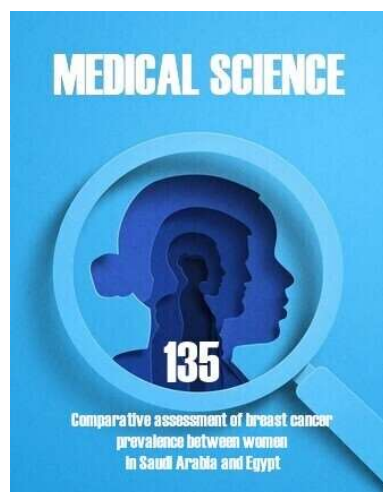


MEDICAL SCIENCE

About the Cover



Background and Aims: Globally, lung cancer is the most cause of fatalities for women, followed by breast cancer (BC). Since survival corresponds negatively with the stage of cancer at diagnosis and delayed BC identification leading to high fatality rate. This study aims to evaluate the occurrence of breast malignancy among females in Saudi Arabia (KSA) and Egypt. Also, compare between causes, risk factors of breast cancer and treatment. *Methods:* A cross sectional study was done among females in KSA and Egypt, data was collected from patients in the BC center through interviews. Online questionnaire was distributed to evaluate the prevalence and awareness level of females about BC clinical signs, methods of examination & risk factors of BC. *Results:* The total participants were 1089 women (546 Saudis and 543 Egyptians), women with BC (5.5% Saudis and 6.7% Egyptians). There was a significance difference among Saudis and Egyptians who are having BC in all demographic characteristics measured. The presence of BC within relatives from the first and second degree, age of menarche, age of menopause, aging, obesity was considered as risk factors of BC. Low level of awareness level about BC was observed. *Conclusion:* Young and old ages of Saudi and Egyptian females with BC, with relatively little information about it. Effective interventions could improve the implementation of successful programs about prevention, screening, early detection and treatment of BC. Programs for university and high school students should teach breast self-examination techniques. (Ref: Mahmoud MR, Alharbi DSB, Alhammad RAH, Hegazy ME, Abdelaziz OG, Abdelaziz SG. Comparative assessment of breast cancer prevalence between women in Saudi Arabia and Egypt. Medical Science 2023; 27: e233ms3011).

Patient's expectations of emergency department care in Saudi Arabia: A cross-sectional study

Nasser Almulhim, Hatun F Al-Rajeh, Reema M Al Dera, Dana H Almuhaimeed, Sara A Alharbi, Noora A Juaythin

Introduction: Patients of all categories come to the emergency room (ER) expecting the best treatment in the fastest amount of time. Nowadays emergency departments (EDs) no longer deal only with life saving patients. They are now the first point of contact for patients, not in the event of a catastrophe only. *Aim:* This study aimed to evaluate patients' expectations of emergency department care in Saudi Arabia and to explore emergency department patient expectations regarding staff communication with patients, wait times, the triage process and information management. *Method:* This is a cross-sectional study conducted among patients who visited EDs between March 2022 and May 2022 in Saudi Arabia. A self-administrated electronic questionnaire was distributed among the targeted patients. The questionnaire includes socio-demographic characteristics (i.e., age, gender, education, etc.) and perceptions toward emergency departments. *Results:* 1866 patients met the inclusion criteria (54.6% females vs. 45.4% males). 38.7% were aged between 18 and 25 years. Almost 90% believed it is important or very important to have information about ER functions. In a multivariate regression model, having a bachelor's or higher degree, living in the western part of Saudi Arabia, knowing that some patients can be admitted to the ER before others and knowing that it is fair were the independent significant predictors of giving high importance to having information about ER functions. *Conclusion:* Patients with better education and perception of EDs are more likely to care about emergency department functions.

Medical Science, 2023, 27, e201ms2923

Surgical outcomes of secondary and tertiary hyperparathyroidism in King Salman Armed Forces Hospital, Tabuk

Yousef Saleh Alalawi, Konstantinos Fourtounas, Sultan Abdulrahman S Alamrani

Objective: To investigate surgical outcomes of tertiary and secondary hyperparathyroidism in King Salman Armed Forces hospital, Tabuk, Saudi Arabia. *Methods:* A record-based research that was retrospective in nature was carried out between January 1, 2015 and August 1, 2022. The King Salman Armed Forces hospitals' documents were gathered, including all valid surgical records. A predesigned data collection pro forma was used to capture the data, which was then revised, coded and entered into the statistical programme IBM SPSS version 22. *Results:* 17 patients who had undergone hyper parathyroidectomy surgery and had a clinical diagnosis of hyperparathyroidism were included in the research. Among the patients, 11.8% had CKD and 88.2% also had hypertension. Following surgery, mean (SD) calcium levels substantially decreased from 2.31 (0.36) to 2.10 (0.29) ($P=0.029$). Additionally, there was a substantial decrease in phosphate mean levels from 2.06 (0.90) to 1.38 (0.63) ($P=0.047$). Additionally, there was a substantial decrease in creatinine levels from 752.52 (305.91) to 544.41 (301.33) ($P=0.024$). A substantial decrease in PTH mean levels was also observed, going from 1888.76 (77.38) pre-operative to 494.42 (577.74) post-operative ($P=0.013$). 35.7% of patients had hypocalcaemia and 11.8% had hematomas as post-operative complications. *Conclusion:* In individuals with chronic renal disease, complete parathyroidectomy with auto-transplantation is a safe and efficient method of treating tertiary and secondary hyper parathyroid disorders. The study sample did not have any recurrence, and the incidence of complications was quite low.

Medical Science, 2023, 27, e202ms2954

Effects of the self-care interventions on the sense of coherence and well-being of patients with acute coronary syndrome: A Quasi-experimental study

Anise Mollazehi-Dashtuk, Elaheh Asadi-Bidmeshki, Mozghan Rahnema, Abdolghani Abdollahimohammad, Mahin Badakhsh

Objectives: Acquiring a sense of coherence and well-being seems necessary to improve the patient's health. Thus, this study determined the effect of self-care interventions on the sense of coherence and well-being of patients with acute coronary syndrome (ACS). *Methods:* This quasi-experimental study was conducted on 40 patients with ACS who were hospitalized in the cardiac care unit of Iranmehr Hospital in Saravan, Iran. The eligible samples were randomly assigned into intervention and control groups. The intervention was including three 60-minute educational sessions and three months of follow-up for the intervention group while the control group sustained with routine care program. Beliefs, Attitudes, Subjective Norms and Enabling Factors (BASNEF) model were used for self-care interventions. Data were collected through a questionnaire of demographic information, sense of coherence and well-being (health index). *Results:* The sense of coherence and well-being scores increased significantly after self-care intervention program in the intervention group. *Conclusions:* The interventions based on the BASNEF model improved the sense of coherence and well-being of patients with ACS.

