total of 10954 patients, of which 8175 (74.63%) were male and 2059 (18.79%) were female. The mean age 50.62 ± 3.0 years and the most prevalent type of study design was case-control (n=14 studies; 82%), followed by cross-sectional (n=2 studies ; 11%), cohort (n=1 study; 5%), and the average follow-up time was 221.44 ± 152.12 weeks. The majority of studies were developed in countries with a high Human Development Index (82%). Patients with OSCC reported consuming 46 food items. We classified and categorized them according to the Food Guide for the Brazilian Population. Of these, 22 (47.82%) were ultra-processed, processed, minimally processed products and finally 22 (47.82%) were fresh foods. **Conclusion:** OSCC was more frequent in male patients, and the majority of the studies were case control. Although this project limits the assessment of causality, we observed that the prevalence of processed foods compared to the consumption of fresh foods was the same in this population (47.82%).

Keywords: Diet; Oral Cavity Squamous Cell Carcinoma; Epidemiology; Cancer.

Financial support: Faculdade de Ciências Médicas de Minas Gerais (FCMMG)

RESUMO DE ESTUDO ORIGINAL

Association between sarcopenia screening and loss of intrinsic capacity of elderly people through the who proposal/icope project

Associação entre rastreio da sarcopenia e perda da capacidade intrínseca de idosos por meio da proposta da OMS/projeto icope

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RESUMO

Introdução: A sarcopenia, que é um distúrbio muscular esquelético progressivo, envolvendo a perda generalizada e acelerada da massa e função. Esta condição aumenta o risco de quedas e resulta em um comprometimento do desempenho físico e redução de realização das atividades de vida diária, desse modo, levando o indivíduo à perda da independência e a necessidade de cuidados de longo prazo. Os domínios que são incorporados na capacidade intrínseca (CI), podem estar relacionados com a sarcopenia, visto que o novo conceito da CI proporciona uma visão para a prevenção dessa patologia. **Objetivo:** Avaliar a acurácia da bioimpedância para o rastreio da sarcopenia em idosos e sua associação com a perda da capacidade intrínseca por meio da proposta feita pela Organização Mundial da Saúde, de idosos atendidos em unidade de atenção primária à saúde na região de Belo Horizonte/MG. **Métodos:** Trata-se de um estudo transversal, com 51 idosos selecionados de 3 Unidades Básicas de Saúde de Belo Horizonte/MG a partir do segundo semestre de 2023. Foram aplicados diversos instrumentos e questionários: Bioimpedância Elétrica, Short Physical Performance Battery (SPPB), Sarc-F e Dinamômetro Jamar. **Resultados:** Uma pequena parte da amostra apresentou rastreio positivo para sarcopenia, de acordo com o questionário SARC-F (sexo feminino: 67%; sexo masculino: 33%). Dentro desse grupo a massa muscular esquelética foi de 18,4 (kg/m²). Além disso, 100% do grupo apresentou capacidade física moderada no SPPB. **Conclusão:** De acordo com o número amostral coletado, não houve diferença significativa entre grupos em nenhum teste realizado, considerando $p > 0,05$. Ademais, do grupo com sarcopenia, 100% da amostra apresentou nível moderado de capacidade física de acordo com SPPB, indicando uma possível perda da capacidade intrínseca no quesito mobilidade.

Descritores: Sarcopenia; Saúde do idoso; Impedância Elétrica;

Apoio financeiro: Institucional de Bolsas de Iniciação Científica (PIBIC) da Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG).

ORIGINAL STUDY

Association between sarcopenia screening and loss of intrinsic capacity of elderly people through the WHO proposal/Icope Project

Associação entre rastreio da sarcopenia e perda da capacidade intrínseca de idosos por meio da proposta da OMS/Projeto Icope

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ABSTRACT

Introduction: Sarcopenia, which is a progressive skeletal muscle disorder, involving the widespread and accelerated loss of mass and function. This condition increases the risk of falls and results in impaired physical performance and reduced performance of activities of daily living, thus leading the individual to loss of independence and the need for long-term care. The domains that are incorporated into intrinsic capacity (IC) may be related to sarcopenia, as the new concept of IC provides a vision for the prevention of this pathology. **Objective:** To evaluate the accuracy of bioimpedance for screening sarcopenia in the elderly and its association with the loss of intrinsic capacity through the proposal made by the World Health Organization, in elderly people treated in a primary health care unit in the region of Belo Horizonte/MG. **Methods:** This is a cross-sectional study, with 51 elderly people selected from 3 Basic Health Units in Belo Horizonte/MG from the second half of 2023. Several instruments and questionnaires were applied: Electrical Bioimpedance, Short Physical Performance Battery (SPPB), Sarc-F and Jamar Dynamometer. **Results:** A small part of the sample presented positive screening for sarcopenia, according to the SARC-F questionnaire (females: 67%; males: 33%). Within this group, skeletal muscle mass was 18.4 (kg/m²). Furthermore, 100% of the group presented moderate physical capacity in the SPPB. **Conclusion:** According to the sample number collected, there was no significant difference between groups in any test performed, considering $p > 0.05$. Furthermore, in the group with sarcopenia, 100% of the sample presented a moderate level of physical capacity according to SPPB, indicating a possible loss of intrinsic capacity in terms of mobility.

Keywords: Sarcopenia; Health of the Elderly; Electric Impedance;

Financial support: Institution of Scientific Initiation Scholarships (PIBIC) of the Minas Gerais State Research Support Foundation (FAPEMIG).

ORIGINAL STUDY

Evaluation of the prevalence of common mental disorders in patients admitted to a 100% SUS university hospital

Avaliação da prevalência de Transtorno Mental Comum em pacientes internados em Hospital Universitário 100% SUS

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ABSTRACT

Introduction: Common Mental Disorder (CMD) can manifest itself through symptoms such as insomnia, irritability, fatigue, difficulty concentrating, depression and anxiety. Its main risk factors include issues related to the socioeconomic or family context, diagnosis and prognosis of diseases, and hospitalizations. This condition is often associated with chronic illnesses and can result in loss of functionality and deterioration in quality of life. Hospitalization is a stressful event, and the distance from home, the lack of socialization with family and friends, along with the therapeutic procedures carried out in the hospital context, can aggravate the individual's mental health status. **Objective:** To assess the prevalence of CMD symptoms in patients admitted to a university hospital. **Methods:** This is an observational, analytical, cross-sectional study. Data was collected using the SRQ-20 (Self Report Questionnaire) and a form to define the profile of the interviewees. These instruments were applied to patients admitted to the ward of a University Hospital during extension activities of the Mental Health League in the first semester of 2024. **Results:** In a convenience sample of 41 patients, 51% female and 49% male, a total prevalence of 32% of CMD was observed, 85% of which was female ($p=0.004$). The main complaints were related to symptoms of tiredness, poor sleep quality, sadness and tension. There was no statistically significant correlation between the prevalence of CMD and length of stay. **Conclusion:** Given the socio-cultural and economic impact of CMD and its prevalence, it is necessary to expand studies to improve the definition of the main risk factors for the development of this disorder. This will enable the design of appropriate mental health interventions for patients in both primary and secondary care.

Keywords: Mental Disorders; Hospitalization; Patient Health Questionnaire.

ORIGINAL STUDY

Duke activity status index cut-off point for assessing functional capacity in individuals with parkinson's disease - preliminary results

Ponto de corte do Duke Activity Status Index para avaliação da capacidade funcional em indivíduos com Doença de Parkinson - resultados preliminares

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ABSTRACT

Introduction: Parkinson's disease (PD) result in functional limitations in patients' daily lives. Therefore, it is important to assess the functional capacity of individuals with PD. The Duke Activity Status Index (DASI) is a simple tool with adequate clinical applicability for this assessment. However, to understand the impact of PD on the functional capacity of individuals, it is necessary to establish appropriate DASI cut-off points. **Objectives:** To determine the cut-off points for the DASI and check whether they are capable of discriminating the severity of the disease among individuals with PD. **Methods:** Cross-sectional study, where 122 individuals with PD had their functional capacity measured by DASI scores. The Receiver Operating Characteristic (ROC) and the area under the curve (AUC) was used to determine the best DASI cut-off point, followed by binary logistic regression analysis to investigate the ability of DASI scores in discriminating the severity of the disease. **Results:** 122 individuals were included (73.3% were male with 68 ± 10.5 years old, and with an average diagnosis time of 7.6 ± 6.4 years). The median score on the Hoehn Yahr scale was $2,5 \pm 0,6$. The average score on the DASI was 35 ± 15.4 points. Preliminary results indicated a statistically significant association between the DASI and the functionality of the individuals evaluated ($p < 0.0001$), with an area under the ROC curve of 76%, indicating good predictive ability. The sensitivity and specificity of the DASI were 56% and 93%, respectively. The established cut-off point was 20.7, allowing for an effective classification of participants' functionality. **Conclusion:** Preliminary findings support the use of the DASI as a simple tool to evaluate patients with PD, and the cutoff value of 20.7 was able to discriminate the severity of the disease among these individuals.

Keywords: Parkinson Disease; Predictive Value of Tests; International Classification of Functioning, Disability and Health.

Financial support: This work was supported by the Programa de Bolsas de Iniciação Científica (PROBIC) of the Faculdade de Ciências Médicas de Minas Gerais (FCMMG) and its sponsor, Fundação Educacional Lucas Machado (FELUMA).

POSTER

The study of the metabolic profile of medical students with an emphasis on cardiovascular risk analysis

O estudo do perfil metabólico de acadêmicos de medicina com ênfase na análise de risco cardiovascular

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ABSTRACT

Introduction: Lifestyle variables such as sedentary lifestyle, smoking, BMI (body mass index) and laboratory data such as lipid and glycemic profiles directly affect an individual's well-being and long-term quality of life. The calculation of cardiovascular risk, which is based on some of these variables, aims to estimate the probability of cardiovascular events occurring in the coming years, and makes it possible to implement preventive measures for them. In this sense, in particular, medical students, subjected to emotional and psychological pressure and a high course workload, which make it difficult to maintain good habits, can have more significant impacts on cardiovascular health in the medium and long term. **Objective:** To evaluate the metabolic profile and clinical-laboratory variables associated with cardiovascular risk factors in medical students. **Methods:** A cross-sectional cohort was carried out through the analysis of clinical and laboratory data from 186 medical students from a private college in Minas Gerais. The study is based on the calculation of cardiovascular risk (based on the Framingham risk score) of the participants - a group that includes students of both sexes, aged between 18 and 35 years. **Results:** There was a manifestation between the presence of habits considered not high, such as smoking, a sedentary lifestyle and the presence of comorbidities, with an increase in cardiovascular risk. Furthermore, it was observed that students with diabetes or altered cholesterol also presented an increased cardiovascular risk. **Conclusion:** In this way, it was possible to highlight the importance of healthy habits, such as abstinence from smoking, good nutrition and physical activity, in cardiovascular health.

Descriptors: Heart Disease Risk Factors; Primary prevention; Students, Medical; Lifestyle

Financial support: financial support from Faculdade de Ciências Médicas de Minas Gerais and Laboratory I9med.

ORIGINAL STUDY

Comparison of the efficacy of drug treatment for arterial hypertension in patients treated at a general medicine and cardiology outpatient clinics of a private education institution.

Comparação da eficácia do tratamento medicamentoso para a hipertensão arterial nos pacientes atendidos nos ambulatórios de clínica médica e de cardiologia de uma instituição de ensino privada.

