

# Medical Science

## About the Cover



*Background:* Attention deficit hyperactivity disorder is one of the most common neurodevelopmental disorders in pediatric age. It is mostly diagnosed in childhood. Pediatrics with ADHD may have issue with attention, controlling impulsive behaviors and act without thinking about or be overly active. *Methods:* A cross sectional study including a questionnaire to measure the public information about ADHD in Hail region, Kingdom of Saudi Arabia. The questionnaire has been collected from DSM-IV criteria of attention deficit hyperactivity disorder (ADHD). *Results:* The participants were more than 400 persons from the public in Hail region, we found result of the test have been used in this study and showed that there is statistically significant association between source of knowledge about disease ADHD and participants. *Conclusion:* There were a lot of positive points regarding the results of the study, but still there were a negative point, need an intervention and take an action. (Ref: Alshurtan K, Alsuhaymi A, Alenezi A, Aljumah S, Alhemsy L, Alluwya S. Public awareness about attention deficit hyperactivity disorder (ADHD) in the Hail region, Kingdom of Saudi Arabia. Medical Science 2022; 26: ms511e2579); (Image from: eiko ojala).

**A population-based survey of the association between systemic hypertension and obstructive sleep apnea among the general population in Saudi Arabia**

Abdullah I Aedh, Rahaf Abdullah M Assiri, Shatha Saad A Alshahrani, Sarah Yahya A Mushari, Aljohrah Mohammed A Al-Hunaif, Razan Ali S Alshehri, Abdullah M Assiri

*Background:* Obstructive sleep apnea (OSA) is a common disorder that is considered one of the secondary causes of hypertension. Hypertension affects approximately 50 % of people with OSA. *Aim:* The purpose of this study is to evaluate the relationship between systemic hypertension and OSA in Saudi Arabia's general population. *Methods:* A descriptive cross-sectional survey was conducted. Participants who had been diagnosed with hypertension aged 18 years or more and living in Saudi Arabia were included. An electronic questionnaire was used for data collection. *Results:* We retrieved 509 responses from participants whose ages ranged from 18 to more than 44 years, with a mean age of  $37.9 \pm 11.2$  years old. OSA was diagnosed among 269 (53.7%) of the study patients. 59.6% of male patients had OSA compared to 49.1% of female patients, with a statistically significant difference ( $P=0.019$ ). 64.2% of hypertensive patients with a secondary level of education complained of OSA compared to 44.7% of others with a lower level of education ( $P=0.001$ ). A total of 67.5% of the study patients complained of snoring during sleep which was significantly higher among patients with OSA (79.6%) than those without (53.4%); ( $P=0.001$ ). Complaints of headache most of the time were significantly higher among patients with OSA than others without (84.4% vs. 69.8%, respectively;  $P=0.001$ ). *Conclusion:* According to the current study, there was a significant prevalence of OSA among hypertensive patients (more than half of the patients), particularly among men, patients with high body mass indexes, smokers and patients with a history of the condition in their families.

*Medical Science, 2022, 26, ms506e2489*

---

**Prevalent practice and attitude toward Wet Cupping Therapy**

Ali A Bu-Khamseen, Alya A Bu-Khamsin, Abdullah A Alnaim, Zahra E Alabbad, Hussain A Alturaifi, Fatimah A Alkhawajah, Wedad M Alabbad, Fatimah M Alhashem Alsayed, Mohammed A Alnajjad, Haidar Alabdrabulridha, Hassan K AlBohassan, Sadiq Bassam Busaleh, Mohammed Ali Als Salman, Ryhana Mohammed Aljumaiah, Hussain S Alsultan

*Background:* Hijama (wet cupping) is a traditional technique that improves blood circulation. However, the results of this procedure are still debatable. As a result, the purpose of this research is to evaluate the knowledge, attitude and practice of persons who underwent cupping at the Qabasat Alkhair facility in the Al Ahsa area. *Methods:* A 400-person cross sectional research was conducted. All participants were chosen from the Qabasat Alkhair facility and received cupping treatment between 2021 and 2022. *Results:* Cupping was performed on 263 (65.8%) of the individuals for therapeutic objectives, whereas 137 (34.3%) were done for preventative ones. Before cupping, 102 (25.5%) of the participants received medical advice. 371 (92.8%) of research participants said they would recommend cupping to others and 377 (94.3%) said they plan to practice it in the future. *Conclusion:* Patients found traditional wet cupping therapy in a primary care setting to be safe and acceptable. The current study's findings imply that wet cupping has a therapeutic advantage. Participants report no adverse effects after therapy.

*Medical Science, 2022, 26, ms507e2577*

---

**Knowledge of risk factors and management of plantar fasciitis among clinical-phase medical students**

Ismail Hamad Almogbil, Ahmed M Alshammari, Abdulraheem S Almutairi, Thamer K Alharbi, Saif M Alshammari, Abdullah T Almutairi, Reem A Almuaymudi, Zakayah S Almutairi

*Objectives:* The study aims to assess and evaluate the knowledge and awareness of Plantar Fasciitis (PF), its risk factors and treatment options among clinical phase medical students. *Methods:* A cross sectional study with a validated online questionnaire was conducted electronically by using social network apps among clinical phase medical students in the Qassim Region, Saudi Arabia. *Results:* There were 408 participants in the study, including 182 (44.6%) women and 226 (55.4%) men. The results showed that both sexes (males  $n=218$ ; 96.5%; and females  $n=175$ ; 96.2%) had an excellent understanding of the condition. Overall, the majority of students could agree on each of the PF risk factors: Long periods of standing (83.3%), being overweight (87.7%), being pregnant (64.7%), engaging in intense exercise (53.7%), going barefoot (46.8%) and wearing stiletto heels (74.3%) are all risk factors. Finally, the results of this study revealed an overall significant association between the completion of the orthopedic course and the major PF symptoms ( $n=408$ ;  $p=0.01$ ). *Conclusion:* The study concluded that knowledge of PF in regards to the symptoms, chronicity and type of shoe wear, the effect of BMI and the diagnostic tool was good among the clinical phase medical students, particularly those who completed the orthopedic course. Although we found that 86.5 % of clinical phase medical students had poor knowledge regarding the management of PF which necessitates more educational activities in the public to raise the awareness level of PF and its management.