Medical Science, 2023, 27, e203ms2972

PHQ-9 to screen for depression in Riyadh, Saudi Arabia

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Background: Depression is a prevalent mental condition characterized by poor mood, loss of function and impaired focus. We aim to assess prevalence of depression among adolescents and adults in Riyadh, Saudi Arabia. *Methods:* A cross-sectional study was conducted in April 2022 in Riyadh, Saudi Arabia, with 166 participants selected by convenience sampling, data collected by a paper-based self-administered questionnaire using patient health questionnaire PHQ-9 and the extremely ill eliminated using SPSS V.23 to analyze the data. A p-value of 0.05 percent or less is deemed significant. *Result:* The majority of participants were female (58%) and between the ages of 15 and 20 (73%), had experienced a traumatic event (62%) and a stressful event (80%), were not

married (78%), did not have chronic diseases (83%), were not dependent on alcohol or drugs (97%), led an isolated life in society (60%) and were bullied (60%), lost interest (42%), felt hopeless (36%), had sleep problems (32%), felt tired (41%), lost their appetite (35%) and did not consider suicide. In Prevalence of Depression, the majority had mild depression (31%), moderate depression (27%), minimal depression (24%), moderately severe depression (11%) and severe depression (4%). From the mild depression, the majority was males (21%) and females (35%), with higher education (35%) and a stressful event was the most common risk factor (80%). *Conclusion:* There was a significant association between depression and education level, as the prevalence of depression increased with university education.

Medical Science, 2023, 27, e204ms2974

Comparative analysis of patient complaints for medical care over the last 10 years

Anzhela Biduchak, Nataliya Hopko, Zhanetta Chornenka, Mohammad Wathek O Alsalama, Diana Tymkul

Background: As is known, the health and life expectancy of the population depend on many factors: The environmental situation, the quality of air, drinking water, food, as well as the quality of the provision of medical services in health care institutions. Even if the work of a medical institution is perfectly organized, it is still possible to receive a complaint from a patient. Accepting it correctly and navigating the legislation on this issue is almost an art. *Methods:* Using statistical and medical-epidemiological methods, an analysis of the database with appeals from citizens of the Ministry of Health of Ukraine during 2013-2022 was carried out. *Results:* The most frequent complaints of Ukrainian citizens over the past 10 years were analyzed in order to further create a base that will help health care organizations improve the monitoring of medical services and the organization of public education. *Conclusion:* Analysis of the population's complaints can and should become the basis for reforming the health care system.

Medical Science, 2023, 27, e205ms2984

Perception, awareness and attitude towards varicose veins among employees working in prolonged sitting and standing postures in Hail region, Saudi Arabia

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Background: One of the most common chronic conditions is varicose veins (VV), which contribute to a higher rate of morbidity as different symptoms can result from varicose veins ranging from itching to ulceration. Aim of this study is to assess the level of knowledge and attitude towards Varicose and treatment methods among the population of Hail in Saudi Arabia. *Methods:* A well-defined questionnaire was conceded among the general population over-18-year-old men and women are the study's subjects. To gauge public awareness and perceptions of sciatica symptoms, causes, risk factors, complications and therapy, data were gathered and questionnaires were used. After data collection over the six-month study period, the Statistical Package for Social Science software was used to evaluate the results (SPSS). *Results:* Among 217 people involved in the study, 60.21% aged between 18 and 30 years old the majority was Saudi (95.96%). Disease pathophysiology and risk factors are well known among 46% of study group and less known by 56.0% study population only. *Conclusion:* Varicose vein is less known among peoples of Hail region. Patient education is crucial regarding disease pathophysiology. It can have a variety of reasons. Most instances of varicose vein are treated most effectively with conservative measures like wearing stockings and using NSAIDs, unless there is development of compression symptoms. In Hail City, 46% of adults had lower levels of community awareness than expected, and symptoms worsened (by 59%) in pregnant women.

Medical Science, 2023, 27, e206ms2985

Breast cancer in Sudan, clinical, histopathological and receptors characteristics: A retrospective study

Khalid Alhazmi, Salah Alghamdi, Abubaker Emadeldin Adlan Koko, Hyder Mirghani

Background: Breast cancer is the leading cause of death globally, the tumor surpassed lung cancer in prevalence. Few studies assessed breast cancer in Sudan. *Objectives:* We aimed to assess breast cancer among women in Khartoum, Sudan. *Methods:* We reviewed 1395 specimens at a tertiary pathology center in Khartoum, Sudan from June 2022 to March 2023. A data sheet (excel) was used to collect specimen type and nature of excision, the tumor grade, site and recurrent or multifocal carcinoma. In addition, tumor size, lymph node involvement and distant metastasis were evaluated for tumor classification and grade. Immunohistochemistry was conducted. *Results:* Out of 1395 specimens, 99.6% were invasive ductal carcinoma, more than half were grade II, and 50.5% were on the left. Breast biopsy was the commonest (79.1%) and mastectomy specimen (4.5%) and complete excision was done in 89% of cases. In the present study, stage tumor I (T I) was observed in 17.3 and tumor III (TII) in 54.8%. Estrogen receptor status, progesterone receptor, HER 2 Neu receptor and triple-negative cancer were positive in 47.8%, 32.4%, 26.1% and 32.3% respectively while Ki67 expression was >50% in 40.2%. *Conclusion:* The majority of breast cancer in Sudan was invasive ductal carcinoma with lower estrogen, progesterone and Human Epidermal Growth Factor Receptor 2 (HER 2 Neu receptor) positivity, while triple-negative and Ki67 were higher. The patients presented late to the healthcare system. Further retrospective studies focusing on genotyping are important for a proper management decision.

Medical Science, 2023, 27, e207ms3000

Assessment of knowledge, awareness about hemorrhoids causes and stages among the general public of Saudi Arabia

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Background: The much more typical symptoms of hemorrhoids include prolapse, itching, painful bright red blood, prolapse and unpleasant grape-like tissue prolapse. Anoscope and (DRE) are used to diagnose it. In general, it is believed that variables including constipation, a low-fiber diet, a high body mass index (BMI), pregnancy and a lack of physical exercise increase the risk of hemorrhoids. The goal of this paper is to assess Saudi citizens' knowledge and awareness of the factors that cause and sequences of hemorrhoids. *Method:* Between October 2022 and February 2023 was completed this paper. At least 384 participants over the age of eighteen made up the study group. The outcomes of this study were analyzed using the SPSS program using a pre-tested questionnaire. *Results:* The research subjects made up of 1410 individuals, thirty percent were men and 69.9% were women. 53.7% of participants were in their 20s to 30s. 42% of participants had a relative with hemorrhoids and 17% of participants themselves had them. For hemorrhoids, 42.8% of participants properly recognized stage 1, 44.7% correctly identified stage 2, 46.7 percent correctly identified stage 3 and 58.1% correctly identified stage 4. Only 28.9 percent of respondents had high-levels of awareness regarding hemorrhoids, compared to 62.7 percent who had a moderate-level and 8.4% who had a poor level. *Conclusion:* In sum, the general Saudi populace has limited understanding of hemorrhoids, their causes and treatment options. Hemorrhoids knowledge scores significantly correlated with age, sexuality, where one lived and profession.