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ABSTRACT

Introduction: Adequate management of systemic arterial hypertension (SAH) is essential for preventing negative cardiovascular outcomes. The majority of hypertensive patients are treated in primary care or at the general medical clinic, however the cardiologists are more qualified to treat these patients. Although there are well-established guidelines for the management of SAH, studies aiming to compare the drug treatment offered by different specialties are scarce. **Purpose:** To compare the pharmacological treatment of patients with SAH treated in the General Medicine (GM) and Cardiology (CA) outpatient clinics of a Teaching Institution, as well as to compare the blood pressure levels and comorbidities present in these two groups. **Methods:** Retrospective cross-sectional study. 181 patients were included, 91 from GM and 90 from CA undergoing pharmacological treatment for SAH from Jan 2020 to Dec 2023 and who presented at least one blood pressure (BP) measurement in the medical record. SAH control was determined by systolic BP below 140 mmHg and diastolic BP below 90 mmHg. Information was collected on the medications used, the epidemiological profile and the BP values. **Results:** The groups were homogeneous for race, sex, age and comorbidities, except for coronary artery disease, which was more prevalent in CA patients ($p=0.003$). CA patients had better BP control ($p=0.044$) and used more beta-blockers ($p<0.001$) and potassium-sparing diuretics ($p=0.003$). More GM patients were on monotherapy and dual therapy, while more CA patients received triple and quadruple therapy ($p=0.018$). **Conclusion:** Our findings suggest a need for better standardization of intra-service care and more studies that compare the effectiveness of SAH treatment among different specialties.

Keywords: Cardiology; Blood pressure control; Anti Hypertensives

Financial support: Study supported by Faculdade Ciências Médicas de Minas Gerais through the grant “PROBIC-Linhas de Cuidado”.

Predictors for weaning from mechanical ventilation and extubation outcome in an intensive care unit of a university hospital in the public health system of Belo Horizonte

Preditores para desmame da ventilação mecânica e resultado da extubação em Unidade de Terapia Intensiva de Hospital Universitário do Sistema Público de Saúde de Belo Horizonte

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ABSTRACT

Introduction: Invasive ventilatory support is one of the leading causes of admission to Intensive Care Units (ICUs), with estimated annual expenses for mechanically ventilated patients in Brazil accounting for approximately 12% of total healthcare expenditures. About 20% of patients on mechanical ventilation (MV) fail extubation on the first attempt, leading to the need for reintubation. This results in prolonged hospital stays in both ICUs and wards, decreased quality of life, and increased mortality rates. The process of weaning from MV involves transitioning from invasive ventilatory support to spontaneous ventilation. Several studies have shown higher success rates in extubations based on well-defined protocols. However, there is currently no consensus on which parameters are most effective. **Purpose:** To identify and describe the variables used to predict extubation outcomes and the MV weaning process in patients admitted to a university hospital within the public health system in Belo Horizonte, Minas Gerais. **Method:** A retrospective cohort study based on data from 75 ICU patients previously on MV and undergoing a spontaneous breathing trial, from January 2023 to June 2023. Medical records were reviewed to identify clinical, laboratory, and ventilatory parameters correlated with extubation outcomes. **Results:** The aim is to achieve a more objective and effective assessment of variables associated with successful extubation, thereby enhancing current techniques and improving patient care for future procedures. **Conclusion:** Understanding predictive variables for MV weaning is crucial for improving the process of successful extubation. This approach not only aims to reduce complications, costs, and length of hospitalization but also seeks to enhance clinical outcomes and patients' quality of life.

Keywords: artificial respiration; ventilation; ventilator weaning; critical care outcomes; intensive care units; multivariate analysis.

ORIGINAL STUDY

Modified sphygmomanometer test for measuring upper limb and trunk muscle strength in individuals with parkinson's disease

Teste de esfigmomanômetro modificado para mensuração da força muscular de membros superiores e tronco em indivíduos com doença de Parkinson

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ABSTRACT

Introduction: Muscle weakness in individuals with Parkinson's Disease (PD) is associated with the number of falls, changes in manual dexterity and loss of control over movements such as reaching and grasping. It is therefore essential to measure muscle strength in the upper limbs and trunk of these individuals. However, the dynamometer, considered the gold standard for measuring muscle strength, is expensive, so validating the Modified Sphygmomanometer Test (MST) could make this assessment more accessible. **Objectives:** To investigate the criterion-concurrent validity and inter-examiner reliability of the MST for measuring upper limb and trunk muscle strength in individuals with PD. **Methods:** This was a cross-sectional study. Maximum isometric strength of the upper limbs and trunk was measured using the MST and portable dynamometers. Spearman's correlation coefficient was used to determine the criterion-concurrent validity of the MST and the intraclass correlation coefficient was used to determine the inter-examiner reliability. **Results:** 60 individuals diagnosed with idiopathic PD, mean age of 64 ± 1.0 years, 59% male and Hoehn and Yahr mean of 2.2 ± 0.1 . Significant correlations with moderate to very high magnitude were found for upper limb muscle strength evaluated for validity ($0.66 \leq r \leq 0.90$; $p \leq 0.001$) inter-examiner reliability ($0.74 \leq ICC \leq 0.97$; $p \leq 0.001$). And significant correlations with low to high magnitude for trunk muscle strength evaluated for validity ($0.65 \leq r \leq 0.77$; $p \leq 0.001$) inter-examiner reliability ($0.47 \leq ICC \leq 0.58$; $p \leq 0.001$). **Conclusion:** The MST showed adequate criterion-concurrent validity and inter-examiner reliability for measuring strength of individuals with PD. Thus, the MST enables healthcare professionals to perform objective and lower-cost strength assessments of upper limb and trunk in individuals with PD.

Keywords: Muscle Strength; Parkinson Disease; Upper Extremity; Trunk.

Financial support: This work was supported by the Programa de Bolsas de Iniciação Científica (PROBIC) of the Faculdade de Ciências Médicas de Minas Gerais (FCMMG) and its sponsor, Fundação Educacional Lucas Machado (FELUMA).

ORIGINAL WORK

Simple skills that save lives: a successful intervention in first aid

Habilidades simples que salvam vidas: uma intervenção bem sucedida em primeiros socorros

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ABSTRACT

Introduction: According to the World Health Organization (WHO), cardiovascular diseases represent the highest rate of morbidity and mortality in the world, therefore considered as a public health issue. Most cardiorespiratory arrest events happen outside of the hospital, leading to worse outcomes. However, studies have shown that first aid abilities such as cardiorespiratory resuscitation (CPR) improve survival rates. These abilities are included in the Basic Life Support (BLS) guideline and can be performed by whoever receives proper training. Therefore, this extension project was created. **Objective(s):** To train pre teens and teenagers in BLS, comparing their knowledge about the theme before and after the intervention with questionnaires, thus checking if the intervention was successful. **Methods:** Medical students from a private university in Brazil received training in BLS by a faculty member certified by the American Heart Association (AHA). Their interventions took place in a public school from Belo Horizonte during March and April of 2024. Immediately before the intervention with realistic simulation mannequins, the teens were tested with 10 questions about CPR and medical emergencies. After a week the questionnaire was retaken to evaluate the knowledge retention. **Results:** In total, 61 students from 03 different classes were tested in their knowledge about BLS. Most students had medium knowledge prior to the intervention which was refined through the intervention. Students from one of the classes showed difficulties in answering the questions even after the intervention, which may indicate that either the intervention wasn't as effective as in the other classes or the students weren't as interested. The medical students offered to repeat the intervention, but no interest was manifested. Nonetheless, the result showed successful rates of 80-90% of correct answers after the action. **Conclusion:** The research proved that training pre teens and teenagers results in successful rates of learning.

Keywords: BLS; Schools; Teens

ESTUDO ORIGINAL

Barriers to primary health care in traditional population in Belo Horizonte, Minas Gerais

Barreiras para o acesso à saúde pelos povos tradicionais em Belo Horizonte, Minas Gerais

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ABSTRACT

Introduction: The WHO describes Primary Health Care (PHC) as the most inclusive, and cost-effective way to achieve universal health coverage. In Brazil, PHC is applied through the Unified Health System (SUS), following the principles of equity and universality. Besides the word minority refers to a small discriminated group, in Brazil, it is the majority of the population. In this sense, it's necessary to evaluate the gaps in PHC of the minorities, making SUS a welcoming and efficient system. **Purpose:** To identify barriers in PHC in minorities: specifically in indigenous and quilombola populations. **Methods:** This is a qualitative study, still in progress, conducted between August/23 to June/24, in Belo Horizonte, Minas Gerais. There will be 14 interviews with the representatives of indigenous and quilombola minorities, being 7 to each population, respecting the data saturation criterion. The interview consisted of 8 questions about how they perceived their PHC. The inclusion criteria of the interviewees was being older than 18 and being able to understand the questions asked, the exclusion criteria was having access to supplementary or private care. **Results:** At the moment, 4 indigenous people and 1 quilombola were interviewed. The pre-analyses of the interviews were carried out, and got to the matter that, on indigenous minorities, the difficulty in finding help in the SUS after leaving their hometown, and the difference between the care system in their home village and the city, are a barrier to be overcome. On the other hand, the quilombola person interviewed affirmed that the lack of holistic treatment for this specific population is a barrier to be overcome. **Conclusion:** The preliminary data reinforce the importance of health professionals being aware of the cultural differences between indigenous peoples, but this study is still in progress and the final analysis will provide the proper conclusion.

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SUMMARY OF ORIGINAL STUDY

Exploring cardioprotection through intermittent fasting: a systematic and narrative review of preclinical studies

Explorando a Cardioproteção através do Jejum Intermitente: Uma Revisão Sistemática e Narrativa de Estudos Pré-clínicos

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ABSTRACT

Introduction: Intermittent fasting (IF) has gained popularity and in addition to weight loss, IF can be associated with broader health benefits. While its positive effects on cardiovascular health have been suggested, they lack robust validation, particularly under scenarios of cardiac stress. **Objective:** To explore the association of IF with cardioprotection through a comprehensive analysis of preclinical studies. By synthesizing the existing literature, we aim to identify gaps, inconsistencies and methodological barriers in understanding the potential benefits of IF. **Methods:** A systematic and narrative review was conducted. We systematically reviewed preclinical studies using IF strategies such as cardioprotection (PROSPERO#CRD42023466215). Inclusion criteria encompassed only animals exposed to IF regimen and cardiovascular stress. All timings, frequencies, and types of IF were eligible. IF regimen in clinical trials, reviews, meta-analyses, updates, guidelines, and observational studies were excluded. **Results:** Out of 187 articles identified, 164 were excluded based on title and abstract review, leaving 23 for detailed analysis. Animal model studies have suggested that IF could elicit protective effects on the heart, indicating potential advantages. However, a comprehensive understanding of these benefits has lacked a strong foundation, particularly regarding the mechanisms involved. Both positive outcomes and concerns have been observed. For example, while IF showed promise in reducing the size of atherosclerotic lesions, preventing atrial fibrillation, and enhancing cardiac mitochondrial function, unexpected adverse effects such as worsening cardiotoxicity and increased atherosclerosis formation were noted. Clinical trials have been scarce, and existing clinical analyses often lacked control groups or had short study durations, hindering a thorough understanding. Moreover, the intricate nature of cardiovascular physiology and pathology necessitates nuanced evaluations that extend beyond baseline conditions. **Conclusion:** IF is promising for cardiovascular health, but more research is essential to elucidate the mechanisms and optimize its efficacy. Rigorous clinical trials are imperative for translational relevance and informed dietary recommendations.

Descriptors: Intermittent fasting; Preclinical studies; Cardiovascular diseases; Animal models;

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

PROBIC/1º SEMESTRE 2023

Evaluation of the prevalence of dermatosis in dermatology service at an university outpatient in 2022

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ABSTRACT

Introduction: Generally, skin diseases can be referred to as “dermatoses”, affecting approximately 35% to 50% of the population. Furthermore, the ability to identify, diagnose and take appropriate action regarding these injuries is not only the responsibility of specialist professionals, but also of non-specialist doctors. However, this scenario is not currently respected, as most consultations with dermatological complaints result in referrals. **Objective:** To evaluate the prevalence of dermatoses in patients treated by the dermatology service of a university outpatient clinic in a Brazilian capital in the year 2022. **Methods:** This is a retrospective study with a cross-sectional design. Data collection took place through the analysis of computerized medical records of patients seen in 2022 at the dermatology service of an outpatient clinic at a higher education institution. The sample of 278 individuals was obtained from the sample calculation of a finite population of 1,000 patients, applying rigorous statistical principles and a confidence level of 95%, a maximum error of 5%, with a conservative estimate of the proportion of around 50 %. To analyze the medical records, the following variables were considered: sex, age, occupation, municipality of origin, CID and diagnostic impressions. **Results:** The average age of the patients was 57 years, 203 (74%) were female and 71 (26%) were male. Regarding the prevalence of diagnoses obtained, there was a significant diversity of results. The most common groups of dermatoses categorized by ICD-10 were Seborrheic Keratosis (L82) and Acne (L70), with a prevalence of 12% and 7.3%, respectively. **Conclusion:** Skin diseases are often diagnosed clinically. In this context, the collection of epidemiological data makes it possible to create public policies that aim to increase the training of health professionals, improving basic care for dermatological patients and reducing the rate of referrals to specialists.