*Medical Science, 2022, 26, ms508e2596*

---

**A study on the prevalence of pediatric sickle cell intricacy amongst the urban population in the Makkah region of Kingdom of Saudi Arabia**

Muazzam Sheriff Maqbul, Rayan Nasser Sarhan, Assalah Khalid Elshahti, Ghadi Mohammed Albalbisi, Saleh Sadan Alzahrani, Muath Salem Binghafrah

The Sickle Cell Disease (SCD) time honored among the interrelated couples because of the mutation of gene ensuing with inside the alteration of pink blood cells to a sickle form inflicting animated phenomenon ensuing in extreme intricacies many of the people which possess a brilliant have an effect on their each mental and health situations destructing the everyday existence of the individual. This moves sectional purpose take a look at changed into a try to examine the intricacies of SCD in many of the pediatric city populace of Makkah vicinity with inside the Kingdom of Saudi Arabia. The pattern length changed into envisioned the usage of the G strength calculator and the received responses from the goal populace of a thousand volunteers changed into analyzed with the aid of using the Microsoft Excel and IBM SPSS Statistics for Windows model 23 changed into used for testing (IBM SPSS, IBM Corp., Armonk, N.Y., USA) with the aid of using representing the P-values (<0.05) in probabilities to decide the significance. The outcomes had been pleasant in align with the take a look at the goal. This take a look at recommends that the network surroundings encounter a whole lot of entanglements because of SCD however those oughts to be as it should be controlled with the essential measures with the aid of using clinical and nursing group of workers supervised with the aid of using applicable public business enterprise authorities.

*Medical Science, 2022, 26, ms509e2602*

---

### **Bariatric surgery effects on glycemic control and diabetes mellitus remission: A meta-analysis**

Hyder Mirghani, Bandar Alamrani, Mohammad Algabri, Meshal Alatawi, Mohammed Alasmari, Ali Alsharif, Fahad Alqahtani, Mshari Albalawi, Fadi Alamrani, Asem Albalawi, Ali Alalawi

*Introduction:* There is an increasing awareness of morbidity-based indications for bariatric surgery, literature on bariatric surgery and diabetes is scarce. *Aim:* We aimed to assess the bariatric surgery role in diabetes remission and HbA1c reduction. *Methods:* We systematically searched three databases Pub Med, Cochrane Library and Google Scholar from the first published article up to September 2022. Two reviewers searched the databases using the following keywords: Diabetes remission, HbA1c level, glycated hemoglobin, glycemic control, Bariatric surgery, sleeve gastrectomy and Roux-en-Y gastric bypass. The retrieved data were entered in a datasheet detailing the author's name, year and country of publication, the methodology and HbA1c levels before and after surgery and diabetes remission. The data were analyzed using the most recent RevMan. *Results:* Out of the 12 studies included in the final meta-analysis, five studies on bariatric surgery effect on the glycated hemoglobin (5257 events) showed a reduction of the glycated hemoglobin (odd ratio, -1.05, 95% CI, -1.15-0.96). A substantial heterogeneity was observed, ( $I^2=79%$ , P-value=0.0007) the P-value for the overall effect<0.001. Regarding the complete resolution of diabetes mellitus, we pooled seven studies and found a complete resolution of diabetes mellitus following bariatric surgery (odd ratio, 29.25, 95% CI, 10.92-78.43). No heterogeneity was observed, ( $I^2=0%$ , P-value=0.63). The P-value for overall effect<0.001 and the chi-square=4.32 with a mean difference of 6. *Conclusion:* Bariatric surgery was effective in diabetes remission and improving HbA1c. Further studies comparing different types of bariatric surgery regarding the same are needed.

*Medical Science, 2022, 26, ms510e2603*

---

### **Public awareness about attention deficit hyperactivity disorder (ADHD) in the Hail region, Kingdom of Saudi Arabia**

Kareemah Alshurtan, Ahlam Alsuhaymi, Abdulaziz Alenezi, Sarah Aljumah, Lama Alhemshy, Saeed Alluwya

*Background:* Attention deficit hyperactivity disorder is one of the most common neurodevelopmental disorders in pediatric age. It is mostly diagnosed in childhood. Pediatrics with ADHD may have issue with attention, controlling impulsive behaviors and act without thinking about or be overly active. *Methods:* A cross sectional study including a questionnaire to measure the public information about ADHD in Hail region, Kingdom of Saudi Arabia. The questionnaire has been collected from DSM-IV criteria of attention deficit hyperactivity disorder (ADHD). *Results:* The participants were more than 400 persons from the public in Hail region, we found result of the test have been used in this study and showed that there is statistically significant association between source of knowledge about disease ADHD and participants. *Conclusion:* There were a lot of positive points regarding the results of the study, but still there were a negative point, need an intervention and take an action.

*Medical Science, 2022, 26, ms511e2579*

---

## **CASE REPORT**

---

### **Dermoid cyst and its bizarre presentation during pregnancy: A tangled case**

Tanvi Chaurasia, Rahul Agola, Geeta Chaurasia

The most common ovarian germ cell tumour found in women of reproductive age is a dermoid cyst, also known as a mature cystic teratoma. They are generally unilateral, yet they are bilateral 10-12% of the time. They are made of ectodermal tissues like skin, hair and nails, mesodermal tissues like fat and muscle and endodermic tissues derived from germ cell layers. Adnexal torsion is thought to occur in 8% of instances of presumed benign ovarian tumour during pregnancy, most frequently at the end of the first trimester and during the second trimester. Ultrasound has a decreased specificity for malignancy it is still the gold standard for characterising an ovarian tumour during pregnancy. Pelvic MRI is accurate in spotting ovarian tumours during pregnancy. In this case, a 22-year-old primigravida who was 39 weeks pregnant and living in a rural region reported abdominal pain, a rare mass felt during a clinical examination, a lack of regular follow-ups and an important finding overlooked. A big lump measuring 20x15 cm that was producing pressure shifts across the lungs and respiratory discomfort was discovered during the patient's

ultrasonography after being admitted. The patient was shifted for an emergency caesarean section. A 2.5 kg healthy baby was delivered. An enormous tumour that was successfully removed was seen twisting an ovary. Dermoid and other benign ovarian cyst patients had favourable pregnancy results, including perinatal outcomes. Since problems are exceedingly rare, the cysts should, wherever feasible, be handled conservatively.