Medical Science, 2023, 27, e208ms3004

The relation between most common hearing problems and use of headphones among high school students in Saudi Arabia

Hosam Amoodi, Sultana Kadasa, Yara Alraddadi, Abdulaziz Alrasheed, Lulwah Alkhuraisi, Khaled Alomari, Safia Alshangiti, Khames T Alzahrani

Background: Excessive noise levels can harm the human ear. Tinnitus, hearing loss and hyperacusis can all be brought on by noise, which can come from a range of work and recreational sources. Our aim in this paper to assess most common hearing problems among high school students used headphones in Saudi Arabia. *Methodology:* An observational-study population consisted of high school students in Saudi Arabia in both genders. Sampling in our study included students aged 14-18 years old who use headphones and are currently in high-school educational level in Saudi Arabia. The pre-structured questionnaire with multiple choice questions was used to collect data from the participants after taking their consent. An analysis was done by using Excel and SPSS software. *Results:* There were 1703 participants in the investigation, of which 81.3 percent of them were women and 18.7 percent were men. 53.6 percent of participants were between the ages of 17 to 19. Twenty-three percent of individuals experience tinnitus when wearing headphones. 14 people (0.8%) had very high-risk scores for hearing issues, 9% had high risk, 38.5% had medium risk, 44.8% had moderate risk and 6.9% had very low risk. *Conclusion:* In accordance with the findings of our research, it appears that Saudi Arabian high school students' usage of headphones and the most prevalent hearing issues are rather strongly correlated. Further study is necessary owing to the higher hearing loss score among headphone users in order to implement treatments and develop ways to improve students' knowledge and attitude regarding the usage of personal listening devices.

Medical Science, 2023, 27, e209ms3005

The prevalence rate of anterior cruciate ligaments reconstruction among population in Saudi Arabia

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Background: Anterior cruciate ligament (ACL) is an essential knee joint stabilizer that keeps the knee joint. Our research aimed to determine the prevalence rate of ACL reconstruction among athletic individuals living in Saudi Arabia. *Methodology:* A cross sectional design was conducted in Saudi Arabia. Athlete participants from Saudi Arabia took part in the ACL reconstruction study and the sample size for a population survey was derived using the "Raosoft" subject size calculator. The data analysis was performed using version 26 of IBM SPSS. *Results:* There were 898 respondents in the investigations and 85 of them (or 9.5%) had a history of ACL. 81.2 percent of patients said that a sporting-related incident led to their injury. 41.2% had a full tear, whereas 47.1% had a partial tear. In 45.9% of patients, there were 6 months or more between the ACL damage and repair, whereas this period was longer in 32.9% of patients. The time between ACL reconstruction and activity resume was 6-8 months in 48.2% of cases and 8-10 months in 28% of cases. Just 50.6% of patients resumed their previous level of physical activity. *Conclusion:* Saudi athletes get ACL injuries at prevalence rate similar to the world range. A large majority of the injured athletes had surgical repair, primarily in Saudi Arabia. The majority of the injured participants reported going back to sports after recovering.

Medical Science, 2023, 27, e210ms3006

Prevalence of substances misuse and predisposing factors at various stages of medical carrier at Al Madinah province KSA

Rania Ezzat Mufti, Bader Hussein Alsawadi, Waleed Talal Alahmadi, Abdulkarem Mohammed Abunaji, Khaled Hussin Alnhas, Faris Sameer Sebaa, Ali Abdulaziz Alraddadi, Magdy Ali Elbarbary

Background: Substances use is widespread, including among students, especially medical students. *Objective:* We conducted this study to estimate the prevalence of substances misuse and predisposing factors at various stages of medical carriers at Al-Madinah Province KSA. *Methodology:* Utilizing a certified questionnaire, a cross-sectional study was transmitted among 279 undergraduate and postgraduate students at Al-Rayan Medical College. *Results:* Data showed that 29.4% of medical students use these subjects. The prevalence of drug use was 5.4% using Captagon, 9.3% using cannabis and 14.7% using other substances among medical

students raising in drug misuse has been noticed in recent years of medical education. About 63.8% of those students using these substances were aware of the adverse effects. The most common reason these students take up these subjects is to relieve psychological stress and occasional parties. Of the 29.4% of substance users, 11.5% tried it once at university and 13.7% took it with their friends. The current study revealed that 10% of drug use among students was due to a lack of parental participation and interactions and 10% may be due to some students losing their parents. **Conclusion:** Roughly one third of students who attend medical school misuse at least one substance in spite of knowing the adverse effects of the chief preparedness factor are psychological stress. The most important independent factors that predicted the risk of drug involvement were male.

Medical Science, 2023, 27, e211ms3012

CASE REPORT

Inferior vena thrombosis: A complication of MDR tuberculosis

Saran K Chacko, Ulhas Jadhav, Babaji Ghewade, Pankaj Wagh, Reshma S Babu, Roshan Prasad

In developing nations, tuberculosis (TB) continues to be a serious health issue, with India bearing the majority of the burden. It comes in a wide variety of presentations and complications. Its propensity for thrombogenesis is a worrying consequence that significantly increases morbidity. Numerous mechanisms of tuberculosis can cause a hypercoagulable condition and thromboembolic consequences. We report a case of a 37-year-old male who had inferior vena cava thrombosis with multidrug-resistant pulmonary tuberculosis (MDR-TB). It was discovered that early diagnosis, anti-TB medication start-up and suitable anticoagulant therapy could save lives. The use of an IVC filter as a treatment in this instance reduced the disease's total morbidity and mortality. The co-treatment with the longer oral bedaquiline containing MDR regimen and anticoagulant therapy is being followed closely in this case and will be a useful tool in the future for further management of such patients.

Medical Science, 2023, 27, e212ms2848

A rare case of acute pulmonary embolism in a postoperative case of dysgerminoma in a young adolescent girl: Lesson learnt

Kamlesh Chaudhari, Apoorva Dave, Deepti Shrivatsava, Tanvi Chaurasia

We present a rare case of pulmonary angiography evidence of pulmonary embolism in an operated case of dysgerminoma in a young adult. Malignant germ cell tumor of the ovary constitutes less than 10% of total ovarian tumors. In young girls malignant primitive germ cell tumour that is most prevalent is dysgerminoma, which has low potential to invade and spread and is treatable when diagnosed early. Thromboembolism in childhood and adolescent age group is not so common. Here, we discuss an unusual form of ovarian dysgerminoma diagnosed intraoperatively on frozen section with post-operative pulmonary embolism with coagulation parameters being normal post operatively. According to our knowledge, this is rarest case where post-operatively patient developed acute pulmonary embolism. We have also reviewed various articles on dysgerminoma and thromboembolism.