Descriptors: Dermatoses; Outpatient Care; Dermatology.

ORIGINAL STUDY

Prefrontal cortex dopaminergic degeneration induces social behavioral deficits in mice

Degeneração dopaminérgica no córtex pré-frontal induz déficits na interação social em camundongos

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ABSTRACT

Introduction: Despite extensive research on Parkinson's Disease (PD), non-motor outcomes like cognitive impairments are less understood. The prefrontal cortex (PFC) is crucial for cognitive functions and often degenerates in PD, leading to significant cognitive and social deficits. **Objectives:** This study investigated the effects of dopaminergic degeneration in the PFC on cognitive functions of mice. **Methods:** We conducted an experimental study where dopaminergic degeneration was induced in mice by intracerebral injection of neurotoxin 6-hydroxydopamine (6-OHDA) into the following coordinates for dorsomedial PFC: anterior-posterior (AP), +2.4 mm; mediolateral (ML), ± 0.5 mm; dorsoventral (DV), 1.7 mm (n = 8). A control group (n = 8) received injections of phosphate-buffered saline (PBS) to serve as a control. Open field, Y-maze, elevated plus maze, light and dark, and social interaction tests were used to evaluate the behavior outcomes. All experimental procedures were approved by an animal ethics committee. **Results:** Mice with induced dopaminergic degeneration in the PFC did not show significant differences in working memory and cognitive functions when compared to control groups. However, the social interaction tests revealed a notable reduction in social behavior, highlighting this as a significant non-motor impact of dopaminergic degeneration in this animal model. **Conclusion:** The reduction in social interactions highlights a major non-motor consequence of dopaminergic degeneration in the PFC of a PD mouse model. Addressing these deficits could be key to comprehensive therapeutic strategies for improving PD non-motor outcomes.

Keywords: Parkinson disease; Cognition; Social interaction; Prefrontal cortex; Nerve degeneration.

Financial support: Faculdade de Ciências Médicas de Minas Gerais, Fundação de Amparo à Pesquisa do Estado de Minas Gerais.

ORIGINAL RESEARCH

Vaccination profile against Herpes Zoster in a private company in Belo Horizonte

Perfil vacinal contra a Herpes Zoster em uma empresa privada de Belo Horizonte

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ABSTRACT

Introduction: Herpes Zoster (HZ) is a neurocutaneous disease caused by the reactivation of latent varicella-zoster virus (vzv). Due to the lack of a definitive and efficient treatment for HZ, vaccination emerges as the best form of prevention. Currently, in Brazil, immunization is limited to the private sector, with no plans for implementation in the public healthcare system (sus). **Objective:** To analyze the profile of HZ vaccination adherence from 2019 to 2023 in a private preventive medicine clinic located in Belo Horizonte. **Methods:** This is a quantitative analytical cross-sectional study using database analysis to verify continuous, dichotomous, and categorical variables. **Results:** During the evaluated period, 3841 individuals were vaccinated against HZ, with 2554 women (66%) and 1287 (34%) men. The predominant age group was between 50 and 69 years, representing 54% of the sample, with a mean age of 67 years. Regarding the available immunobiologics for vaccination, there was a balance between the number of doses administered for the two vaccines, Zostavax (single dose) with 2034 doses administered (53%), and Shingrix (two doses) with 1807 doses administered (47%). However, on an individual analysis, it was observed that there was a decrease in the administration of the second dose of Shingrix, with 1016 individuals vaccinated with the first dose and 791 with the second dose, representing a 22.14% reduction in revaccination. **Conclusion:** The HZ vaccination profile predominantly consists of women between 50 and 69 years old, which can be explained by the recommended age for vaccination and the higher adherence of females to vaccination in general. Additionally, a considerable portion of the sample did not receive the second dose, indicating difficulties in adhering to prolonged treatments.

Keywords: Herpes Zoster, Vaccination, Scientific Research.

Financial support: This research is supporting by FAPEMIG (Fundação de Amparo à Pesquisa do Estado de Minas Gerais) with Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL RESEARCH

Knowledge, acceptability, and vaccination adherence against Herpes Zoster

Conhecimento, aceitabilidade e adesão vacinal contra a Herpes Zoster

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ABSTRACT

Introduction: Herpes Zoster (HZ) is a neurocutaneous disease caused by the reactivation of latent varicella-zoster virus (VZV). Over 95% of adults are at risk of developing HZ. Additionally, between 2010 and 2019, there were over 16,000 hospitalizations due to varicella and HZ in Brazil. However, the disease remains poorly discussed in the country. **Objective:** To analyze the knowledge and acceptability of the population served by the public sector in an outpatient clinic in Belo Horizonte regarding HZ and its immunization. **Methods:** This is a quantitative analytical cross-sectional study using questionnaires. **Results:** Up to the present moment, 104 responses have been collected out of the projected 349. The mean age of the participants is 64.24 years, with a median of 63 years, ranging from 50 to 88 years. Most of the participants are female (75%). When asked about Varicella, 77.9% of the respondents claimed to be familiar with it, but only 22.1% had previously had it, and 38.2% had been vaccinated against it. Regarding “Chickenpox,” 100% of respondents reported being familiar with the disease, 73.1% had already had it, and 56.3% had been vaccinated. Regarding HZ, 56.6% claimed to be familiar with the disease, but 50% were unable to answer questions about its symptoms. 68% of the respondents were not aware of the HZ vaccine; however, 78.8% stated that they would get vaccinated, but only 40.2% would pay for the vaccine, with 80.6% of them willing to pay amounts lower than R\$500. **Conclusion:** The respondents demonstrated limited knowledge about Varicella and HZ regarding symptoms and immunization. The acceptability of HZ immunization was high, despite the lack of knowledge about its vaccines and mechanisms of action. However, the high cost still represents a barrier to increasing vaccination adherence against the disease.

Keywords: Herpes Zoster, Immunization, Scientific Research, Varicella.

Financial support: This research is supported by FAPEMIG (Fundação de Amparo à Pesquisa do Estado de Minas Gerais) with Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Head and Neck Paragangliomas: analysis of the impact of radiotherapy modalities on surgical technique

Paragangliomas de Cabeça e Pescoço: análise do impacto das modalidades radioterápicas na técnica cirúrgica

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ABSTRACT

Introduction: Head and Neck Paragangliomas (HNPG) are rare, highly vascularized, and slow-growing neoplasms. However, tumor growth can occur in regions with complex vascularization and innervation, and symptoms vary according to the affected structures, including hoarseness, dysphagia, pulsatile tinnitus, and hearing loss. Currently, radiotherapy has been employed as an adjuvant method to surgical resection, aiming to achieve better therapeutic outcomes. **Purpose:** To evaluate the impact of incorporating radiotherapy modalities on the surgical technique used in the resection of HNPG. **Methods:** Observational, qualitative and quantitative, analytical, longitudinal, and retrospective study. The sample comprises medical records of 16 patients diagnosed with paraganglioma between 1996 and 2022. The data obtained were age, sex, type of HNPG, treatment employed, and pre- and post-surgical deficits. Prevalence analysis and relative and absolute frequency of deficits for each type of treatment employed were established. **Results:** Statistical analysis of the study is ongoing. Sixteen cases of HNPG were analyzed, among which the following types were observed: jugulo-tympanic (43.75%), carotid body (18.75%), jugular (18.75%), jugular foramen (12.50%), and vagal (6.25%). The highest prevalence of HNPG was in women (75%), in the fifth and sixth decades of life, as found in the literature. The most common preoperative symptoms were pulsatile tinnitus (25%), headache (18.75%), hypoacusis (12.5%), dysphagia (12.5%), and pain (12.5%). Adjuvant radiotherapy was employed in 50% of cases, of which 25% showed significant symptom improvement without associated deficits. **Conclusion:** It is expected that the use of radiotherapy will be associated with better post-surgical outcomes. However, a more robust analysis is needed to better evaluate the impacts of new radiotherapeutic modalities on the approach to HNPG and its reduction in surgical morbidity and mortality.

Descriptors: Adjuvant Radiotherapy; Carotid Body Tumor; Glomus Jugulare; Glomus Tympanicum; Paraganglioma.

Financial support: Faculdade de Ciências Médicas de Minas Gerais

ORIGINAL STUDY

Therapeutic plasmapheresis: analysis of practices and compliance with international guidelines

Plasmaférese terapêutica: análise de práticas e conformidade com diretrizes internacionais

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ABSTRACT

Introduction: Therapeutic plasmapheresis is a therapy designed to remove pathogenic components while replenishing physiological fluids. The American Society for Apheresis (ASFA) regularly issues guidelines on the use of this therapeutic modality. The entity recognizes the challenges associated with apheresis practice, especially in assessing quality and effectively implementing recommendations in clinical practice. **Objectives:** Describe the epidemiology of patients undergoing therapeutic plasmapheresis and evaluate whether indications are in accordance with current ASFA guidelines. **Methods:** Retrospective observational study using data from a blood center serving hospitals in Belo Horizonte (MG). Inclusion criteria were therapeutic plasmapheresis performed in individuals over 18 years old, between April 2021 and December 2023. Data were compiled into a spreadsheet and subjected to statistical analysis. **Results:** During the period, 85 patients underwent the procedure, with 60% of whom were women, with a median age of 43 years. The most commonly used replacement was albumin (84%), except in cases of thrombotic thrombocytopenic purpura (TTP), when plasma was used. Around 31% of procedures were conducted in the ICU, with the remainder in the ward. A total of 493 apheresis sessions were performed, with an average of 5.8 per patient. The primary diagnoses were: neuromyelitis optica (24%), acute rejection post-kidney transplant (21%), TTP (12%), and Guillain-Barré syndrome (8.2%). Adverse reactions occurred in 5 sessions (1.01%): seizure; alveolar hemorrhage; hypotension; vasovagal reflex; edema; and urticaria. Regarding indication, 50% were classified as category I, 43% as category II, and 6.6% as category III. In terms of evidence level, 63% of cases fell into category 1B, 25% into 1A, 5.3% into 2C, 4% into 1C, and 2.7% into 2B. **Conclusion:** In this sample, indications were precise according to ASFA recommendations, with a low rate of adverse events. Future clinical studies are needed to evaluate the therapeutic response of the procedure.

Descriptors: Plasmapheresis; Hemotherapy Service; Guideline Adherence.

Financial support: Faculdade de Ciências Médicas de Minas Gerais (FCMMG)

ESTUDO ORIGINAL

Assessment of the impact of ICT utilization on health promotion among cardiology patients in a university outpatient clinic

Avaliação do impacto do uso das TICs na promoção da saúde em pacientes da cardiologia de um Ambulatório Universitário

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ABSTRACT

Introduction: The exponential advancement of Information and Communication Technologies (ICTs) has revolutionized various sectors, including the healthcare field. Although there are studies investigating the use of ICTs by patients to seek health information, there is still a shortage of specific research on how patients from clinical subspecialties utilize these technologies. Furthermore, understanding patient behavior in these specific contexts is crucial for improving communication between healthcare professionals and patients, as well as optimizing available resources for patient education and engagement in their own healthcare. **Objective(s):** To investigate the usage of Information and Communication Technologies by patients of a University Outpatient Clinic. **Methods:** This is a cross-sectional observational study conducted through the analysis of quantitative and qualitative data, by consulting the information described in electronic medical records and conducting interviews with a group of these patients. Individuals of both genders, above 18 years old, who signed the Informed Consent Form were included in the interview. **Results:** A total of 18 patients were interviewed, 12 women and 6 men. The average age of the patients was 66 years old. 50% of individuals had incomplete elementary education. Among the interviewees, approximately 4 (22%) of both genders do not know how to use the internet. Of these 22%, around 7 (39%) are individuals with incomplete elementary education. At a significance level of 0.05, a statistical association is observed between individuals categorized as “Incomplete Elementary Education” and “Not knowing how to use the internet”. **Conclusion:** The importance of digital inclusion is evident, as well as the need to explore new technologies and approaches to optimize communication and care provision, considering the challenges and needs of these individuals.