*Medical Science, 2022, 26, ms512e2537*

---

### **Thyrotoxic periodic paralysis associated with Grave disease: An unusual presentation with weakness**

Gajanan Nandkumar Umalkar, Rajeshwari Vhora, Gajanan Chavan, Vaishnavi Kantode, Mayur Wanjari

Acute quadriplegia is an emergency frequently encountered in clinical practice. Localization of acute quadriplegia ranges from the neuromuscular junction, peripheral nerves, anterior horn cells and central nervous system and electrolyte disturbances. Here we present a case of 48 years old male with a known case of grave disease with thyroid ophthalmopathy. On admission patient has been treated with medical management, on medical management patient methylprednisolone 500 mg in 500 ml of normal saline and was admitted under observation of physician in critical care I.C.U. After gone through medical management patient prognosis was good and advice for the regular follow up.

*Medical Science, 2022, 26, ms513e2549*

---

## **ANALYSIS**

### **Knowledge and awareness toward lumbar disc herniation among general population**

Naif AlHamam, Mohammed Al Saeed, Bashayer F Al Furaikh, Habib Y Al Dabbab, Mohammed Y Al Rasasy, Nasser M Al Serhani, Shima H Al Boesa

*Introduction:* Disc pathology is the most frequent cause of chronic LBP, with 39% of cases of LBP presenting with intervertebral disc disease, which makes it the most common condition among the degenerative abnormalities of the lumbar spine. Therefore, this study aims to investigate the knowledge and awareness of lumbar disc herniation among the public in single region in Saudi Arabia. *Methods and Materials:* This is a cross-sectional questionnaire-based study that was conducted among general population of Al Ahsa, the Eastern Province of Saudi Arabia in the period between January 2022 and June 2022. A previously published questionnaire in literature with similar research objectives was used in this study. Data were analyzed using descriptive analysis using Statistical Package for the Social Sciences (SPSS) v22. Results considered statistically significant with a P value less than 0.05. *Results:* A total of 995 participants completed the study questionnaire. A total of 100 (10.1%) were diagnosed with disc prolapse and 243 (24.4%) attended or watched an awareness about disc herniation. The exact 298 (29.9%) participants had good awareness levels, while 697 (70.1%) had poor awareness levels regarding Lumbar disc herniation (LDH), risk factors, clinical features and management. *Conclusion:* The study concluded that public awareness regarding lumbar disc herniation in Al-Ahsa was poor. Although, a good awareness level was observed among some groups such as, age group between 20-35 years, university educated, health care workers, single, high-income category and participants who had prior knowledge about the disease.

*Medical Science, 2022, 26, ms514e2592*

---

### **Measuring the awareness of the family with asthmatic child about the care and prophylaxis of asthma in Unaizah city, Saudi Arabia**

Ashraf Kamal, Amal Almutairi, Daad Fouly, Beshair Almansour, Njoud Almutairi, Rawan Almutairi, Raghad Alammari, Shahad Alahmadi, Younis Alharbi

*Background:* The management of asthmatic children and how the family response in this regard is highly affected by several factors, primarily the parent's knowledge and attitude toward the disease. *Objective:* The aim is to evaluate the knowledge and the awareness of the family with a child of asthma from Unaizah, Al-Qassim region regarding asthma. *Methods:* Our study is a cross-sectional survey that is conducted in King Saud Hospital, the only secondary hospital in the area, in Unaizah city. Through a period of three months; from July till September 2022. *Results:* We concluded that a higher awareness score was associated with being a mother as a caregiver of a one child in the family with atopic/chronic illness or disabilities child with, having a child diagnosed with atopic/chronic diseases or other disabilities and having more than. *Conclusion:* This emphasis of this study is to help improving the asthma care and compliance, by way of the medical community that can be helpful in providing the proper education and guidelines also to conduct awareness events.

*Medical Science, 2022, 26, ms515e2597*

---

### **Self-reported oral health behavior and dental attendance pattern between smokers and non-smokers in Saudi Arabia: A cross-sectional study**

Rabiya Basari Uppin, Abdulrahman Farraj Aldawsari, Shahad Abdullah Alsulaiman, Ibrahim Abdullah Alotaibi, Fahad Saad Almutairi

*Introduction:* This study aimed to determine smokers' and nonsmokers' self-reported oral health behavior and dental visiting patterns in Saudi Arabia. *Methods:* A structured, close-ended and self-reported questionnaire assessed the oral health behaviors and dental attendance patterns among study participants in Saudi Arabia. Descriptive statistics, chi-square tests and non-parametric

tests were applied to the data. Hiroshima University Dental Behavioral Inventory (HUDBI), designed in Arabic and English, was shared on social media platforms to capture the data on oral health behavior among citizens and residents. *Results:* Seven hundred and thirteen subjects responded to the questionnaire, of which 486 (68.2%) were non smokers and (31.8%) were smokers. The mean HUDBI ranks of smokers ranged between 89.03 to 124.74, while for non smokers, it ranged from 202.70-265, indicating poor oral health behaviors of smokers. Smokers and non smokers showed a significant difference in having false teeth in old age ( $p=0.033$ ), gum color ( $p=0.002$ ) and worsening teeth despite regular cleaning ( $p=0.011$ ). Similarly, more smokers than non smokers used hard tooth brush bristles ( $p<0.001$ ). Most smokers than non smokers visit the dentist due to their dental problems. *Conclusions:* Smokers demonstrated poorer oral health behaviors than non smokers and visited the dentist whenever they had dental problems.