Medical Science, 2023, 27, e213ms2908

Inpatient cardiac and respiratory physiotherapy management of a child with Down syndrome who underwent surgical repair of congenital heart disease: A case report

Abhishek Daf, Deepiksha Chouhan, Avanti Gachake, Vishakha Tayade, Vishnu Vardhan

Down syndrome (DS) is characterized by the presence of all or a portion of the third chromosome 21. In this population, congenital heart disease (CHD) is the primary cause of death and morbidity in the first two years of life. Atrioventricular septal defect (AVSD) is the most common CHD seen in DS patients, followed by an atrial septal defect (ASD), ventricular septal defect (VSD), and tetralogy of Fallot (TOF). There is a high possibility of serious cardiac abnormalities in DS patients thus; there must be a protocol in place for early screening, prompt diagnosis and early operative measures. Due to advancements in technique and postoperative care over the last few years, the prognosis following surgical repair has substantially improved. Most of the post-operative strategies for patients with CHD can be applied to patients with DS. Physiotherapists play an important role in managing patients after the surgical repair of cardiac abnormalities. They also help in facilitating physical activity in children with DS. Our case report aims to provide the post-operative physiotherapy protocol for a child with DS operated for the closure of ASD and VSD along with the ligation of Patent Ductus Arteriosus (PDA). The main aim of post-operative cardiac and respiratory physiotherapy management was to clear lung secretions, promote healthy healing of the incision, maintain patency of lungs, reduce work of breathing and improve chest mobility while addressing delayed developmental milestones. The case report illustrates the importance of inpatient post-operative physiotherapy management which will lead to a gain in the existing knowledge while dealing with such patients.

Medical Science, 2023, 27, e214ms2911

A modified approach for removal of damaged implant abutments: A clinical report

Sowmya S, Shyla Dureja, Putta Sai Pranathi, Ganesh S, Raghavendra Swamy KN, Nagabhushana Doggalli

Dental implants have currently become an extremely popular prosthodontic treatment option for restoring function and aesthetics, owing to their effectiveness, longevity, dependability and esthetic outcome. Among the various prosthetic rehabilitation modalities for completely edentulous cases, implant-supported overdentures have a very good prognosis. Over time in use, implant-related complications like abutment damage may arise. Damaged abutments may lose their external hexagonal structure, making it challenging to engage the drivers. This makes their removal complicated and technique sensitive. The rotary devices that are used

have many drawbacks that might harm the implant's internal threads during implant abutment removal. This article describes a novel method for removing a damaged mandibular overdenture abutment using an ultrasonic scaler wrench without jeopardising the implant. This conservative management was found to be simple, cost-effective and time-efficient, with no additional required equipment.

Medical Science, 2023, 27, e215ms2991

Large duct intrahepatic cholangiocarcinoma arising from intraductal papillary neoplasm of bile duct: A rare case report

Neha A, Thanka J, Rajendran, Shobana B

Intrahepatic cholangiocarcinoma (iCCA) is one of the primary carcinomas of the bile duct. It is a malignant intrahepatic epithelial neoplasm with biliary differentiation arising in the liver periphery/proximal to the left and right hepatic ducts with greater significance and more clinical and therapeutic challenges. The average age at diagnosis is >50. It presents as three major macroscopic growth patterns (mass-forming (MF), periductal infiltrative (PI) and intraductal growth (IG)). The worrisome mortality of these tumours, which accounts for 2% of all cancer-related fatalities globally each year, is caused by their discrete form, high aggressiveness and resistance to chemotherapy. Histological confirmation is necessary because the non-invasive methods currently used to diagnose cholangiocarcinoma are insufficient. We present a case of large duct intrahepatic cholangiocarcinoma of mass forming type arising from IPNB (intraductal papillary neoplasm of bile duct) with high grade dysplasia in a 60-year-old male.

Medical Science, 2023, 27, e216ms2969

ANALYSIS

Knowledge and attitude toward cardiopulmonary resuscitation among medical students in Saudi Arabia

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Background: Cardiopulmonary resuscitation (CPR) is used to sustain blood flow and oxygenation in patients experiencing cardiac arrest. It involves performing several cycles of chest compressions and artificial respiration. This study aimed to assess the knowledge and attitudes toward CPR among medical students in Saudi Arabia. **Methodology:** A cross-sectional study was conducted using an online questionnaire at a single time point. The target sample consisted of medical students in Saudi Arabia. Data were collected and analyzed using the Statistical Package for the Social Sciences. **Results:** 1,692 people took part in the survey; the majority of them (80.1%) were between the ages of 20 and 25, with 57.8 percent of women and 42.2 percent of males. Only 10.9 percent of individuals reported having a poor knowledge score, whereas the majority of participants (54 percent) reported having a moderate knowledge-score. Most participants (95.3%) had positive-attitudes toward-CPR and only 4.7% had negative attitudes. In total, 67.1% participants had poor practice scores and 32.9% had good practice scores. There was a significant-association between knowledge-scores of participants and age ($p=0.001$) and academic year ($p=0.001$). There was also a significant association between attitude scores and marital status ($P=0.046$) and academic year ($p=0.001$). **Conclusion:** The results of our paper showed that medical students had good knowledge and positive attitudes toward CPR but poor practice. In general, our results are better than those of previous studies conducted in Saudi-Arabia. Additionally, they are better than other reported figures worldwide.

Medical Science, 2023, 27, e217ms3003

Modulation of neurotransmitter signaling along the Microbiota–Gut–Brain Axis by prebiotics, probiotics and synbiotics in peptic ulcerative rats

Huda A Al Doghaither, Fares K Khalifa

Background: Normal brain processes need a healthy gut containing various microorganisms. Probiotics (Pro), prebiotics (Pre) and synbiotics (Syn) are able to prevent gut inflammation by restoring the makeup of the gut microbiome and introducing beneficial functionalities to gut microbial populations. Because of their functions in gut physiology and probable implications in the gastrointestinal and neurological systems pathology, neurotransmitters, such as norepinephrine, dopamine and serotonin, have lately attracted attention. In pathological conditions such as gastric ulcer (GU), neurotransmitter levels are dysregulated, resulting in a range of gastrointestinal symptoms. **Objectives:** To assess the effects of Pre, Pro and Syn on neurotransmitters that regulate gut microbiota and the gut–brain axis (GBA) under peptic ulceration circumstances. **Methods:** Fifty male rats were used in the study and were divided into groups as follows: Control group, ulcerative group and orally supplemented groups. Serum samples were used for measuring the levels of neurotransmitters in the blood. **Results:** Levels of serotonin, dopamine, gamma-aminobutyric acid (GABA), glutamate and norepinephrine were decreased in PU rats as compared to healthy rats. Treatment with Pro alone or in combination with Pre (PU + SynB) significantly improved the serum levels of neurotransmitters, inflammatory biomarkers and oxidative stress markers. **Conclusion:** Several neurological findings regarding the GBA reveal that the gut microbiota has strong bidirectional communication with the CNS and control the development and functions of the CNS, which, in turn, improves gut homeostasis.