Descriptors: Communication; Education; Technology.

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Evaluation of the pharmacological thromboprophylaxis protocol in patients at a university hospital in Belo Horizonte

Avaliação do Protocolo de Tromboprolifaxia Farmacológica em Pacientes de um Hospital Universitário em Belo Horizonte

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ABSTRACT

Introduction: Venous thromboembolism (VTE) represents a significant public health concern, with alarming mortality rates worldwide. It is estimated that VTE affects around 1-2:1,000 adults per year, with an annual incidence of approximately 10 million people in different ethnic groups. In Brazil, VTE is responsible for more than 67,000 deaths between 2010 and 2019, with more than 520,000 VTE-related hospitalisations. Despite the availability of prophylactic measures, the incidence remains high, especially in hospital settings. **Objective:** This quantitative cross-sectional study aims to evaluate the effectiveness and potential economic impact of the pharmacological thromboprophylaxis protocol in patients at a University Hospital in Belo Horizonte. **Methods:** The study will include 969 patients at the Hospital's Medical Clinic between January 2023 and January 2024 who underwent pharmacological thromboprophylaxis. The inclusion criteria were adult patients over the age of 18. **Expected results:** The epidemiological analysis is expected to reveal a high incidence of VTE, with a significant prevalence of known risk factors such as immobilization, surgery, obesity and cancer. We anticipate finding a considerable rate of non-compliance with thromboprophylaxis guidelines, with potentially significant financial impact for the healthcare system, evidenced by the cost of in-hospital VTE treatment ranging from US\$69.11 to US\$88.39. **Conclusion:** This study highlights the importance of implementing and strictly adhering to pharmacological thromboprophylaxis protocols. The expected findings may inform strategies to improve the effectiveness and efficiency of thromboprophylaxis in hospital settings, contributing to improved healthcare and reduced costs associated with VTE.

Keywords: Thromboembolism; Venous thromboembolism; Thrombosis.

ORIGINAL STUDY

Clinical and lifestyle characterization of people diagnosed with dyspepsia attended in the care line of an ambulatory in Belo Horizonte

Caracterização clínica e de estilo de vida de pessoas com Dispepsia atendidas na linha de cuidados de um ambulatório em Belo Horizonte.

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ABSTRACT

Introduction: Dyspepsia is part of a heterogeneous group of symptoms that affect the upper abdomen. This is a condition that directly impacts the quality of life of patients; due to its prevalence, dyspepsia places a greater burden on health services (Rome IV criteria, 2021). **Objective:** To outline an epidemiological profile of users of the Care Line of a gastroenterology outpatient clinic in Belo Horizonte who have a diagnosis of dyspepsia. **Methods:** This is a prospective cross-sectional study in which 236 medical records of patients diagnosed with dyspepsia were evaluated, from that data were collected to perform a clinical and lifestyle characterization of these patients. **Results:** Of the selected patients, 75% are female and 25% are male. An age range of 19 to 90 years was observed. The mean BMI was 28.6 kg/m². Regarding the patients' lifestyle, alcohol consumption was more frequent than smoking, and the majority of patients were sedentary. Of the evaluated patients, the majority were hypertensive and continuously used more than 4 medications. Fasting blood glucose and glycated hemoglobin were above reference values, revealing a pattern of prediabetes in this population. **Conclusion:** It is concluded that there is a correlation between obesity and disease exacerbation, but the alcohol consumption and smoking habits of the patients do not follow literary patterns. It was not possible to establish a relationship between laboratory tests and dyspepsia prevalence.

Descriptors: Dyspepsia; Prevalence; LifeStyle; Ambulatory Care.

Financial support: This study received financial support from a scientific initiation scholarship offered to the main author by the Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Clinical and epidemiological profile of patients undergoing arteriovenous fistula in a university hospital in Belo Horizonte

Perfil clínico e epidemiológico dos pacientes submetidos a confecção de fistula arteriovenosa em um hospital universitário de Belo Horizonte

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ABSTRACT

Introduction: Chronic Kidney Disease (CKD), characterized by progressive and irreversible loss of renal function, is a significant public health issue. Treatment involves controlling underlying diseases, primarily diabetes and hypertension, and contributing factors. However, most chronic nephropathy patients progress to requiring some form of renal replacement therapy (RRT), such as hemodialysis. In this vein, arteriovenous fistula (AVF) emerges as the ideal vascular access, given its low complication rate and good durability. **Objective(s):** To analyze the clinical and epidemiological profile of patients undergoing AVF creation for hemodialysis at a university hospital within the public healthcare system. **Methods:** Prospective cross-sectional study, based on the analysis of medical records of patients who underwent AVF creation at a University Hospital in Belo Horizonte between July and November 2023. **Results:** Forty individuals (25 men) with a mean age of 66±17 years were included. The main risk factors found were arterial hypertension (90%), diabetes (57.5%), and dyslipidemia (25%). Regarding the type of AVF created, 55% were radiocephalic, 37.5% brachiocephalic, and 7.5% brachial axillary, with the left upper limb (75%) being the most used for creation. The mean creatinine level was 4.76 mg/dl for women and 6.11 mg/dl for men. It is noteworthy that only 11 individuals experienced complications after surgery. Only 12 individuals underwent RRT before AVF creation. A statistically significant correlation was found between prior RRT and creatinine level ($p=0.030$), hematocrit ($p=0.041$), and serum sodium ($p=0.017$). **Conclusion:** There is a high prevalence of comorbidities such as diabetes and hypertension in CKD individuals undergoing AVF creation. The significant correlation between prior RRT and certain laboratory parameters reinforces the importance of early identification and proper management of comorbidities to improve clinical outcomes and quality of life for these patients.

Keywords: Chronic Kidney Disease; Arteriovenous Fistula; Renal Replacement Therapy.

Financial Support: This research project received support from the Lucas Machado Educational Foundation (FELUMA) of Faculdade de Ciências Médicas de Minas Gerais (FCMMG) through a scientific initiation scholarship from the Scientific Initiation Scholarship Program (PROBIC-FCMMG).Parte superior do formulário

SYSTEMATIC REVIEW

Prevalence of sarcopenia in individuals after stroke

A Prevalência de Sarcopenia em Indivíduos Pós Acidente Vascular Cerebral

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ABSTRACT

Introduction: In recent years, stroke has shown a global prevalence of 89.13 million cases, considering all subtypes. The disease can trigger various systemic consequences that last and worsen over the years after stroke. Individuals after stroke frequently present muscle weakness, which is associated with various muscle abnormalities. Thus, sarcopenia induced by stroke, could be common, although infrequently studied. When related to a disease such as stroke, it is considered as a secondary sarcopenia and can trigger muscle atrophy more quickly, thus becoming part of the disease process. A previous systematic review investigated the prevalence of sarcopenia in individuals after stroke and included studies with considerably different screening standards, which further illustrates an unequal assessment, consequently impacting the clinical practice of these individuals.

Objective: To carry out an up-to-date meta-analysis to investigate the prevalence of post-stroke sarcopenia.

Methods: Systematic review registered with PROSPERO (CRD42023416980). The search was carried out in the MEDLINE, SCIELO, EMBASE, LILACS, PEDRO, EBSCOHOST, AMED and gray literature databases, with no date or language restrictions. Studies describing the prevalence of sarcopenia in post-stroke individuals over the age of 18 were included. Rayyan software was used to optimize the title screening process, carried out by two independent researchers.

Results: Of the 1142 articles found, 28 were included in the review, totaling 6687 post-stroke individuals. Of these, 85.7% were in an in-hospital setting and 48.5% were in the acute post-injury phase. Most of the studies were carried out in Asia (79%) and diagnosed sarcopenia according to the Asian Working Group of Sarcopenia consensus (50%). A screening prevalence of 51.87% (ranging from 13.9 to 80%) and 38.6% (ranging from 4.5 to 89%) of sarcopenia diagnoses were observed. **Conclusions:** High prevalence rates of post-stroke sarcopenia were observed, with high variability in relation to the form used for diagnosis and screening.

Keywords: Prevalence, Sarcopenia, Stroke, Muscle loss.

ORIGINAL STUDY

Exploring the epidemiological profile of patients in the gastrointestinal line of care: an approach to improve public health

Explorando o perfil epidemiológico dos pacientes na linha de cuidado gastrointestinal: uma abordagem para melhoria da saúde pública

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ABSTRACT

Introduction: The Gastrointestinal Line of Care (LCG) is a way of monitoring patients with gastrointestinal tract disorders, coming from Primary Health Care through all levels of care, and involves diagnosis, treatment and rehabilitation. The LCG helps promote public health, and it is important to investigate the epidemiological profile of the patients, considering demographic, clinical and socioeconomic characteristics, in order to outline better prevention strategies and more effective interventions. **Objective:** Evaluate the epidemiological profile of patients included in the LCG, treated at the Ambulatório Ciências Médicas (ACM), in order to improve service provision. **Methods:** Retrospective review of data from the medical records of patients inserted into the LCG in the ACM. All appointments were included, between March 2021 and December 2021, with patient identification records, primary ICD, comorbidities, medications in use, family history, social history and test results (abdominal ultrasound, endoscopy and colonoscopy). **Results:** There is great diversity in the epidemiological profile of patients included in the LCG, but when data is analyzed it is possible to identify some patterns in the selected categories, such as social habits, comorbidities and medication in use. Full statistical analysis is being carried out to identify further patterns, trends and associations between the variables. **Conclusion:** It is essential to understand the epidemiological profile of the patients included in the LCG in order to plan and implement targeted health policies, prevention programs and effective interventions. This approach facilitates the identification of risk groups; assesses the opportune moment to insert the patient into the LCG; enables the efficient allocation of resources and, consequently, a higher quality of care provided. The continuation of this work will provide essential information to understand the LCG patient profile, monitor their evolution, identify the best multidisciplinary approach and promote improvements in global and individual health.

Key words: Gastrointestinal Tract; Public Health; Health Profile, Epidemiology.

Financial support: This study has been sponsored by Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY REPORT

Incidence of endometrial polyps in postmenopausal patients undergoing diagnostic hysteroscopy, with previous ultrasonography of endometrial thickening at a university hospital in Belo Horizonte: prospective study

Incidência de pólipos endometriais em pacientes na pós-menopausa submetidas a histeroscopia diagnóstica, com ultrassonografia prévia de espessamento endometrial em hospital universitário de Belo Horizonte: um estudo prospectivo

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ABSTRACT

Introduction: Endometrial polyps (EP) are focal protrusions of the endometrium that can affect between 7.8 and 34.9% of women, with a higher prevalence between 40 and 60 years, especially in the postmenopausal phase, when compared to the premenopausal period. EPs are an important cause of abnormal uterine bleeding (AUB), accounting for 21 to 28% of AUB cases in postmenopausal women. Screening for EPs can be done by transvaginal ultrasound (TVUS), but the gold standard for diagnosis is diagnostic hysteroscopy (DH).

Methods: This is an observational, prospective, cross-sectional study that will be conducted by collecting data from patients undergoing DH at a University Hospital from Belo Horizonte. **Results:** In the data analysis of the research project, the estimated sample size is 127 patients. Up to this point, data from 147 women have been collected, among whom 90 (62%) fit the inclusion criteria of the research. Additionally, 39% of the patients included in the research showed endometrial thickening on TVUS. Of these, 69% with thickening on TVUS presented endometrial polyps on diagnostic hysteroscopy. According to what was expected, the majority of patients diagnosed with Endometrial Polyp on DH will have a prior result of endometrial thickening on TVUS.