*Medical Science, 2022, 26, ms516e2624*

---

### **Prevalence and determinants of smoking behavior among general population in Makkah city, Saudi Arabia - An analytic cross-sectional study**

Sanad M Alharthi, Saad M Alharthi, Emad A Baatiyyah, Faisal M Alzahrani, Alwaleed S Alzahrani, Abdulrahman A Baabdullah, Mokhtar M Shatla

*Background:* Smoking behavior is a health threat to the world. It has a big influence on many diseases. The aim of this study was to assess the prevalence and determinants of smoking among general population in Makkah city, Saudi Arabia. *Methodology:* A cross sectional study has been conducted in September 2022 by posting an online survey on social media platforms (WhatsApp, Twitter) to collect data on participants' demographics, smoking behaviors and determinants using a validated Arabic version of a subcategory questions from the global adult tobacco survey (GATS). *Results:* A total of 996 participants responded, with the age 16-30 years old predominance ( $N=647$ , 65%). The prevalence of smoking was ( $N=340$ , 34.1%). There was an increased risk for tobacco smoking among participants with male gender ( $OR=3.68$ ), low income ( $OR=2.77$ ), government employee ( $OR=1.25$ ), who experienced domestic violence or neglect ( $OR=2.54$ ) and who had smoking friends ( $OR=2.14$ ). *Conclusion:* A high prevalence of smokers was noticed. Understanding the factors associated with the smoking are crucial to design tobacco prevention and control programs. The health authority should take urgent measures to encounter this major issue.

*Medical Science, 2022, 26, ms517e2575*

---

### **Awareness of ocular complications associated with the use of cosmetic contact lenses from unlicensed vendors among Taif city, Saudi Arabia**

Abdulhamid Alghamdi, Amaal Mohammed Almalki, Amal Saeed Althagafi, Amal Hamid Almutairi, Anoud Hassan Alkurayzi, Abdulaziz Saud Aljuaid, Mohammed Hamad Alfaqih

*Background:* The usage of CLs has grown significantly and it is only expected to grow. However, CLs' wearers may have risk of eye infections if they fail to wear, clean, disinfect and store their CLs as directed. To assess awareness of ocular complications associated with the use of cosmetic contact lenses from unlicensed vendors and its correlation with age, gender and education level among Taif city, Saudi Arabia. *Methods:* Cross sectional study conducted on the general population of Taif City, Saudi Arabia. An electronic questionnaire was used for data collection. The study questionnaire was uploaded online using social media platforms by the researcher and their relatives in the Taif region till no more new answers were obtained. *Results:* Twenty% of participants had previously worn contact lenses and 29.5% were currently wearing them. In 31.7% and 19.4% of cases with refractive error, contact lens use was cited as cosmetic. 13.4% of study participants reported contact lens difficulties and 55.1% of them quit wearing them as a result. When asked if they were aware of any contact lens-related complications, 23.9% said that dry eye was a frequent problem. 18.0% of people complained of redness, 16.4% itching, 11.9% discomfort, 11.7% blurred vision, 12.2% eye burning, 9.9% eye stings, 11.6% corneal infection/inflammation and 8.7% of people complained of scratches on the surface of their eyes. *Conclusion:* Users of CLs lacked sufficient training and experience. Although many of them purchased contact lenses without a prescription for cosmetic reasons, their knowledge of and attitudes concerning contact lenses were acceptable.

*Medical Science, 2022, 26, ms518e2611*

---

### **Parents' knowledge and attitudes towards malocclusion and early identification of dentofacial deformities linked to oral habits in children**

Dareen Khalid Aljehani, Abdulmajeed M Kaki

*Introduction:* Early intervention avoids or minimizes full-blown malocclusion later in childhood and removes elements that interfere with dental arch development. Parents have a significant role in their children's oral health and related habits. This study aimed to assess parental awareness of children's oral health and habits and its impact on the malocclusion. *Materials and Methods:* A convenience sampling technique was used to recruit parents of children aged 4-9 years old in Jeddah. A self-administered questionnaire was utilized to collect parents' awareness and knowledge about oral health, oral habits and early identification of malocclusion. *Results:* A total of 485 eligible parents participated in the study. About 79% of parents agreed that it was essential to keep baby teeth in place to prevent malocclusion. It was reported by 24.7% and 17.7% of the parents that genetics and oral habits are the reasons for a malocclusion. The overall knowledge level was found to be moderate among the parents, where 36.7% had demonstrated 'good' knowledge related to oral habits and oral health and their relationship with malocclusion. Good knowledge levels were significantly higher among parents who had higher educational levels ( $p<0.001$ ). *Conclusion:* Unlike previous studies

done in Saudi Arabia, this study showed comparatively good awareness of oral habits and oral health and its impact on malocclusion among parents. This research highlights the role of pedodontists as key players in imparting knowledge to parents in preventing malocclusion among children.

*Medical Science, 2022, 26, ms519e2617*

---

### **Seasonal influenza and its vaccine: Knowledge and attitudes of the general population in Makkah city, Saudi Arabia**

Nahla H Hariri

*Background:* Influenza is a significant factor to morbidity and mortality that is underreported. The rate of vaccination uptake is greatly influenced by the public's understanding of influenza. By increasing public knowledge of the illness and the availability of vaccinations, influenza vaccination uptake can be dramatically boosted. *Objectives:* To determine the degree of knowledge of the Saudi community concerning of influenza and its vaccine and their attitude with the underlying intention of identifying the key variables and obstacles that impede its acceptance. *Methods:* A descriptive cross-sectional study involving a social-media distributed web-based questionnaire was performed with 517 participants in Makkah City, Saudi Arabia. *Results:* Of the 517 respondents, 42.2% of the respondents had a good knowledge level based on the knowledge score. According to the regression analysis, working in the medical area (OR=3.45) and intention to go on a pilgrimage in the current year (OR=2.32), were the independent predictors of possessing a high level of knowledge of influenza and the associated vaccine. Avoiding drugs, being worried about the vaccine's negative effects, and believing that seasonal flu is not dangerous enough to merit vaccination were the impediments to getting the vaccine. *Conclusion:* More educational initiatives are required to promote influenza prevention.

*Medical Science, 2022, 26, ms520e2620*

---

### **Acceptance and awareness of breast reconstruction surgery among educated women in Almadinah Almunawwarah, Kingdom of Saudi Arabia: A community-based study**

Obaid Alsaedi, Ammar Alzahim, Waleed Alharbi, Asem Beek, Ahmad Alhazmi, Ayman Alamri, Mohammed Mohammed, Yazeed Alharbi, Basem Alhusaini

*Objectives:* Breast health awareness is a necessary subject for women because breast cancer is one of the most commonly diagnosed cancers in Saudi Arabia and a major cause of death related to cancer, which motivated us to inspect the knowledge of women in our society regarding reconstruction surgery. *Methods:* A cross-sectional study was conducted among educated females in Almadinah to determine the awareness and acceptance of breast reconstruction surgery. An online validated questionnaire was used to collect the data. Analysis of the data was carried out using RStudio (R version 4.1.1). *Results:* We analyzed the responses of 342 participants in this study, most of whom were Saudis (97.7%). The majority of respondents admitted that breast reconstruction is important to them (89.2%); the most common reason among the participants who did not accept breast reconstruction surgeries (22.8%) was a procedural failure. *Conclusion:* We concluded that the majority of women used social media as their source of information, but we still saw a lack of knowledge regarding the surgical options for breast reconstruction, while acceptance of reconstruction was high.