Medical Science, 2023, 27, e218ms3018

Utility of Hemogram based markers for predicting severity of acute pancreatitis

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Introduction: Acute pancreatitis is a serious and potentially life-endangering condition. Complete blood count (CBC) is basic laboratory investigation routinely conducted in most of acute pancreatitis patients and by use of simple calculation, CBC based marker could be utilized. *Material and methods:* Current prospective observational study performed at Medical Gastroenterology Department, JNMC, Wardha, Maharashtra, India during April 2022 to March 2023. After satisfying inclusion and exclusion criteria total 84 acute pancreatitis patients were enrolled and assessed for hemogram based markers and severity indices. Revised Atlanta classification was used for classifying acute pancreatitis severity. AUROC were utilized for calculating cut-off values of hemogram based markers (such as LMR, NLR etc.) APACHE-II score, BISAP score, SIRS and mCTSI for predicting organ failure, ICU admission and outcome. *Results:* In current study, mean age of patient was 41.1 ± 12.7 years. Based on Revised Atlanta classification, 42.9% patients had mild, 15.5% patients had moderate and 41.7% patients had severe pancreatitis. WBC count, Neutrophils, NLR, PLR, mCTSI, SIRS, BISAP and APACHE II were significantly increasing while Lymphocyte and LMR was significantly decreasing with raising acute pancreatitis severity ($p < 0.05$). By using AUROC NLR (Neutrophil lymphocyte ratio) had significantly predicted ICU admission (0.761; $p < 0.05$) and organ failure (0.797; $p < 0.05$). *Conclusion:* Evaluating severity based on hemogram based marker were early, easy and simple to calculate compared to complex severity indices which require multiple parameters for calculating severity index for prediction of organ failure, ICU admission conversely, severity indices were better compared to Hemogram based marker for predicting outcome of acute pancreatitis.

Medical Science, 2023, 27, e219ms2970

The impact of alternate shifts on emergency doctors' work satisfaction and quality of life in Riyadh region

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Objective: Emergency departments (EDs) in Saudi Arabia have experienced a tremendous increase in patient flow, resulting in increased workloads and decreased satisfaction among emergency physicians (EPs). We aimed to analyze the impact of alternate shifts on Saudi emergency doctors, determine the rate of life satisfaction of those affected and assess the effect of alternating shifts on the quality of their life. *Methods:* This study explored the impact of the alternate shift system on the work satisfaction and quality of Saudi emergency doctors. This study was carried out among 162 emergency physicians employed in emergency departments in different hospitals in Riyadh region, Saudi Arabia. The survey was distributed online and included questions about demographics, satisfaction with job and quality of care and experience with alternate shifts and the results were analyzed using frequency analysis. *Results:* The results showed that the majority of emergency doctors reported a high level of job satisfaction and quality of care. Additionally, 63% of respondents agreed that alternating shifts ever forced them to consider leaving EM as well as 57% of the respondents agreed that alternating shifts had adversely affected their family and social life. *Conclusions:* Alternate shift changes have a moderate to significantly unfavorable effect on EM doctors' social, familial and physical well-being, according to the current study. However, as seen by their high level of career satisfaction, this did not make the doctors consider leaving EM.

Medical Science, 2023, 27, e220ms2990

Prevalence and risk factors of irritable bowel syndrome among medical students in Saudi Arabia

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Background: A chronic functional gastrointestinal illness known as irritable bowel syndrome (IBS) is primarily distinguished by changed bowel habits, abdominal pain and bloating/distention. There are a considerable proportion of medical students in Saudi Arabia who suffers from IBS due to different risk factors. Our study aimed to determine prevalence of irritable bowel syndrome (IBS) and its risk factors among many medical students from different universities in Saudi Arabia. *Methodology:* This is an observational cross-sectional study conducted in Saudi Arabia from July 2022 to January 2023. The sample size was involving 402 with a 95% confidence interval, a 5% margin of error. The data was collected through a standardized clear questionnaire and its analysis will be done using SPSS version 25. *Results:* 18.7% of the studied population was previously with IBS. 26.6% always face a lot of stress, 34.6% sometimes consume sugar to deal with stress. 42.5% had a positive family history for IBS. 7.2% had previously undergone an abdominal surgery. 13.7% take NSAIDS regularly. *Conclusion:* The prevalence of IBS was higher among females than among males and was highest among fifth-year medical students. Most of the participants had moderate or high levels of anxiety. Stress management activities and student counseling sessions are recommended to decrease anxiety levels.

Medical Science, 2023, 27, e221ms2980

Perception of Epilepsy among physiotherapy students and professionals: A cross sectional survey

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Background: In developing countries like India, epilepsy and its sequelae are often seen as a social stigma. Physiotherapists form a part of the team treating patients with epilepsy. Hence this survey was undertaken to assess their knowledge, attitude and perception about epilepsy. *Method:* This study was a cross sectional survey carried out in the urban, semi urban and rural areas of Maharashtra. The epilepsy perception questionnaire was administered to physiotherapists in the age group 18-60 years through Google forms. Responses obtained were analysed using statistical test. *Results:* A total of 585 responded. Out of the professionals, 38% were post graduates ($n = 222$) and 21% were graduates ($n = 122$). Whereas amongst the student population, 13% were pursuing post-graduation ($n = 77$) and 28% were pursuing under-graduation ($n = 164$). Post graduate professionals scored higher in knowledge and perception of epilepsy as compared to the others. *Conclusion:* Post-graduate professionals scored the highest indicating that a

post-graduate degree and the number of years of clinical practice made a difference in the awareness, perception and knowledge of epilepsy.

Medical Science, 2023, 27, e222ms2853

CASE REPORT

Incidentaloma: Ameloblastic carcinoma of mandible: A case report

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Incidentaloma is a radiological neology for incidental findings unrelated to the original diagnostic inquiry which helps in early diagnosis of suspicious lesions. Ameloblastic carcinoma is an uncommon and aggressive odontogenic tumour which causes significant bone destruction and shows cytologic characteristics of malignancy. It's more commonly seen in the mandible and in wide range of age groups. This case report aims at presenting an incidental finding of ameloblastic carcinoma in an asymptomatic patient who sustained facial fractures following trauma.

Medical Science, 2023, 27, e223ms2868

ANALYSIS

Prevalence of psychological distress among students of medical colleges at Prince Sattam Bin Abdulaziz University

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No group is exempt from mental diseases and mental health issues affect society as a whole; yet, students experience much higher levels of mental discomfort than their peers in the community. It can affect patient's daily life and can lead to variety of emotional and physical problems. Since medical students have long years of studying and Nemours responsibilities included saving people's life, we will start cross-sectional research to recognize the percentage of psychological distress among students of medical colleges in (PSAU) Prince Sattam bin Abdulaziz University in Al-Kharj city. This is a cross-sectional study and the sample size will be collected was from students of medical health in PSAU University. Each participant filled out an anonymous, self-administered questionnaire that asked about their socio-demographic characteristics and the (BSI 18) Brief Symptom Inventory 18, a tool for detecting psychological distress. In Addition, the (K10) 10-item Kessler Psychological Distress Scale will measure psychological distress and anxiety. It was shown that students generally had a significant prevalence of psychological distress. The questionnaire was successfully completed by 203 students in total. Based on the BSI-18 scale, 30% of those were found to have psychological discomfort. On the somatization test, females scored considerably better than males. This conclusion requires serious efforts to be made to create appropriate screening and intervention programs that are specifically targeted at this population.