Conclusion: Given the high incidence of endometrial polyps in women during perimenopause, especially in postmenopause, and due to diagnostic failures of TVUS, it becomes important to establish the true incidence of ultrasonographic findings of endometrial thickening, where the diagnosis of polyps is confirmed by DH. Considering that EP is the primary indication for performing DH, a procedure that allows for biopsy of the suspicious area and complete removal of the lesion, which investigates the potential for neoplastic transformation.

Keywords: Hysteroscopy; Ultrasonography; Postmenopause.

ORIGINAL STUDY

Analysis of knowledge about acute myocardial infarction in individuals seen at the outpatient clinic of a medical school in Belo Horizonte

Análise do conhecimento sobre infarto agudo do miocárdio em indivíduos atendidos no ambulatório de uma faculdade de medicina em Belo Horizonte

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ABSTRACT

Introduction: Acute Myocardial Infarction (AMI) represents one of the main causes of mortality both in Brazil and globally. Recognizing its signs and symptoms is crucial to ensuring early care and effective treatment. In this context, it is essential to assess the population's knowledge about AMI, to identify and fill information gaps.

Purpose: To examine the level of knowledge about AMI in the population attending an outpatient clinic at a medical school in Belo Horizonte. **Methods:** Cross-sectional, observational study, with 150 volunteers in the waiting room of an outpatient clinic. The assessment of knowledge was obtained by completing a questionnaire, containing dichotomous, open and multiple-choice questions about the signs and symptoms of AMI.

Results: The sample consisted of 150 individuals, of which 103 (68.7%) were female and 47 (31.3%) were male. Five individuals (3.3%) correctly identified all possible locations of anginal pain, while 30 (20%) got half of the options correct. Regarding pain irradiation sites, no participant identified all the possibilities, and 18 (12%) answered half or more of the options correctly. Regarding associated symptoms, 36 (24%) obtained 100% accuracy, while 30 (20%) did not get any of them correct. Furthermore, only four (2.7%) respondents reported having received prior medical advice on AMI prevention. Finally, 67 (44.7%) stated that they did not know which measures could prevent an AMI and, among those who reported knowing, 68 (48%) did not obtain any correct answers. **Conclusion:** A gap in knowledge about AMI was found among study participants. The low success rate in identifying the locations and radiation of pain, together with the limited prior medical guidance on prevention, highlights the importance of educational programs to improve understanding and prevention of this condition.

Keywords: Myocardial Infarction; Health Education; Disease Prevention; Information Dissemination.

Financial Support: FAPEMIG.

ORIGINAL STUDY

Association between anticholinergic burden and neurocognitive decline in elderly: a retrospective cross-sectional analysis

Associação entre a carga Anticolinérgica e o declínio neurocognitivo em idosos: uma análise retrospectiva transversal

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ABSTRACT

Introduction: In Brazil, there are over 28 million elderly individuals, which leads to an increase in medication consumption. One of the warnings for polypharmacy in the elderly is anticholinergic burden, which corresponds to the sum of intrinsic anticholinergic activity in various drugs, even if they are not necessarily categorized as antimuscarinic agents. Analyzing the anticholinergic burden is relevant because there are numerous adverse effects attributed to the accumulation of these substances. **Objectives:** To identify the prevalence of anticholinergic medication use in the elderly. To determine the relationship between anticholinergic burden and the presence of cognitive impairment in the elderly using chronic medications. **Method:** Cross-sectional retrospective analysis through observation of electronic medical records from a Geriatrics outpatient clinic and association between anticholinergic burden calculated by the Anticholinergic Risk Scale (ARS), Brazilian Anticholinergic Scale (EBA) and the score obtained by patients on the Mini-Mental State Examination (MMSE) on the same date. A total of 209 medical records were included in the final sample. **Results:** Out of 209 patients, 78 (37%) had some degree of anticholinergic burden according to the ARS, while according to the EBA, 103 of patients (49%) had anticholinergic burden. Of the total sample, 48% (101) showed a decrease in the MMSE score, considering educational cutoffs. In the studied sample, no correlation was found between the MMSE score and anticholinergic burden according to both scales used. On the other hand, an association was found between cognitive decline in MMSE and systemic arterial hypertension, dementias, education, and age. **Conclusion:** The use of anticholinergic medication in the elderly is relevant, as well as cognitive decline assessed by MMSE. However, several confounding factors influence this association, such as comorbidities, age, and education; which may justify the lack of statistically significant correlation between MMSE score and anticholinergic burden.

Keywords: Cholinergic Antagonists, Elderly, Cognitive Dysfunction, Adverse Effects, Drug Toxicity

ORIGINAL STUDY SUMMARY

Cardiovascular complications and treatment strategies in stroke survivors

Complicações cardiovasculares e estratégias de tratamento em sobreviventes de acidente vascular encefálico

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ABSTRACT

Introduction: Stroke, a leading cause of disability and mortality worldwide, is strongly associated with modifiable cardiovascular risk factors. In Brazil, stroke ranks as a leading cause of death and long-term disability, underscoring the urgent need for targeted cardiovascular management. **Objective:** To identify cardiovascular alterations in individuals who have experienced a stroke and are receiving subsequent cardiovascular care. **Methods:** A retrospective cohort study was conducted at an outpatient clinic from October 2022 to October 2023, analyzing medical records of patients diagnosed with stroke. Data collected encompassed personal demographics, details of the stroke incident and its sequelae, cardiovascular symptoms/events, requested examinations, and prescribed medications. Descriptive statistics, t- and chi-square tests determined the impact of investigated variables on outcomes. Ethical approval was granted (CAAE: 67119822.9.0000.5134). **Results:** The study evaluated 26 stroke patients with an average age of 66.4 years, with a slight male majority (57.7%). The prevalence of motor sequelae and speech impairments was observed in 46.2% and 19.2% of patients, respectively, indicating substantial long-term impacts of stroke. Cardiovascular risk profiles were prominently featured, with 100% of patients diagnosed with hypertension, 46.3% with type 2 diabetes, and hypercholesterolemia observed in 65.4% of the patients. Chronic arterial disease was the most prevalent condition at 34.6%. Laboratory tests showed suboptimal average high density lipoprotein (HDL) levels, while creatinine levels were high. Diagnostic assessments found electrocardiogram (ECG) abnormalities in 33.3% of patients, mostly related to ventricular repolarization and atrial fibrillation, and echocardiograms showed abnormalities such as valvular regurgitation in 50% of the sample. Treatment predominantly involved aspirin, simvastatin, and carvedilol, focusing on cardiovascular management and secondary prevention strategies. **Conclusion:** This study underscores the complex interplay between cardiovascular diseases and stroke. Continuous monitoring and customized treatment strategies to manage cardiovascular risks are required to improve long-term outcomes for stroke survivors.

Keywords: Stroke; Cardiovascular Diseases; Signs and Symptoms; Ambulatory Care

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

RESUMO DE ESTUDO ORIGINAL

The impact of meditation on the mental health and sleep quality of liver transplant patients: a randomized clinical trial

O impacto da meditação sobre a saúde mental e qualidade de sono de pacientes com transplante hepático: um ensaio clínico randomizado.

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ABSTRACT

Introduction: Liver transplant recipients commonly face emotional health challenges, including stress, insomnia, anxiety and depression. These challenges negatively impact the quality of life, increasing the risk of graft rejection. Meditation presents a promising non-pharmacological and cost-effective intervention to address such issues, particularly in Brazil, where liver transplants are the second most common type. **Objectives:** Evaluate the impact of meditation on mental health, sleep quality, symptoms of anxiety, depression and perceived stress in liver transplant recipients. **Methods:** This ongoing randomized controlled trial with two arms is conducted in two phases, separated by six weeks. The study recruited 143 liver transplant recipients aged 18 to 65 years, with at least six months post-operation. Participants were assessed for sociodemographic variables, sleep quality (Pittsburgh Sleep Quality Index), anxiety (Beck Anxiety Inventory), depression (Beck Depression Inventory), and stress (Perceived Stress Scale) symptoms, and then randomized. The intervention group engaged in twice-weekly meditation sessions of 15-30 minutes over six weeks. The control group waited for the same period. Follow-up data collection occurred after six weeks. This trial received ethical approval (CAAE: 69209323.2.0000.5134) and is registered with the Brazilian Clinical Trials Registry under the identifier RBR7cfmsdb. Statistical analysis was performed using two-way ANOVA with repeated measures, correlation, or t-tests to compare pre- and post-intervention scores. **Results:** 35 participants completed the trial, with preliminary results indicating significant improvement in sleep quality (mean difference [md] = 3.86; $p < 0.001$), anxiety (md = 7.06; $p = 0.01$), and depression (md = 5.93; $p < 0.001$) among the meditation group, compared to the control group. Reductions in anxiety and depression symptoms were highly correlated within the meditation group ($R = 0.898$; $IC95 = 0.71-0.96$; $p < 0.001$). **Conclusion:** Meditation seems a beneficial therapeutic strategy, offering a viable, drug-free option to improve the mental health of post-liver transplant patients.

Keywords: Randomized controlled trial; Liver transplantation; Meditation; Mental Disorders; Sleep Initiation and Maintenance Disorders

Financial support: Faculdade de Ciências Médicas de Minas Gerais and Coordenação de Aperfeiçoamento de Pessoal de Nível Superior–Brasil (CAPES)–Finance Code 001

ORIGINAL STUDY

Anabolic androgenic steroids: assessment of the knowledge of medical students

Esteroides androgênicos anabolizantes: avaliação do conhecimento de estudantes de medicina

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ABSTRACT

Introduction: Anabolic-androgenic steroids (AAS) are synthetic substances derived from testosterone, illicitly used on a large scale for aesthetic purposes, muscle gain, and sports performance. Numerous studies have demonstrated that AAS can induce various adverse reactions in users. **Objective:** To assess the beliefs and knowledge of medical students regarding AAS and potential complications associated with its misuse. **Method:** Qualitative and descriptive cross-sectional observational study was conducted using an online questionnaire developed by the authors. **Results:** The study included a sample of 309 medical students. Among the participants, 89% disagreed that AAS use promotes rapid, efficient, and healthy muscle hypertrophy. Only 25% of the students reported awareness of the correct indications for AAS prescription. Additionally, 73% agreed with the resolution prohibiting the use of these substances for aesthetic and sporting purposes in Brazil; however, only 14% believed this measure would be effective. Regarding complications related to AAS, the sample identified the most significant risks as heart problems, hypertension, aggressiveness, hepatotoxicity and dysphonia, and hirsutism in women. **Conclusion:** The study identified a significant knowledge gap among medical students regarding the correct indications for AAS and the health risks associated with their administration. It was observed that these topics are not adequately covered during medical education. The curriculum should address this subject given its high prevalence to equip future physicians with ethical medical practices, enable them to educate the public about the risks associated with AAS, and prepare them to manage the complexity of adverse effects linked to the improper use of these substances.

Keywords: Anabolic Androgenic Steroids; Adverse Event; Testosterone.