*Medical Science, 2022, 26, ms521e2636*

---

### **COVID 19 severity, ICU need and outcome in asthmatic patients**

Qais zaid Alhamdan, Sultan Hudaib Aljaid, Seham Yahya Alzahrani, Abdulrahim Yousef Alomran, Abeer Ishq Alosaimi, Deemah Adnan Alafaliq, Fatima Ali Alghanem, Heba Essam Fahmy, Khulood Abdullah Bayazeed, Kumail Abdulmonem M Albahrani, Malak Husain Al Ramadhan, Mohammed Ali Radhi Albur, Zahra Abdullah Ali Al Musa, Zainab Ahmed Adnan Alawami, Zainab Ahmed Ali Albetiyan

There is insufficient data to definitively establish the link between coronavirus disease 2019 and asthma, despite reports that individuals with comorbidities are more likely to experience unfavorable clinical outcomes. On account of this, the objective of this study is to carefully analyze the clinical traits of asthmatic COVID-19 patients. 18 COVID-19 patients with asthma and 101 COVID-19 patients without asthma were statistically matched in this single-center, retrospective and observational cohort study using propensity scores based on age, sex and comorbidities. In the meantime, data on demographic variables, clinical and laboratory tests and results were gathered and compared between the two groups to identify any differences. According to statistics, patients on the COVID-19 who had asthma had a higher proportion of ICU admissions than those who did not. Additionally, asthma patients showed greater levels of inflammatory responses such as interleukin 6, interleukin 8, procalcitonin, leukocytes, neutrophils, and CD4+ T cells. Additionally, COVID-19 patients with asthma had more significant increases in organ damage markers such D-dimer, lactate dehydrogenase and high-sensitivity cardiac troponin I. In COVID-19 asthma patients, exacerbated inflammatory responses and numerous organ damages were induced, highlighting the need for excessive intense surveillance and supportive care.

*Medical Science, 2022, 26, ms522e2632*

---

### **CASE REPORT**

#### **Case presentation of axillary swelling as hydatid cyst**

Mili A Jain, Chhavi Jain, Swarupa Chakole

Hydatid disease is induced most commonly due to infestation of the parasitic organism, *Echinococcus granulosus*. Lack of personal and communal hygiene increases the chances of contracting this infection. Zoonotic organisms are typically seen in the liver; they occasionally move to the brain, lungs and kidneys; they are seldom found in muscle, eye, vagina, bone or heart. A 36-year-old male patient was shown predominantly with right axillary swelling for three months which was painless and gradually progressive in nature. On investigations by ultrasonography (USG) and fine needle aspiration cytology (FNAC), it was diagnosed as a case of a hydatid cyst of muscle. The infection was treated with the administration of antiparasitic therapy combined with total cystectomy and instilled scolicidal agents with follow-up monitoring with the surgeons.

*Medical Science*, 2022, 26, ms523e2567

---

### **Aggressive management of extensive de gloving injury of the left lower limb with debridement and split skin grafting and application of vacuum-assisted closure system over recipient grafting site in a tertiary health care setup**

Anil Reddy, Suhas Jajoo, Chandrashekar Mahakalkar, Siddharth Mendiratta, Garima Saxena, Harshita J

A novel technique for fixing skin grafts combines vacuum-assisted closure (VAC) with a dressing based on the bacterium Chlorhexidine gauze. In this instance, the patient came to us with substantial degloving damage to the left lower leg due to a crushing injury, with exposed femoral vessels and a knee capsule. He was on fluids and blood transfusions when we arrived. Emergency debridement was performed, the exposed vessels were covered with a sartorius flap, the exposed patella was covered with a gastrocnemius flap and both were then covered with a VAC dressing. Later, a serial meshed grafting was performed and each was covered with a VAC dressing. We, here aim to demonstrate that it is preferable to use VAC dressing over grafting for improved graft uptake and to reduce the need for frequent dressing changes in cases of pain and soakage. One week after dressing removal the rate of skin transplant acceptance was measured. In the same patient, the VAC dressing method is contrasted with traditional bolster dressing over the foot. Compared to the tie-over bolster technique the VAC plus chlorhexidine-based dressing region shows higher skin graft uptake rates and reduced levels of discomfort. There was graft loss over the foot where we used conventional dressing.

*Medical Science*, 2022, 26, ms524e2574

---

## ANALYSIS

---

### **Prevalence of irritable bowel syndrome (IBS) and its impact on quality of life among adult general Saudi population in Al-Baha region, Saudi Arabia: A cross-sectional study**

Areej I Al-Hazmi, Zahraa Y H Almakinah, Nawaf O M Almutairi, Anfal J A Al-Nujaidi, Loay Y Al-Thobaiti, Hanin A M Alghamdi

*Background:* Irritable bowel syndrome (IBS) is a condition that is characterized by irregular bowel movements and recurring stomach pain in the absence of anatomical or biochemical abnormalities. Based on Rome IV criteria, four bowel patterns may be seen. Quality of life (QOL) seems to be affected in patients with IBS. *Objectives:* To measure the prevalence of IBS in Al-Baha region using Rome IV criteria and evaluate the effect of IBS on QOL. *Methods:* This cross-sectional study analyzed data from a population-based survey of adults in Al-Baha region (410 valid responses, 76.3% females, aged 18 and older). The questionnaire covered the sociodemographic characteristics, Rome IV diagnostic criteria for IBS and QOL of participants using the Euro QOL 5-Dimension, 3-Level (EQ-5D-3L) questionnaire. *Results:* 27.3% of the participants (74.1% females) met Rome IV criteria. The most frequent subtype among IBS patients was IBS-M (42.86%), which was followed by IBS-C (25.89%), IBS-D (16.96%) and IBS-U (14.29%). Smokers had an equal distribution of the four types of IBS, while 87.5% of the non-smokers had IBS-M. IBS-C was recorded as the most common sub type in participants diagnosed with depression or stress 20.69%. The mean EQ-VAS score of QOL was lower in IBS patients (73.83% vs. 83.37% in non-IBS). *Conclusion:* The prevalence of the disease in this study was 27.3% and the most common subtype among IBS was IBS-M type. There was no association between educational level or gender and increased risk of IBS. The QOL is significantly lower in IBS patients than in non-IBS.