Medical Science, 2023, 27, e224ms3026

Association of depression and anxiety with diabetes mellitus and asthma among adults in Riyadh, Saudi Arabia 2022

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Background: Depression is a mood disorder that affects the daily functions negatively, while anxiety disorders are the most commonly diagnosed mental disorders. Increased blood pressure, palpitations, hyperglycemia and other chronic diseases and physiological imbalances can result from various psychiatric disorders. They can also predispose the patients to psychiatric illnesses. This study aims to assess the relationship between Psychological Disorders, Diabetes Mellitus and Asthma among adults in Saudi Arabia in 2022. **Methods:** A cross-sectional study, targeted adults in a sample of 304 adults. Through paper-based questionnaires using Hospital Anxiety Depression Scale (HADS) in Arabic and English languages. Data cleared, coded and entered using Statistical Package for Social Science and Microsoft office Excel. **Results:** Out of 304 participants, 3.3% were diagnosed with diabetes mellitus (DM) and 10.2% were diagnosed with asthma. In the anxiety section of HADS, 1% of diabetic patients had borderline abnormal results while 0.7% had abnormal results ($p=0.73$). For asthma patients, 1.3% had borderline abnormal results and 3.3% had abnormal results ($p=0.45$). In the depression section of the HADS, 2.6% of asthmatic patients had borderline abnormal results and 1% had abnormal results ($p=0.69$). Diabetic patients had 0.7% borderline abnormal results and 0% abnormal ($p=19$). **Conclusion:** The number of participants diagnosed with asthma or DM in our study was limited, therefore, results were not statistically significant and a clear relationship was difficult to establish. Further research on a much larger population is needed to find a definite relationship.

Medical Science, 2023, 27, e225ms2946

A quasi-experimental study to assess the effectiveness of birth companion-based care during first stage of labour, on labour outcome and emotional status among parturient women in selected hospital of Gurugram, Haryana

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Background: Birth companionship is an effective strategy for improving the standard of care offered during labour and delivery. Despite the numerous advantages of labour companionship, it is not widely practiced. Having a labour companion also reduced anxiety about childbirth and mistreatment, such as unnecessary vaginal examinations and poor communication, when compared to not having a labour companion. **Methods:** In the present study quantitative approach with a post-test-only control group design was adopted. 60 parturient women were enrolled using a Purposive sampling technique. A 3-point Likert scale was used to assess the

emotional status of women. The Mode of Delivery, Duration of the First Stage of Labour and APGAR score were used to evaluate labour outcomes. Partograph was used to assess labor outcomes. *Result:* The result showed significant improvement in emotional status between Control and experiment group. T test was used to compare the emotional status between experimental and control group which was found to be highly significant as $p < 0.05$. The chi square test was used to evaluate the mode of delivery between the two groups and the difference was found to be significant with a p-value of < 0.05 . The duration of the first stage of labour and the APGAR score were compared using an independent t test between two groups, which was found to be significant as $p < 0.05$. *Conclusion:* Implementation of the birth companion-based care module has significantly improved emotional status and labor outcomes.

Medical Science, 2023, 27, e226ms2983

Lived experiences of management intern nursing students in the clinical settings of the quality of educational services using the SERVQUAL model: A descriptive phenomenology study

Azizollah Arbabisarjou, Mehrangiz Ghabimi, Nazanin Yousefian Miandoab, Abdolghani Abdollahi Mohammad

SERVQUAL model is a popular remarkable tool for assessing the quality of educational services. The main of this research is exploring lived Experiences of Management Intern Nursing Students in the Clinical Settings of the Quality of Educational Services Using the SERVQUAL Model. *Methods:* This is a qualitative study was conducted by using a phenomenological approach. The study population consisted of the 8th semester nursing students spending management internships in the wards of teaching hospitals of Zabol and Zahedan located in southeastern Iran. The study participants were selected by using both the convenience sampling and the purposeful sampling. The participants were 22 eligible students. Interviews were conducted in a secluded and open environment for collected data. *Results:* The analysis results of the interviews can be divided into five main themes and 15 sub-themes. Main themes are Conflict over physical resources, the inadequacy of facilities and equipment, Lack of coordination among employees, Challenges of responsiveness in the ward, Conflict in confidence, Double empathy. *Conclusion:* It is therefore recommended that research to be conducted in several teaching hospitals with different facilities at the same time in order to generalize the results.

Medical Science, 2023, 27, e227ms2996

Explaining the clinical training experiences of anesthesiology students: A phenomenological study

Azizollah Arbabisarjou, Mehdi Rezvaniamin, Fatemeh Saeedinezhad, Hamed Faghihi

Introduction: The process of clinical training today is considered a primary element of education, especially for medical sciences, so it seems necessary to plan to improve how students understand clinical conditions. Hence, the present study sought to explain the clinical training experiences of anesthesiology students. *Method:* A qualitative study was conducted using descriptive phenomenological approach. The data were collected using in-depth and individual semi-structured interviews and data analysis was done simultaneously with the data collection using the Colaizzi analysis model. *Results:* The themes describing the experiences of people with psoriasis included: The operating room environment, stressful environment, the effective clinical training challenge and disrespecting students. *Conclusion:* The results showed that the stressful environment of the operating room is an important challenge for students; on the other hand, the problems and challenges of clinical training can be a serious threat to the quality-of-care services of the country's health system. Various disrespects to students in the operating room environment can decrease their self-confidence, discourage them and decrease their interest in caring for sensitive patients and it makes it very difficult for the student to bear the unfriendly conditions and atmosphere of the operating room. Also, professors, group managers and educational staff should try to improve the quality of clinical training and modify wrong procedures in the operating room environment by obtaining awareness about the students' experiences, while understanding them more.

Medical Science, 2023, 27, e228ms2997

The effect of psychological stress on physical and behavioral health and its role in chronic diseases in Saudi Arabia

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Background: Psychological stress is a phenomenon caused by the relationship of a human with its environment. Stress can lead to depressive disorders. According to World Health Organization, one out of four human beings is stressed nowadays. *Objectives:* To find the percentage of the middle-aged population suffering from psychological stress and to find if psychological stress affects the middle-aged population's physical and behavioural health and chronic diseases. *Methodology:* A cross-sectional study was designed and data was collected from Saudi natives of age 40 years and above with the help of an online survey tool; the calculated sample was 385 individuals, whereas an extra 10% was taken to increase the validity of the study. *Results:* Study participants were from fourteen different cities in Saudi Arabia. There were 48.9% of males and 51.1% of females and 64.8% of them had a university level of Education. Of the participants, 131 (31%) scored to have low psychological stress, 247 (58.4%) had moderate stress and 45 (10.6%) scored to have high perceived psychological stress. Psychological stress was found to be significantly associated with Headaches, digestive problems, chest pain, muscular stiffness and sexual problems ($p < 0.001$). Psychological stress was found to be significantly associated with behavioural irritability, Smoking, lack of sleep, lack or excess of eating and avoiding gatherings ($P < 0.001$); psychological stress was not associated with Chronic diseases ($p > 0.001$). *Conclusion:* Most Saudi adults aged 40 years and above have moderate psychological stress (58.4%). Psychological stress can significantly affect an adult's physical and behavioural health.