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Results of an entrepreneurship intervention among adolescents at a public school in Belo Horizonte

Resultados de uma intervenção em empreendedorismo entre adolescentes de escola pública de Belo Horizonte

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ABSTRACT

Introduction: Entrepreneurship is a crucial skill that must be cultivated from an early age. In this study, we evaluated the impact of an entrepreneurial intervention promoted by the Academic League for Health Entrepreneurship in a public school in Belo Horizonte. **Objectives:** To investigate changes in attitudes and entrepreneurial knowledge among adolescents aged 16 and 17 after participating in the “EmpreendaSaúde” project. **Methods:** A cross-sectional study was carried out that analyzed the questionnaires completed by students before and after the intervention. In addition, scientific articles were used to prepare the project and the questionnaire applied. **Results:** At the beginning of the project, the students expressed satisfaction in owning their own business, but few had the professional goal of becoming entrepreneurs. Most perceived challenges in creating business ideas, but demonstrated creative skills and the ability to recognize opportunities. The strongest skills identified were creativity, problem solving and recognizing opportunities. However, skills such as leadership, product development and networking skills were less highlighted. There was a significant increase in students scores regarding entrepreneurship knowledge; in the perception of viability and attractiveness of the subject; self-efficacy to start and run your own business; and in the development of entrepreneurial skills. **Conclusion:** After the intervention, it was possible to observe a greater predisposition of students to become entrepreneurs, in addition to a notable difference in their willingness to start and run their own business. These results highlight the effectiveness of entrepreneurial interventions among adolescents, emphasizing the importance of entrepreneurial education programs in public schools. Furthermore, they provide valuable insights for future initiatives that aim to promote an entrepreneurial culture among young people, which contributes to the economic and social development of communities.

Keywords: Entrepreneurship; Education, Primary and Secondary; Early Intervention, Educational.

ORIGINAL RESEARCH STUDY

Epidemiological profile of children victims of sexual assault

Perfil epidemiológico de crianças vítimas de violência sexual

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RESUMO

Introduction: Child violence is a worldwide phenomenon with social, physical and emotional consequences for all victims. Sexual violence is one of its cruelest forms and has lifelong consequences. **Objective:** To investigate and characterize the epidemiological profile of child victims of sexual violence treated in a legal medical unit. **Methods:** This is a retrospective, descriptive, cross-sectional study, with a sample of 46 children who suffered sexual violence, treated in a legal medical unit over a period of one year. To characterize the sample, simple frequency and percentage frequency were used to represent the qualitative variables, the chi-square test of independence in the variables was used to determine the level of association between the variables of interest and the Wilcoxon Rank Sum Test to detect the difference between groups for quantitative variables that did not follow a normal distribution. **Results:** The majority of children, 33 (72%), were female, with an average age of five years, with a range between 3.25 and 8 years. The attackers were members of the family in most cases. The time lag between the alleged assault and the legal medical examination was more than 7 days in 30% of cases. Only in 11% of cases the search occurred less than 72 hours after the attack; and in 8.7% of cases between 72 hours and 7 days. In 87% of the examinations, it was not possible to find expert evidence indicative of sexual violence. **Conclusion:** The study shows a long time lag between the sexual assault of children and the search for legal medical care, which may make it difficult to find traces. In this way, the importance of raising awareness among the scientific community and caregivers is highlighted in order to seek this service more quickly to perform justice.

Palavras-chave: forensic medicine, childhood, sexual violence

Financial support: This research project received support from Fundação Educacional Lucas Machado (FELUMA) of Faculdade de Ciências Médicas de Minas Gerais (FCMMG) through the granting of scientific initiation scholarship from the Scientific Initiation Scholarship Program (PROBIC-FCMMG).

ORIGINAL STUDY

Comparison between direct oral anticoagulants and heparin for venous thromboembolism prophylaxis in non-critical patients admitted to a university hospital in Belo Horizonte

Comparação entre anticoagulantes orais diretos e heparina para profilaxia de tromboembolismo venoso em pacientes não-críticos internados em Hospital Universitário de Belo Horizonte

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ABSTRACT

Introduction: Venous thromboembolism (VTE) is a condition of high incidence among non-critically ill hospitalized patients. Injectable anticoagulants, such as heparins, have been used for years for its prophylaxis. However, these have a high prevalence of bleeding and other adverse events among users. Therefore, oral anticoagulants have emerged to facilitate the use of these drugs by the population and minimize such effects.

Objective: To evaluate the association between the use of Heparin or Rivaroxaban for venous thromboprophylaxis and the occurrence of adverse events in non-critically ill patients admitted to a University Hospital.

Method: This is a retrospective, observational, quantitative cohort study with a convenience sample of 57 patients. Non-critically ill patients admitted to a University Hospital, using Rivaroxaban or Heparin, in the years 2018, 2019, 2021, and 2022 who experienced an outcome of VTE during their hospitalization were included.

The search was conducted on the MVPEP platform using the patients' admission numbers, which provided access to their medical records. At the end of the first stage, 100 patients were selected and underwent further analysis, excluding cases of phlebitis.

Preliminary Results: The sample had an average age of 64.56 (\pm 15.59) years. The maximum age was 92 and the minimum was 27 years, with 30 men and 27 women. Among these, 31 had clinical admissions and 26 surgical admissions. The average length of hospital stay was 34.59 (\pm 24.54) days, ranging from 2 to 113 days. Additionally, 20 patients required mechanical ventilation, 45 were discharged, and 12 deceased. Finally, 8 used Rivaroxaban and 49 were treated with Heparin.

Conclusion: It is expected that Rivaroxaban will be non-inferior to heparins regarding the incidence of VTE, however with a higher incidence of hemorrhagic events when compared to the use of heparins.

Keywords: Factor Xa Inhibitors; Hemorrhage; Drug-Related Side Effects and Adverse Reactions; Venous Thromboembolism; Disease Prevention; Heparin.

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ORIGINAL STUDY

Neuropathic pain: prevalence and risk factors in patients undergoing primary total knee arthroplasty

Dor neuropática: prevalência e fatores de risco em pacientes submetidos à artroplastia total primária de joelho

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ABSTRACT

Introduction: Neuropathic pain (NP) is a chronic syndrome resulting from injuries or pathologies of the somatosensory system, manifesting through symptoms such as dysesthesias, electric sensations, burning, and allodynia, and it is caused by various diseases and injuries. **Objective:** To analyze the prevalence and risk factors for neuropathic pain in patients undergoing primary total knee arthroplasty (TKA). **Methods:** This is a prospective observational study, which included a cohort of patients with chronic pain, over 18 years old, candidates for TKA at a public hospital specializing in knee surgery in Belo Horizonte. Data were collected based on patients' medical records and through the application of a questionnaire, via telephone call, with socioeconomic variables, comorbidities, previous treatments, and the Douler Neuropathique 4 Questions interview, a screening tool for NP. All patients with unsuccessful contact or who refused to participate in the survey were excluded. **Results:** 23 patients were included, of whom 43.5% had NP, mostly female (60.9%), between 50 and 80 years old, with grade I obesity (34.8%), and with limitations in performing their daily activities (95.7%). The main pain characteristics observed were sensations of electric shock (56.5%) and pinprick (52.2%). Systemic arterial hypertension and diabetes mellitus were the most observed comorbidities. **Conclusion:** Many of the candidates for TKA suffer from chronic pain, which manifests as NP; the main risk factors observed were female gender, advanced age, and obesity. NP is often underdiagnosed, which impairs its specific treatment, prognosis, and patients' quality of life, making its proper screening extremely important.

Keywords: neuropathic pain; prevalence; primary total knee arthroplasty; chronic pain

Financial support: This research project receives support from the Scientific Initiation Program of Hospital Felício Rocho and Faculdade de Ciências Médicas de Minas Gerais (PIC-HFR/FCMMG) through the granting of a scientific initiation scholarship.

ORIGINAL STUDY

Chronic neuropathic pain: a prevalent symptom in urgency and emergency unit

A dor crônica de característica neuropática: um sintoma prevalente em unidade de urgência e emergência

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ABSTRACT

Introduction: Neuropathic pain (NP) is a chronic syndrome resulting from an injury or pathology of the somatosensory system. It is estimated that 10% of the Brazilian population presents pain with neuropathic characteristics. In an orthopedic urgency and emergency unit, patients with recent traumas, sprains, chronic pain and idiopathic musculoskeletal disorders are treated. Distinguishing nociceptive pain from neuropathic pain is important to establish etiology, prognosis and specific treatments. **Objective:** To investigate the prevalence and factors associated with neuropathic pain in patients treated at the orthopedic clinic in an urgent and emergency unit. **Method:** This is a cross-sectional study, which included patients over 18 years of age treated in the emergency room at the orthopedic clinic of a hospital located in Belo Horizonte. The sample size calculation was 139 patients. Data were collected through the application of a questionnaire that contained variables associated with the patient's pain, socioeconomic level and comorbidities. Those with chronic pain were also administered the Douler Neuropathique 4 Questions (DN4), a screening instrument for DN. **Results:** 197 patients were included, of which 18.8% had chronic pain, and of these, 11.7% had neuropathic pain, the majority of whom were female, between 40 and 60 years old. Only 34.8% had comorbidities other than Diabetes Mellitus or High Blood Pressure. It is observed that, although the study was carried out in an Emergency Room (ER), a service mainly focused on providing care to patients suffering from acute conditions, a significant prevalence of neuropathic pain was found. **Conclusion:** Several patients seek physician assistant with complaints of untreated chronic pain, which manifests as NP, which makes us believe that an underdiagnosis occurs, making the investigation of NP in individuals who present complaints of chronic pain extremely important.

Keywords: Orthopedics; Emergency; Chronic pain; Diagnosis.

Financial support: This research project receives support from the Scientific Initiation Program of Hospital Felício Rocho and Faculdade de Ciências Médicas de Minas Gerais (PIC-HFR/FCMMG) through the granting of a scientific initiation scholarship.

ORIGINAL STUDY

Multimorbidity in older adults and the utilization of healthcare services: ELSI-Brazil

Multimorbidade em adultos mais velhos e a utilização dos serviços de saúde: ELSI-Brazil

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ABSTRACT

Introduction: Multimorbidity refers to the presence of two or more chronic health conditions in an individual. People with chronic conditions have higher utilization of healthcare services. Understanding this usage is essential to providing efficient care, optimizing resources, and improving health outcomes for this population.

Objective: To describe the experience of people with multimorbidity in utilizing healthcare services. **Methods:** Cross-sectional study using secondary data from the Brazilian Longitudinal Study of Aging (ELSI-Brazil) from 2019-2021. A descriptive analysis of the prevalences and 95% confidence intervals of sociodemographic variables and healthcare service utilization among users with multimorbidity was performed. All results presented achieved $p < 0.05$. **Results:** The final sample consisted of 9,949 individuals aged 50 and over, of whom 61.4% had multimorbidity. The prevalence of multimorbidity was higher among women (65.2%; CI95%: 61.7 - 68.5), widowed individuals (69.4%; CI95%: 65.0 - 73.5), and the oldest age group, 80 years or older (78.7%; CI95%: 73.5 - 83.2), with prevalence increasing with age. Among those with multimorbidity, 66.5% (CI95% 63.2 - 69.7) have a regular healthcare professional or service they seek when ill, and 63.8% (CI95% 60.3 - 67.1) always consult the same doctor. Most report that their doctor knows the medications they use (62.7%; CI95%: 59.1 - 66.2) and is aware of all their health problems (62.2%; CI95%: 58.9 - 65.5). **Conclusion:** The prevalence of multimorbidity was high among study participants. Most participants have a connection with a healthcare service, and their doctors are well-informed about their medications and health issues.

Keywords: Multimorbidity; Health Services; Cross-Sectional Studies; Noncommunicable Diseases.

Financial support: Faculdade de Ciências Médicas de Minas Gerais - FCMMG

ORIGINAL ARTICLE

Comparative analysis of patient satisfaction level after total knee arthroplasty in a public hospital and a private hospital in Belo Horizonte

Análise comparativa do grau de satisfação do paciente após artroplastia total de joelho em um hospital público e em um hospital privado de Belo Horizonte

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ABSTRACT

Introduction: In Brazil, it is estimated that around 12 million Brazilians have Osteoarthritis (OA), equivalent to 6.3% of the adult population in 2022. Total Knee Arthroplasty (TKA) can provide considerable benefits to patients in terms of quality of life, pain relief, and functionality in the medium and long term. In 2019, Brazilian government expenditures on health amounted to approximately R\$ 711.4 billion. Of this amount, R\$ 283.6 billion were spent by the Federal Government, while R\$ 427.8 billion were expenses of household final consumption and nonprofit institutions serving households. Patient satisfaction is an essential aspect in evaluating actions developed in the healthcare sector, as well as guiding the planning of health services and systems. In a scenario of discrepancy between public and private health expenditures and with a forecast of an increase in the elderly population, comparing patient satisfaction after TKA becomes essential to evaluate the actions developed and guide health service planning. **Objective:** To compare, between a public service and a private service in Belo Horizonte, the level of patient satisfaction regarding the outcome of TKA. **Method:** This is a cross-sectional observational study conducted on patients who underwent TKA between 15 to 20 weeks, in a public hospital and a private hospital. **Expected Results:** Despite data collect has not been completed yet, the researchers expect to find similar levels of patient satisfaction after TKA between private and public services.