*Medical Science*, 2022, 26, ms525e2550

---

### **Diabetic foot care: Knowledge and practice**

Mohammed Alharbi, Ahmed Mohammed Ahmed Abdalrahman, Eyad Mohammed Khalifah, Fauwaz Fahad Alrashid, Anas Abdulqader Fathuldeen, Sager Holy Alruwaili, Ahmed Onayzan Alshammari, Khalid Rahil Alanazi, Rakan Hamoud Alsukaybi, Abdalmajid Maezi Alanezi, Saadeldin Ahmed Idris

*Background:* The most common and serious diabetic complication involves foot ulcers. Such a complication is extremely burdensome for patients and for healthcare systems. *Objective:* To evaluate the understanding and practice of diabetic patients toward diabetic foot care. *Methodology:* Using a pretested online questionnaire data were collected prospectively from the general population descent from Hail region between November 2021 and April 2022 and analyzed by SPSS version 24.0. *Results:* A total of 423 diabetics participated in the study. More than three-quarters (76.8%) were from urban areas (P=0.03). Diabetic foot ulcer was found in 152 (35.9%) and it was lower most in the utmost educational groups (P=0.003) and highest in the older and those from urban areas, P=0.007 and P=0.013 respectively. A 79% knew that regular physical activity helps reduce blood sugar (P=0.001). Moreover, 70.4% were aware that before washing their feet, they should test the water's temperature (P =.001). Awareness was affected by the presence of diabetic foot ulcer and education (P=0.01, and P=0.001 respectively). Foot care practice was reported among 42.6%

( $P=0.313$ ). It was affected by the presence of diabetic foot ulcer and co-morbidity ( $P=0.04$ , and  $P=0.002$  respectively). *Conclusion:* A low percentage of populations are aware of and practicing diabetic foot care. Emphasis should be placed on intensifying the role of education in diabetic foot care.

*Medical Science, 2022, 26, ms526e2591*

---

### **The pattern of pilon fractures in King Saud Medical City**

Ahmed Onayzan Alshammari

*Background:* The pilon fracture is a fracture notable by the fact that it varies greatly in its intricacy. Despite being uncommon, pilon fractures are of interest to orthopedic surgeons because of the awkwardness of their treatment. For correct grading, classification and preoperative preparation, necessary radiographic images must always be undertaken. *Aim:* The study was designed to determine clinical as well as radiographic patterns of pilon fractures at our facility. *Methods:* The study included patients with tibial pilon fractures who presented to King Saud Medical City (September 2019 – August 2022). Fractures were categorized based on the AO classification method and Gustilo–Anderson classification. *Results:* Tibial pilon fractures occurred in 21 individuals, among them 23.8% of fractures were open, 14.2% of the individuals had Gustilo type II and the predominance (47.6%) belonged to AO type 43-B. Fracture grade and its relationship to fibula fracture both substantially impacted the AOFAS scoring rate ( $P=0.025$  and  $P=0.019$ , respectively). *Conclusion:* When compared to other musculoskeletal injuries, tibial pilon fractures are still quite rare, but it is rising in incidence. Hence, specific orthopedic surgery units in Saudi Arabia dealing with lower tibial fractures are needed to cover a wider geographic area to categorize patients aiming to tailor appropriate management strategies that may positively affect its outcome.

*Medical Science, 2022, 26, ms527e2631*

---

### **Prevalence of obesity and associated factors among girls' primary school-age in Riyadh: Perspectives of mothers**

Sarah S Alamer, Amjad K Alanazi, Shujon M Alazzam, Reem S Almutairi, Rawan M Alasfr, Jana S Sendy, Lama S Aleid, Huda A Fallatah, Abrar A Omar, M A Alfadeel

Obesity is a complex condition due to accumulation of excess body fat that impairs human health. Obesity in childhood is a special concern causing development of multiple chronic conditions. *Objective:* To evaluate the problem of Childhood Obesity in girls of a primary school in Riyadh. *Methodology:* This study was cross-sectional. Participants were 408 mothers. Selected according to convenience. Electron questionnaire used for data collection. Data cleared, coded and entered through SPSS. *Results:* Overall mothers of 408 children aged 6-12 years old, obesity prevalence was 49.5%, significant results of child obesity was associated with mothers who suffer obesity 61%, mothers with educational level secondary school or lower 41%, less than normal birth weight or more than normal birth weight 64%, risk factors such as child eat larger amount of food 67.2%, child skips early morning breakfast 49%, child watches TV/electronic devices (more than 2 hours per day) 53% and child who experience stressful condition 86%. *Conclusion:* Mother's health status, occupation status, the level of their attitude and their awareness of obesity risk factors is strongly associated with their children obesity.

*Medical Science, 2022, 26, ms528e2498*

---

### **Knowledge and perception about light-curing units among dental students and interns: A cross-sectional study**

Dana Alsenan, Halah Mudhish, Lina Alharbi, Mona Alzahrani, Noor Aljarallah, Fatin Ageel

*Objective:* This study aimed to evaluate the knowledge and perception of dental students and interns about Light-Curing Units (LCUs), at Princess Nourah Bint Abdulrahman University (PNU), Riyadh, KSA. *Materials and Methods:* The online questionnaire entailed 14 questions that were grouped under three sections: (1) Demographics, (2) LCUs and light-activated materials and (3) LCUs' maintenance, safety and disinfection. Chi-Square and ANOVA tests were used to compare the groups with a significance fixed at  $p \leq 0.05$ . *Results:* A total of 108 dental students and interns participated in the survey. Regarding the overall knowledge among the groups, an insignificant statistical difference was found between the groups' knowledge of LCUs based on the level of education ( $P$ -value=0.231). As for the appropriate infection control methods, many have answered correctly (69.4%). Regarding the use of radiometers (50.9%) of the participants do not use radiometers in their daily practice, moreover (36.1%) were not familiar with the device. *Conclusion:* Our findings suggest that dental students and interns have very low overall knowledge regarding the light-curing units while demonstrating relatively high awareness toward maintenance and infection control protocols.