Medical Science, 2023, 27, e229ms3021

The impact of studying medicine on students' social interactions in Riyadh, Saudi Arabia 2021-2022

Abdelaty Shawky Mohamed, Abdulrahman Bashir Ahmad Hussamuldin, Nujud Binhudayb, Abdulrahman Aloufi, Farah Qari, Majed Alanazi

Background: The prevalence of social anxiety disorder, commonly known as social phobia, increases during adolescence. Social phobia can be colonized in those who involve interacting with, observing and behaving with many people. These include meeting people, including strangers, speaking in meetings or groups, starting a conversation, working, eating and drinking, going to school, shopping, showing up in public, using public toilets and public speaking, including conversations. Social anxiety disorder can be inherited through family history. It can also be treated with certain therapies and medications. Our aim is to identify the social concerns of medical students in Riyadh. *Methods:* A cross-sectional study. 180 Medical students, we used the social phobia inventory (SPIN) questionnaire to screen and measure severity of social anxiety from September 2022 to November 2022 with SPSS and MS software for analysis. *Results:* Majority of participants was females (66.1%) in the second year (25%) of age from 22-25 years (58.9%) as single (96.7%). Most of them were from Almaarefa University (86.7%) having very mild social phobia (38.9%). Relation between social phobia and gender (p value=0.05) and with academic year (p value=0.05) and with age (p value=0.12). *Conclusion:* The most common form of social anxiety among medical students was moderately low. Although females were more likely to develop social phobia than males, there was a substantial difference in severity between the two groups. In addition, the amount of social anxiety among students had little impact on their academic year.

Medical Science, 2023, 27, e230ms2912

Burden of pandemic COVID-19 on medical students perceived psychological stress in Saudi Arabia

Naif Alrudian

Due to various factors, medical students are at higher risk of perceived stress than the general population during the pandemic (COVID-19). This study was planned to assess the stress levels and the occurrence of various mental health issues among graduate medical students in the Kingdom of Saudi Arabia. Following scales were used for this study - 1) DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure-Adult (CCSM-A) – for assessing the prevalence of common mental health issues, 2) Perceived Stress Scale to assess perceived stress and 3) Student Stress due to COVID-19. Questionnaire to assess global stress score related to COVID-19. 123 participants were contacted, out of which 109 (88.6%) agreed to participate in the study. The most of the students (33.9%) were from the second academic year. Anxiety (72%) and depressive symptoms (70%) were the most common symptoms reported by the students as per the CCSM-A scale. The mean (SD) perceived stress score and global stress score was 18.3 (5.7) and 7.6 (5.4), respectively. Anger, suicidal ideation and substance use were significantly associated with the year of study after adjusting for age and self-perceived COVID risk. Graduate medical students experience a significant burden of mental health conditions. Periodic mental health assessment and provision of early and adequate mental health services to those in need are the need of the hour in the post-pandemic recovery phase.

Medical Science, 2023, 27, e231ms3044

The prevalence and consciousness of using magnification devices during the restorative procedures among the dental practitioners in Saudi Arabia

Samar H. Abuzinadah, Osamah Alsulimani

Background: Magnifying loupes in dentistry have three key objectives: To improve visibility, compensate for the lack of near vision presbyopia and maintain proper posture. The study aims to determine the prevalence and consciousness of using magnification devices during restorative procedures among dental practitioners in Saudi Arabia. *Methods:* The study group included all dental practitioners aged above 18 years. The outcomes of this study were analyzed using the SPSS program using a pre-tested questionnaire. *Results:* The study included 634 participants as follows; 56.9% females; 43.1% males; 46% dental interns; 35.8% General Dentists; 47.9% from the western region; 33.9% from the Central region. 55.7% of participants were using magnification devices and 44.3% were not using magnification devices. 32 percent of respondents thought that the expensive price of the magnification equipment was a barrier to its use. In comparison, 27.1% found no reason to hold back from buying the magnifying loupes. The rest of the participants found excuses for not buying; 17.1% chose discomfort; 16.1% chose lack of training; 7.7 of Dental practitioners decided to wear glasses. *Conclusion:* The findings revealed that, while most practitioners were aware of dental magnification, their use in clinical practice could have been better. Dental practitioners have moderate knowledge of the usage of dental magnification during restorative procedures.

Medical Science, 2023, 27, e232ms3037

Comparative assessment of breast cancer prevalence between women in Saudi Arabia and Egypt

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Background and Aims: Globally, lung cancer is the most cause of fatalities for women, followed by breast cancer (BC). Since survival corresponds negatively with the stage of cancer at diagnosis and delayed BC identification leading to high fatality rate. This study aims to evaluate the occurrence of breast malignancy among females in Saudi Arabia (KSA) and Egypt. Also, compare between causes, risk factors of breast cancer and treatment. *Methods:* A cross sectional study was done among females in KSA and Egypt, data was collected from patients in the BC center through interviews. Online questionnaire was distributed to evaluate the

prevalence and awareness level of females about BC clinical signs, methods of examination & risk factors of BC. *Results:* The total participants were 1089 women (546 Saudis and 543 Egyptians), women with BC (5.5% Saudis and 6.7% Egyptians). There was a significance difference among Saudis and Egyptians who are having BC in all demographic characteristics measured. The presence of BC within relatives from the first and second degree, age of menarche, age of menopause, aging, obesity was considered as risk factors of BC. Low level of awareness level about BC was observed. *Conclusion:* Young and old ages of Saudi and Egyptian females with BC, with relatively little information about it. Effective interventions could improve the implementation of successful programs about prevention, screening, early detection and treatment of BC. Programs for university and high school students should teach breast self-examination techniques.

Medical Science, 2023, 27, e233ms3011

The prevalence of IBS among UQU students in Makkah, KSA

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Background: Irritable Bowel Syndrome (IBS) is a common gastrointestinal disorder that affects people of all ages worldwide. IBS can be influenced by stressful factors such as psychiatric illness or environmental factors. *Aim:* To determine IBS prevalence among Umm Al-Qura University students, Makkah, Saudi Arabia. *Method:* In 18 UQU colleges, a cross-sectional study was conducted on undergraduate students. An online self-administered questionnaire was used to diagnose IBS by using the Rome III criteria. The data collection process started in September 2021 to January 2022. *Result:* The prevalence of IBS among UQU students was (20.30%) according to the Rome III criteria. 43.2% of students had IBS family history, 28.3% had previously been diagnosed with IBS and 8.2% had chronic illnesses other than IBS. Of them, 53.9% had emotional stress, 81% had educational stress and 84.2% had psychological stress (Anxiety). More than 60% (64%) had sleeping disorders, 14.8% were smokers and 45% were having fatty meal >3 times per week. Of them, 43.1% were having vegetarian meal >3 times per week and 58.4% were not exercising at all. Female students, those in >7 academic year, those having IBS family history, who had previously been diagnosed with IBS, who had emotional or educational stress, psychological stress or sleeping disorders all had a significantly higher prevalence of IBS. *Conclusion:* Irritable bowel syndrome was found in 20.30% of students in Makkah, Saudi Arabia. Enhancing the quality of academic and psychological counseling services may reduce IBS risk factors among students.