Descriptors: Total knee arthroplasty; Osteoarthritis; Quality of life.

Financial support: FAPEMIG

ORIGINAL STUDY

Assessment of the knowledge of medical students from a health education institution about oral hormonal contraceptive methods

Avaliação do conhecimento de internos de medicina de uma instituição de ensino em saúde acerca dos métodos contraceptivos hormonais orais

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ABSTRACT

Introduction: In addition to the primary function of oral hormonal contraceptives (OHCs) in preventing unwanted pregnancies, pills may be prescribed for a variety of medical indications. Given their growing relevance in the healthcare context, it is imperative to determine whether future physicians master the specifics of such drugs and are prepared to prescribe them. **Objective(s):** To assess the level of knowledge of 5th and 6th-year medical students from a health education institution regarding the topic of OHCs and to determine if there is a discrepancy in subject mastery between penultimate and final-year students. **Methods:** This is a cross-sectional, quantitative, and descriptive study with the voluntary participation of 260 students enrolled in the penultimate and final years. The assessment was conducted through a questionnaire on the Google Forms platform, disseminated via WhatsApp, covering topics such as indications, contraindications, and drug interactions. Participation required agreeing to the Informed Consent Form. **Results:** Preliminary results indicated that 62% of participants expressed confidence in their ability to prescribe an OHC, believing they possessed adequate knowledge about indications and contraindications. However, when queried about potential drug interactions with different types of medications, 77% were unable to provide information about antifungals, and 44.9% did not know what action a patient should take in case of missing a dose of the contraceptive. Additionally, 58% of participants were unable to correctly identify an absolute contraindication of OHCs, with no significant discrepancy observed among the evaluated groups. **Conclusion:** The preliminary analysis indicated that the knowledge level of 5th and 6th-year medical students had a lower accuracy rate in the aforementioned aspects, highlighting an opportunity for improvement in medical education and consequently enhancing guidance for future patients. Lastly, the completion of the statistical analysis is necessary for further associations.

Keywords: Hormonal Contraceptives; Oral Contraceptives; Reproductive Health.

Financial support: This research received support from the Fundação Educacional Lucas Machado (FELUMA) of the Faculdade de Ciências Médicas de Minas Gerais (FCMMG) through the granting of a scientific initiation scholarship from the Programa de Bolsas de Iniciação Científica (PROBIC FCMMG).

ORIGINAL STUDY SUMMARY

Profile and determinants of patient absenteeism from scheduled appointments in cardiology outpatient care

Perfil e determinantes do absenteísmo de pacientes às consultas agendadas em atendimento ambulatorial de cardiologia

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ABSTRACT

Introduction: Outpatient absenteeism is defined as the absence of patients from previously scheduled appointments at health units, without prior notice. This results in a lack of available care for other patients as well as administrative and financial strain. Therefore, evaluating the characteristics of the patient who does not attend the appointment and its cause becomes essential to develop effective proposals and resolve this problem. Purpose: To analyze the profile of patients who were absent from the cardiology outpatient service and list the causes underlying the number of absences. **Methodology:** Cross-sectional, observational study carried out in two stages, the first being the analysis of 531 electronic medical records from the cardiology outpatient clinic of a university hospital, covering the period from February 2022 to April 2024 where sociodemographic and clinical characteristics were collected. The second stage, which is still ongoing, includes telephone contact with patients who are absent from scheduled appointments and questioning them about the reason for their lack of attendance. All information collected will be stored in a spreadsheet with access restricted to researchers. **Results:** Preliminary data identified 137 total absent patients, which points to a rate of 25.8% absenteeism. There was a predominance of female individuals, with an average age of 65.4 years, mixed race and married. It is expected to find among the main causes of abstention, follow-up in another service, failure in communication and forgetting the appointment. **Conclusion:** This study will contribute to the development of measures aimed at increasing adherence to consultations and continuity of treatment, through the implementation of information technologies and professional training within the scope of effective communication with patients. In addition, improvements are proposed for patient record questionnaires in order to achieve a more precise sociodemographic profile.

Keywords: Absenteeism; ICT in health; Ambulatory care.

Financial support: PROBIC

CATEGORY: ORIGINAL STUDY

Analysis of the epidemiological profile of tuberculosis in adults over 20 years old from 2012 to 2022

Análise do perfil epidemiológico da tuberculose em adultos acima de 20 anos no período de 2012 a 2022

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ABSTRACT

Introduction: Tuberculosis (TB) is an infectious and contagious lung disease, caused by the bacterium *Mycobacterium tuberculosis*, transmitted through the air, through respiratory secretions. It has a higher incidence in vulnerable populations, such as low-income people and immunosuppressed people. The main risk factors involved in tuberculosis are: diabetes, smoking, alcohol use and use of other drugs. Therefore, an epidemiological study focused on this disease is necessary, as TB has a high incidence in the population and there are many risk factors related to this clinical condition. **Purpose:** To analyze the epidemiological profile of tuberculosis in adults over 20 years old by year of diagnosis from 2012 to 2022. **Methods:** Cross-sectional population-based descriptive study, with analysis of data provided by DATASUS. **Results:** In general, there is a growing increase in TB cases in Brazil, totaling, in 2022, more than 1 million cases of the disease. The ratio of black/black and indigenous people with tuberculosis is higher compared to the others. The majority of smokers with TB are male, accounting for 21.46%; in analogy, 68.46% of men are HIV positive and are more susceptible to TB. Smokers are more susceptible to latent infection and the development of the disease, and HIV-positive people with TB are at greater risk of progressing to AIDS and are more likely to die compared to HIV-negative TB patients. Furthermore, extrapulmonary forms of TB are increasing proportionally with the incidence of the disease. The lack of education limits the population's knowledge of TB protection and prevention methods. **Conclusion:** Studying tuberculosis is necessary, given the potential benefits that prophylactic, diagnostic and therapeutic measures can bring. The increase in the number of cases in the period analyzed shows the need for more effective education policies, seeking information from the population and controlling cases.

Keywords: Tuberculosis; Adults; Prevalence; Risk factors.

Financial support: Faculdade Ciências Médicas de Minas Gerais

ESTUDO ORIGINAL

The perception of the transgender population regarding access to healthcare and inclusion in cancer prevention campaigns

A percepção da população transgênero sobre o acesso à saúde e inclusão em campanhas de prevenção ao câncer

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ABSTRACT

Introduction: The number of transgender individuals has been increasing in recent years, which requires greater commitment from health policies in addressing the specificities involved in gender affirmation strategies. It is known that, after hormonal therapy and certain gender reassignment surgeries, there is a persistence or increase in the risk of developing breast and cervical cancers in transgender women and prostate cancer in transgender men. This justifies the need to discuss ways to better include this population in prevention and health promotion programs of Primary Health Care (PHC), as well as in the Brazilian Unified Health System (SUS) network. **Objectives:** To understand the perception of the transgender population regarding access to healthcare and inclusion in cancer prevention programs. **Methods:** This is a qualitative descriptive study, still in development, aiming to interview seven to ten representatives of the transgender population in Belo Horizonte/MG. The saturation criterion will be respected, which aims to handle concerns and issues that are not solved with epidemiological or experimental approaches. **Preliminary Results:** From February/2024 to March/2024, five people were interviewed, all transgender women, of which four (80%) were users of the Brazilian Unified Health System (SUS) and one (20%) a user of private healthcare services. The required number of interviews necessary to reach saturation has not yet been completed, and the treatment of the collected data is still in progress. **Conclusion:** By the end of the project (October/2024), we expect to identify the barriers faced by the transgender population in accessing healthcare, as well as to understand their perception regarding the inclusion of this population in cancer prevention programs.

Descriptors: Public health; Minority health; Transgender Persons; Early Detection of Cancer.

ORIGINAL STUDY

Phacoemulsification with monofocal plus intraocular lens implantation in a patient with senile cataract - case report

Facoemulsificacao com implante de lente intraocular monofocal plus em paciente portadora de catarata senil - relato de caso

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ABSTRACT

Introduction: Cataract is an opacity of the cristalline and the biggest cause of curable blindness worldwide. The treatment is phacoemulsification with intraocular lens (IOL) implantation which consists of removing the opaque biological lens and implant an IOL. Different IOLs have been developed to meet the needs of the patients. The monofocal IOL allows patients excellent visual acuity, however, it's necessary to use glasses for medium and short distances. In this sense, multifocal lenses were developed, reducing the need for the use of glasses, although they pose a greater risk of unwanted visual phenomena, such as photic disorders. Aiming to solve this demand the monofocal plus lens was created, which proposes improved distance and intermediate vision. **Description:** A.P, 66 years old, female, attends the consultation at an Institute of Eyes for cataract evaluation. On examination, uncorrected long-distance visual acuity (UDVA) was 20/150 right eye (RE) and 20/40-1 left eye (LE) at long distance; UDVA at short distance (37cm) J2 both eyes (BE); UDVA intermediate distance (66cm) J2 BE; Corrected visual acuity (CDVA) at long-distance -1.25 -0.75 x 55 20/40 RE and -0.25 -0.50 x 160 20/40 LE; CDVA 37cm +3.00 J1-2 RE and +3.00 J1-1 LE; CDVA 66cm +2.00 J1-1 BE. Biomicroscopy: CNEGI-II + anterior chamber, worse RE; Phacoemulsification was performed and the monofocal plus IOL was implanted in the patient's ER. On the 30th day after surgery, the patient returns without complaints, reports a correct postoperative period and improved vision. On examination, long-distance UDVA was 20/20 RE; UDVA J1 RE at 37cm and 66cm. **Discussion:** The monofocal plus lens had a positive result, given the significant improvement in UDVA, especially at short and medium distance, as demonstrated in other studies. **Conclusion:** Therefore, the monofocal plus lens proved to be effective in improving visual acuity at intermediate and short distances.

Keywords: Cataract; intraocular lenses; Intraocular lens implantation.

Financial support: Faculdade de Ciências Médicas de Minas Gerais.

ORIGINAL STUDY

Multimorbidity in older adults and the utilization of healthcare services: ELSI-Brazil

Multimorbidade em adultos mais velhos e a utilização dos serviços de saúde: ELSI-Brazil

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ABSTRACT

Introduction: Multimorbidity refers to the presence of two or more chronic health conditions in an individual. People with chronic conditions have higher utilization of healthcare services. Understanding this usage is essential to providing efficient care, optimizing resources, and improving health outcomes for this population.

Objective: To describe the experience of people with multimorbidity in utilizing healthcare services. **Methods:** Cross-sectional study using secondary data from the Brazilian Longitudinal Study of Aging (ELSI-Brazil) from 2019-2021. A descriptive analysis of the prevalences and 95% confidence intervals of sociodemographic variables and healthcare service utilization among users with multimorbidity was performed. All results presented achieved $p < 0.05$. **Results:** The final sample consisted of 9,949 individuals aged 50 and over, of whom 61.4% had multimorbidity. The prevalence of multimorbidity was higher among women (65.2%; CI95%: 61.7 - 68.5), widowed individuals (69.4%; CI95%: 65.0 - 73.5), and the oldest age group, 80 years or older (78.7%; CI95%: 73.5 - 83.2), with prevalence increasing with age. Among those with multimorbidity, 66.5% (CI95%: 63.2 - 69.7) have a regular healthcare professional or service they seek when ill, and 63.8% (CI95%: 60.3 - 67.1) always consult the same doctor. Most report that their doctor knows the medications they use (62.7%; CI95%: 59.1 - 66.2) and is aware of all their health problems (62.2%; CI95%: 58.9 - 65.5). **Conclusion:** The prevalence of multimorbidity was high among study participants. Most participants have a connection with a healthcare service, and their doctors are well-informed about their medications and health issues.