*Medical Science, 2022, 26, ms529e2600*

---

### **Awareness of morbid obesity as a risk factor for obesity-related cancers among Saudi morbid obese patients: A cross-sectional study**

Enas M Al Qahtani, Aziz Jarman M Alsubaie, Rajeh Omar Rajeh Alaklabi, Sultan Hammad Mohammed Alosaimi, Mashael Muhammad Alfarasani, Tahani Alshandari, Malik Al Mutairi

*Background and Aims:* Obesity has become one of the most prevalent epidemic disorders worldwide. This study aimed to evaluate society's perception of the relationship between obesity and cancer. *Settings and Design:* A descriptive cross-sectional study was conducted targeting obese patients in Saudi Arabia, Targeting Saudi participants aged 18 years and older from August to October 2022. *Methods:* After having ethical approval, an online questionnaire was used for data collection. *Statistical Analysis:* Data was



revised, coded and input to statistical software IBM SPSS version 22 (SPSS, Inc. Chicago, IL) after being extracted. *Results:* The study questionnaire was completed by 512 individuals in total. Almost 70% of the obese participants are not recognized themselves as obese. In contrast, only 20.5% of them believe that they are obese. Most participants are ready to treat obesity and 47.1% consider surgery to treat obesity. The most noted reasons for treating obesity among participants were to have a better lifestyle and diet. Only 11% of them considered cancer as a threat resulting from obesity. *Conclusion:* The study revealed that the vast majority of the obese participants knew that obesity is a health threat due to associated complications, including metabolic diseases. However, in our society, obesity is not often recognized as a risk. The factor for cancers. Thus, it's recommended that there is a need to increase the awareness and implantation of obesity prevention programs for patients prepared by healthcare providers.

*Medical Science, 2022, 26, ms530e2593*

---

## CASE REPORT

---

### **Dental considerations and management of a patient with dandy-walker syndrome: A case report**

Atheer Almulyafi, Jawza Alfarraj, Jawaher Alharbi, Sliuman Alnashwan, Abdul Aziz Alaeefy

*Introduction:* Dandy-Walker syndrome is a congenital disorder that mainly affects brain development during pregnancy, particularly the cerebellum, which is the part responsible for movement. An enlargement in the fourth ventricle and cyst formation occurs in this disorder. As cerebrospinal fluid accumulates, high pressure and swelling may occur in the base of the skull causing hydrocephalus. *Objective:* The purpose of this article is to describe the clinical manifestations, dental considerations, oral findings and management strategies in a DWS-affected pediatric patient. *Case description:* 4 years old Saudi male patient came with his father with a complaint of multiple caries. The patient was completely uncooperative and refused to sit on the dental chair for examination. The patient was diagnosed with Dandy-Walker syndrome and presented to the clinic with difficulty in swallowing and chronic carious lesions. The swallowing problem is being directed to the swallowing unit at the speech and language pathology department. Under general anesthesia, the patient will go for full dental rehabilitation. *Conclusion:* Children with Dandy walker syndrome are presented with different clinical presentations and varied intellectual development. The dental management of such children should be customized for each individual based on their needs. Oral health education for parents and caregivers regarding oral hygiene and dental trauma is of prime importance.

*Medical Science, 2022, 26, ms531e2582*

---

### **Foreign body ingestion induced ileal perforation: A case report**

Bogshan MK, Alhassani MD, Ansari FA

Foreign body consumption leading to gastrointestinal perforation is uncommon and sometimes ignored; hence, misdiagnosis is likely. Here in, we present a 26-year-old male who contributed to the department of emergency medicine with chronic lower abdominal pain for three months. He provided no information on his past sea food consumption. The findings of laboratory testing and the first imaging examination were normal. Abdominal CT revealed a high-density lesion, presumed to be a foreign body. During surgical exploration, a fish bone was discovered in the terminal portion of the ileum, resulting in many ileal perforations and the creation of an ileo-ileal fistula. Diagnostic laparoscopy followed by exploratory laparotomy, resection of the perforated bowel segment and side-to-side anastomosis was performed. The patient recovered from surgery nicely and was discharged in good health. A precise diagnosis of complications caused by ingestion of fish bones is fairly difficult. Detailed information on the patient's diet and eating habits must thus be obtained. Patients' clinical manifestations are mainly determined by the location of the perforation, typically at the terminal of the ileum and rectal sigmoid colon. CT and diagnostic exploration are the modalities for accurate diagnosis and management.

*Medical Science, 2022, 26, ms532e2634*

---

### **A rare case of papillary thyroid carcinoma (PTC) presenting as multinodular goiter (MNG) successfully operated with total thyroidectomy (TT)**

Kshiti Mahuli, Chandrashekhar Mahakalkar, Suhas Jajoo, Aravind Chava, Vaishnavi Kantode, Mayur Wanjari

An enlarged, diffusely heterogeneous thyroid gland is known as multinodular goiter; papillary thyroid cancer is the utmost obvious type of this condition (MNG). The typical symptom of thyroid goiter, a prolonged benign swelling of the thyroid gland, is a generally asymptomatic anterior neck lump that can occasionally expand to the mediastinum. Retropharyngeal goiters usually manifest themselves. This case is of a 90-year female with large anterior neck swelling for 25 years associated with pain relieved by medications. Computed tomography (CT) of the neck suggests a heterogeneously enhancing solid cystic lesion suggestive of multinodular goiter. She underwent a total thyroidectomy; the postoperative period was uneventful. Histopathological examination suggested papillary thyroid carcinoma (TNM staging pT3apNxpmx). The patient had a stable postoperative period and got discharged within 15 days after the surgery. The prognosis of the patient is good.