Medical Science, 2023, 27, e234ms2938

Assessment of pain at emergency department depending on factors and patient satisfaction

Amirah Fahad Alshammeri, Nawa Khalid Alshammari, Luluah Abdullah Alrashidi, Ibrahim Abdullah Alrashidi, Ahmed Abdullah Alreshidi, Abdalelah Ali Albujaydi

Background: Acknowledge the assessment of pain in patients who have been to the ED (emergency department) in hail city and other factors related to their visit. *Objective:* This study aims to correlate patients' pain scores with their reason for the emergency room visit and identify factors that are involved in pain management and patient satisfaction at the ED in Hail region, Saudi Arabia. *Material and Methods:* The study was carried out over a period of 6 months and conducted using an electronic questionnaire that was distributed to all consenting adults who resided in hail region. SPSS version 25 for Mac was used to analyze the data. *Results:* There were 442 participants who signed up for the study and returned the questionnaire, 355 (80.3%) of whom were female and 348 (78.7%). Eighty-two percent of participants have been to a government hospital. Among this group, 374 (84.6%) were transported privately and the majority received care within 10–20 minutes of arrival. *Conclusion:* A lower pain score at discharge and a shorter treatment wait time were both linked to higher satisfaction rates.

Medical Science, 2023, 27, e235ms3023

CASE REPORT

Role of a subanesthetic dose of ketamine for perioperative analgesia in a patient of cerebral palsy posted for spasticity corrections of lower limbs: A case report

Maitri Patel, Vijay Chandak, Kashyap Kanani

Spastic type of cerebral palsy is the commonest disorder is associated with childhood disability. For spasticity corrections, orthopedic procedures are performed which are extremely painful. So, adequate pain relief is the priority during the immediate postoperative period for good perioperative outcomes. Ketamine being an N-Methyl D aspartate (NMDA) receptor antagonist blunts central pain sensation at a subanesthetic dose (0.3mg/kg or less IV) and is used as an adjuvant for perioperative analgesia. A subanesthetic dose has a minimal physiological impact as compared to an anesthetic dose. Ketamine, as a subanesthetic dose improves pain score and decreases opioid consumption during the perioperative period. We present, a case of a twelve-year-old female child known case of cerebral palsy came for spasticity correction of lower limbs under general anesthesia.

Medical Science, 2023, 27, e236ms2689

A rare case of bilateral central retinal vein occlusion in a patient with Vitamin D deficiency

Varsha Kandambeth, Swapneel Mathurkar, Sachin Daigavane

One of the most important differentials for painless sudden loss of vision is CRVO (Central retinal vein occlusion). It is one of the leading diseases causing vision loss especially in elderly population. However, bilateral simultaneous CRVO in a young patient

with no other co morbidities is rare. This case illustrates a young male of 40 years with no well-known comorbidities who experienced sudden onset diminution of vision in right eye followed by left eye in 2 weeks gap. No history of smoking, diabetes, hypertension, dyslipidemia or any other systemic disorders. Patient is not on any topical or systemic medications. There was no significant family history. On evaluation of right eye, the BCVA (best corrected visual acuity) was 6/36 and left eye was finger counting 3 meters. Intra ocular pressure in both eyes was 18 mm Hg. Anterior segment showed all normal findings. Dilated fundus evaluation in both eyes showed multiple superficial and deep hemorrhages with hard exudates and macular edema. OCT (Optical Coherence tomography) displayed macular edema in both eyes. Blood investigations showed all values within normal limits except Vitamin D levels which were found to be deficient.

Medical Science, 2023, 27, e237ms2731

ANALYSIS

The relationship between smartphone addiction/overuse and musculoskeletal pain in Saudi Arabia

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Background: Although the smartphone with the latest advancement of technology has made many aspects of human existence more convenient and quick, providing us several advantages, the usage of the smartphone has several negative impacts on physical or mental health that might generally be resulted in behavioral alterations and posture or musculoskeletal changes. As a result, the purpose of this study was to examine whether or not prolonged exposure to smartphones increases the risk of developing musculoskeletal discomfort. **Methods:** A questionnaire (containing sociodemographic data, musculoskeletal pain and their relationship with smartphone usage) using social media distributed pre-designed Google form was employed for performing this cross-sectional study. SPSS v.22.0 was utilized for statistical analysis. Data were considered statistically significant at $P < 0.05$. **Results:** Study revealed that addiction or smartphone dependency presented a significantly association of smartphone usage with musculoskeletal pain (45% - neck pain; 33% - shoulder and hand pain). **Conclusion:** The above results suggested that neck pain is the most prevalent smartphone-associated musculoskeletal pain that could be prevented by good posture maintenance.

Medical Science, 2023, 27, e238ms3009

Comparison of post-operative hip abductor muscle strength and functional outcome between dynamic hip screw and proximal femoral nail in intertrochanteric fracture

Niketa Patel, Paresh Golwala

Extra capsular intertrochanteric femur fractures occur between femoral neck and lesser trochanter of the femur. However, this study aims to study the influence of restoration of femoral offset in relation to the strength of the hip abductor muscle along with the functional outcomes. In patients with ≥ 18 years of age that were operated for Intertrochanteric fracture and referred for physiotherapy, a prospective cohort study was performed. On the principles of deep venous thrombosis (DVT) prevention, strengthening exercises, ROM exercises and gait training the patients were given physiotherapy. Once weight bearing was allowed on 6 weeks, their gait parameters (stride length, cadence), functional strength (Unilateral stance test) and Harris Hip Score were measured. The same outcome measures along with the strength of hip abductor muscle were repeated at 6 months as femoral offset is important for restoring anatomy. In conclusion, weak hip abductor muscle strength was exhibited in patients with unrestored femoral offset and better outcomes were reported in patients with Dynamic Hip Screw fixation in comparison to other surgeries in young population. Additionally, the functional status of the patients with more than 70 years of age remained poor in comparison to the younger patients post-operatively.

Medical Science, 2023, 27, e239ms3024

Evaluate acceptability of Saudi Arabian parents to vaccinate their children against COVID-19

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Background: Health and infection control measures, as well as immunization, are critical elements in containing the global COVID-19 pandemic. Saudi Arabia has legalized child immunization and parental consent is normally required for vaccinations for children under the age of 18. **Objectives:** The Kingdom's Vision 2030 requires a knowledgeable and healthy society. This study aims to verify parents' willingness to vaccinate their children against COVID-19 and their understanding of the disease that they regard as crucial to the nation's future. **Methods:** An online cross-sectional survey among Saudi & non-Saudi parents who have children aged 12–18 and accessed between July to September 2022. **Results:** 260 of 666 parents completed the survey. 88% of parents agreed to vaccinate their children under-18 children. 19.2% of Saudis authorized their child's immunization, compared to 6.7% of non-Saudis ($P=.049$). 31.7% of parents with COVID-19-related family member loss had a positive attitude, compared to 16.1% of those without ($P=.048$). **Conclusion:** The Ministry of Health's social media and education level determine whether COVID-19 vaccination education campaigns should focus on the pandemic and community danger rather than vaccine safety and efficacy.

Medical Science, 2023, 27, e240ms3039