Keywords: Multimorbidity; Health Services; Cross-Sectional Studies; Noncommunicable Diseases.

Financial support: Faculdade de Ciências Médicas de Minas Gerais - FCMMG

ORIGINAL STUDY

Evaluation of realistic simulation and the academic monitoring process as teaching methods in medical students' learning

Avaliação da Simulação Realística e do Processo de Monitoria Acadêmica como método de ensino no aprendizado de estudantes de medicina

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ABSTRACT

Introduction: The incorporation of innovative teaching-learning methods holds significant relevance in enhancing the development and training of academics in the healthcare field, providing tools for a more practical and reflective education. Realistic simulation (RS) stands as an active teaching methodology, facilitated through the utilization of technologies, wherein students have the opportunity to practice what they have learned in a safe and controlled environment, honing their skills and medical practice proficiency before application with patients. This process aims to construct the knowledge, engaging both students and teachers actively in the classroom, thus replacing mere information memorization and the vertical transfer of knowledge with interdisciplinary practice. **Purpose:** This study seeks to analyze the contribution of the teaching methods, realistic simulation, and monitoring, to the skills and practical competencies of medical students at a faculty in the state of Minas Gerais. **Methods:** The study adopts an analytical observational research design of transversal nature. The sample comprised students (aged 18 to 25 years) from the medicine course who undertook the module “Training and Skills VII” in the second semester of 2022 at a private college. Data collection was carried out through the administration of an electronic questionnaire on Google Forms platform, employing the “Student Satisfaction and Self-Confidence in Learning” scale. **Results:** Statistical analysis revealed that 99.3% of the students believed that RS aided them in feeling confident in performing techniques, while 81% of them strongly agreed that academic monitoring process is crucial for knowledge acquisition. Correspondingly, 74% of respondents indicated that the teaching methods utilized in the simulation were beneficial and effective. **Conclusion:** This study supports the notion that the implementation of realistic simulation and monitoring as teaching methods yields positive effects in the acquisition of skills and practical competencies by students.

Keywords: Simulation Training; Tutoring; Undergraduate Education in Medicine.

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ORIGINAL STUDY

Functional capacity and sarcopenia screening in post-stroke individuals: a cross-sectional study

Capacidade funcional e rastreamento de sarcopenia em indivíduos pós Acidente Vascular Cerebral Crônico: um estudo transversal

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ABSTRACT

Introduction: Stroke is caused by the lack of oxygenation and nutrients in the brain due to the obstruction or rupture of blood vessels. Muscle weakness is a common consequence of stroke and it can lead to the individuals' reduced functional capacity on activities of daily living. Sarcopenia, which is a muscle disease related by the reduction of muscle strength and quality, can be presented by stroke survivors and it could also affect their capacity on performing activities of daily living. Thus, it is important to investigate the role of the association of both conditions on the individuals' functional capacity. **Purpose:** To investigate the association between functional capacity and sarcopenia screening in individuals after chronic stroke. **Methods:** This is a cross-sectional study which included post-stroke individuals aged 18 or older who have scored over 18 on the Mini Mental State Examination. The sample was recruited by convenience. After the initial assessment, the SARC-F and SARC-CalF questionnaires were administered to screen for sarcopenia. Hand grip strength was assessed, using the Jamar[®] Dynamometer, to confirm the diagnosis. Finally, a questionnaire to assess the individuals' functional capacity (Duke Activity Status Index) was administered. Data was collected in person at the Faculdade de Ciências Médicas de Minas Gerais (FCMMG). This study was approved by the FCMMG Research Ethics Committee. Chi square will be used to investigate the association between the variables. **Expected results:** It is expected that there will be an association between functional capacity and the presence of sarcopenia in post-stroke individuals..

Keywords: Stroke; Sarcopenia; Functional capacity.

Financial support: This research project received support from the Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG) through a scientific initiation scholarship from the Programa Institucional de Bolsas de Iniciação Científica (PIBIC) of the Faculdade de Ciências Médicas de Minas Gerais (FCMMG).

ORIGINAL STUDY

Walking speed and sarcopenia screening in individuals post-stroke: a cross-sectional study

Velocidade de marcha e o rastreamento de sarcopenia em indivíduos pós acidente vascular cerebral crônico: um estudo transversal

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ABSTRACT

Introduction: Stroke is one of the main causes of disability in the world, resulting in many muscle dysfunctions, such as the loss of strength, trophism, muscle mass and muscle quality. These muscular alterations can lead to stroke-related sarcopenia. Sarcopenia is a disease that affects the musculoskeletal system, which can have consequences on walking speed and impacts on the individuals' quality of life. Although walking speed is an important feature affected on both post-stroke and sarcopenia individuals, only a few studies investigated the association of walking speed on individuals with stroke-related sarcopenia. **Objective:** To investigate the association between walking speed and sarcopenia in individuals after stroke, as well as whether community ambulatory and non-community ambulatory individuals have different SARC-F and SARC CAL-F scores. **Method:** This cross-sectional study was carried out at the Faculdade de Ciências Médicas de Minas Gerais (FCMMG) and approved by the FCMMG Research Ethics Committee. The study included chronic hemiparetic individuals who were able to walk independently and had suffered a stroke at least six months prior to the beginning of the research. The SARC-F and SARC CAL-F questionnaires were used to screen for sarcopenia. The 10-meter walk test was used to measure gait speed. Chi-square will be used to investigate the association between the variables and the t-test will be used to investigate whether there are differences between the SARC-F and SARC CAL-F scores according to gait categorization (community and non-community ambulatory individuals). **Expected results:** It is expected that there will be an association between sarcopenia and gait speed. It is also expected that individuals with higher SARC-F and SARC CAL-F scores will have lower gait speed.

Keywords: Stroke. Sarcopenia. Walking Speed.

Financial support: This research project received support from the Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG) through a scientific initiation scholarship from the Programa Institucional de Bolsas de Iniciação Científica (PIBIC) of the Faculdade de Ciências Médicas de Minas Gerais (FCMMG).

ORIGINAL STUDY

Family planning: does multiple sclerosis influence the desire to become a mother?

Planejamento familiar: a esclerose múltipla influencia o desejo de ser mãe?

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ABSTRACT

Introduction: Multiple sclerosis (MS) is the most prevalent demyelinating disease in the population, mainly affecting women of childbearing age. Historically, women with MS had fewer children than the general population. With the advent of disease-modifying drugs (DMD) and the consequent reduction in disability, the pregnancy rate has increased. We found 24 articles linking MS and pregnancy, but none of them addressed patients' self-perception of family planning. **Objective:** To assess the influence of MS on family planning in patients with the disease. **Methods:** This is a cross-sectional, quantitative study in which female MS patients over the age of 18 and of childbearing age answer the "Desire to have children" questionnaire, which contains 10 questions about the desire for motherhood. The final result is obtained by calculating the arithmetic mean of the individual answers obtained using a graduated scale, which is proportional to the desire to have children. **Results:** Applying the inclusion criteria, 9 patients were selected for the study by April/2024, with an average age of 31.8 years. Of these, 44.4% were married and 55.5% were single. All the patients were taking some form of DMD, 44.4% Fingolimod and 33.3% Natalizumab. With regard to family planning, 66.6% of the patients used some form of contraception and 33.3% had been pregnant previously, all before diagnosis. 22.2% reported a previous history of abortion. 55.5% of the patients reported that the diagnosis of MS had interfered with their desire to become a mother. The average score obtained by the scale was 3.37 among the patients, with 1.1 and 5.7 being the lowest and highest, respectively. **Conclusion:** More data is needed to establish the relationship between a previous diagnosis of MS and a decreased desire for motherhood

Descriptors: Planned pregnancy; Degenerative diseases of the central nervous system; Female contraception

ORIGINAL STUDY

Antipsychotic medications efficacy on the clinical outcomes of schizophrenic outpatients assisted at a teaching clinic

Efeito dos antipsicóticos na evolução clínica de pacientes com esquizofrenia atendidos em um ambulatório universitário

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ABSTRACT

Introduction: Schizophrenia is a psychiatric disorder commonly associated with impairments in social and occupational functioning. It generally presents itself with several symptom domains but is strongly marked by positive ones, which include hallucinations, delusions as well as disorganized thoughts and behaviors.

Objective: To assert the effect of antipsychotic drugs on the clinical outcomes of schizophrenic patients.

Methods: Retrospective observational study developed from the analysis of medical records of schizophrenic outpatients assisted at a teaching clinic located in Belo Horizonte. Data was collected from all patients (70) who met the criteria: attending the clinic, having schizophrenia, and using antipsychotics. Patients with other CIDs were excluded. To measure the antipsychotic effectiveness, a modified PANSS scale, which assesses the symptoms of the illness, was used. The most relevant criteria for estimating clinical improvement was suited and selected to appraise the drug's ability to diminish positive symptoms, increase daily activities, and reduce inappropriate behavior. As a result, the methodology does not only consider subjective data from medical records.

Results: The most used antipsychotics were haloperidol (25) and risperidone (22). The latter led to diminished positive symptoms, increased daily activities, and absence of inadequate behaviors ratios of 91%, 77%, and 73%, respectively, in contrast to the former's ratio of 76%, 48%, and 48%. When used on the same patient, risperidone and haloperidol (4) previously mentioned ratios rested at 75% each. The third most prevalent drug, olanzapine (8), reduced positive symptoms in 88% of the patients, a ratio comparable to risperidone, although it only raised daily activities 50% of the time and prevented inadequate behaviors in 63% of the users.

Conclusion: Amongst antipsychotic medications that had four or more occurrences, risperidone came up as the most versatile one, ranking first in the three variables chosen by the researchers to evaluate antipsychotic effectiveness on patients' clinical outcomes.

Descriptors: Antipsychotic Agents; Schizophrenia; Drug Therapy.

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ORIGINAL STUDY

Epidemiological profile of blood donors in the microregion of Belo Horizonte between the years of 2019 to 2022

Perfil epidemiológico dos doadores de sangue na macrorregião de Belo Horizonte entre os anos de 2019 a 2022

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ABSTRACT

Introduction: Blood donation in Brazil is voluntary, spontaneous, non-rewardable by any means, and, therefore, strategies to attract donors are needed to avoid lack of storage in blood banks. Thus, understanding the epidemiological profile of donors can contribute to implementing more effective interventions and public policies for this purpose. **Purpose:** Understanding the epidemiological profile of blood donors in the macro-region of Belo Horizonte, considering their individual variables. **Methods:** This is a population cross-sectional study based on the database of a blood bank in Belo Horizonte, MG, during the period from 2019 to 2022. The studied variables included demographic, social. **Results:** Between January 2019 and December 2022, there were 106,928 candidates to donate blood at the Vita Hemoterapia blood bank in Belo Horizonte. Of this group, 88,038 (82.33%) were considered eligible to donate. Among these, 80,128 (91.01%) were designated donors and 7,891 (8.96%) were spontaneous donors. Furthermore, 47,211 (53.63%) of the eligible donors were male, and 40,827 (46.36%) were female. Regarding the type of donor, 66,483 (62.17%) were first-time donors, 16,997 (15.89%) were repeat donors, and 23,449 (21.92%) were sporadic. The main age group of donors was between 30 and 39 years old, comprising 32,646 (30.53%) individuals. The main causes of ineligibility were: recent sexual intercourse (12.91%), followed by medication use (10.23%). **Conclusion:** The epidemiological profile studied aligns with national trends in blood donation. It is evident that actions need to be taken to foster donor loyalty and attract more donors from other age groups. Conducting similar studies in other blood banks can provide valuable insights for developing more efficient strategies to attract donors, such as community education initiatives, aiming for a more effective and quality supply to regional blood banks.

Keywords: Blood Donation; Health Profile; Hemotherapy Service.

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