*Medical Science, 2022, 26, ms533e2551*

**Prevalence and risk factor of cholelithiasis after laparoscopic sleeve gastrectomy among Hail population, Saudi Arabia**

Fauwaz F Alrashid, Hamad H Alanazi, Hadeel S Alhamazani, Raghad A Alsdairi, Renad A Almusawi, Abdulrahman A Alkhateeb, Yasmin S Alhamazani

*Background and Aims:* The prevalence of cholelithiasis after different kinds of bariatric operations was found to increase in recent studies. The incidence rate internationally ranges from 2 to 50%, locally it is between 2.3 and 3.5%. The purpose of this study was to evaluate the incidence and risk factors for cholelithiasis among the Hail community in Saudi Arabia following laparoscopic sleeve gastrectomy. *Methodology:* A cross-sectional study was done on 505 patients who underwent laparoscopic sleeve gastrectomy in Hail region, Saudi Arabia. An online questionnaire was used to assess participants' demographic data, family history of gallstones, operative history, pre and postoperative BMI, DM, HTN and high TG, daily fat rich foods and diagnosis with gallstones after operation. *Results:* The prevalence of gallstone development after surgery was 19.8% and it was significantly higher among patients who underwent laparoscopic sleeve gastrectomy for more than a year, who had diabetes or triglycerides prior to surgery and who often ate meals high in fat. The chance of gallstone formation following surgery did not significantly correlate with the patients' demographics or family history of gallstones, according to a multivariate logistic regression analysis. *Conclusion:* It is critical to regularly check on each patient's postoperative weight. In addition, patients must be informed about gradual weight loss in order to reduce their risk of developing cholelithiasis.

*Medical Science, 2022, 26, ms534e2588*

---

**Parent's awareness and knowledge about school backpack and related musculoskeletal disorders Saudi Arabia: A cross-sectional study**

Ali Tawfiq Alamer, Abbas Hadi Alsuwayj, Ahmed Yousef Algafle, Mohammed Hassan Alrasasi, Hassan Abdulmonem Alhassan, Abdullah Mohammed Alaithan, Nibras Adel Alfandi, Jalal Khaled Aldandan, Hussain Adil Alghadeer, Mohammed Fahad AlKhalifah, Hassan Mohammed Alahmad, Mohammed Hussain Alradhi, Rawan Mubarak Aldrees, Ruqayyah Anwar Alghazal, Sokinah Nasser Almusalami

*Background:* School children often use backpacks, which are known to cause a variety of health-related issues, including altered gait, poor posture and pain. *Methods:* A cross-sectional study was conducted in Saudi Arabia during the period of 1/10/2022 to 1/11/2022 among parent who has at least one school-aged child. The data were collected via an online questionnaire that inquired about the student's biography, school back practices and perceptions and carrying ways and musculoskeletal (MSK) outcomes. *Results:* A total of 2424 parents fulfilling the criteria. About 69% of the parents know the type of school backpack and 22.2% reported that their child' complains of musculoskeletal consequences. *Conclusion:* The parents' knowledge of school backpacks was above average in terms of all parameters, including appropriate weight, character traits and carrying techniques. Additionally, they were well knowledgeable about related MSK illnesses.

*Medical Science, 2022, 26, ms535e2635*

---

**Current mental health status and burnout level among anesthesiologists in Riyadh, Saudi Arabia: A cross-sectional study**

Waleed Abdullah Alghamdi, Ahmed Maamoun Khalaf, Hamad Mohammed Alsuwailem, Khalid Nezar Khalifah, Hesham Sameh Abozaid, Khalid Abdulaziz Balbaid, Abdullah Adnan Rifaey, Mohammed Khulaif Alharbi

*Background:* Being a healthcare professional may be exceedingly challenging physically and emotionally. Some anesthesiologists may suffer from mental health problems and burnout as a result of their exposure to lengthy working hours, unpredictable settings, and persistent stress. Our study objective is to determine the frequency and prevalence of anesthesiologists' mental health status and burnout level as well as any associated risks factors. *Method:* A cross-sectional analysis was carried out on multiple hospitals in an organized setting located in Riyadh, Saudi Arabia. At least hundred and fifty anesthetists in multiple hospitals in Riyadh participated in the study. The questionnaire contained three parts, the first part representing respondents' demographic data. The depression, anxiety and stress scale - 21 Items (DASS-21) were utilized in the second section to assess mental health status. The last part elucidated the levels of burnout using the Maslach Burnout Inventory–Human Services Survey (MBI-HSS) for Medical Personnel. *Results:* In this research, we gathered data from 152 anesthetists from different hospitals in Riyadh, Saudi Arabia. We discovered among the participants that the prevalence of depression, stress and anxiety among anesthetists was 45%, 35.1% and 51%. Furthermore, considering the extent of burnout, 22.5%, 49.7% and 47.7% had a high and prominent level of burnout, taking into account emotional exhaustion, depersonalization and a lack of personal accomplishment. Burnout was prevalent in 64.9% of participants who scored highly in one or more of these three domains. *Conclusion:* Burnout and mental illness are very common among anesthesiologists in the Riyadh, Saudi Arabia. Younger participants were the most directly affected group by these symptoms; therefore, they ought to be the focus of any methods developed to lessen this prevalence. High rates of burnout have also been associated with higher levels of mental problems, reduced life quality and poorer healthcare services.

*Medical Science, 2022, 26, ms536e2646*

---

## **Knowledge of polycystic ovary syndrome among females in Al- Qunfudah governorate, Saudi Arabia: A cross-sectional community-based study**

Mosad M Odah, Fuad M Alkudaysi, Ibrahim A Alnashri, Hassan I Alnashri, Hassan O Alfakieh, Ali A Almathami, Awad A Alessi, Turki M Alhasani, Ali A Alghanmi, Abdulrahman A Almarhabi, Safa H Alkalash

*Background:* Polycystic ovary syndrome (PCOS) considered one of the foremost common endocrinological diseases, which affects women of childbearing age and their quality of life. *Methods:* An analytical cross-sectional study was conducted among a simple random sample of 826 females whose ages of 18-years-old and above in Al-Qunfudah governorate. Data were collected through a validated, electronic self-administered questionnaire to assess their knowledge toward PCOS. *Results:* A total of 826 women from different areas of Al-Qunfudah governorate were recruited in this study, 47.3% of them whose ages between 18 to 24 years and 39.3% were residents of Al-Qunfudah city. A percentage of 11.9 of this study sample self-reported as being previously diagnosed of PCO, of whom 65.3% received treatment. There was a significant association between knowledge score and age ( $p=0.000$ ), marital status ( $p=0.036$ ), educational level ( $p=0.000$ ), prior knowledge about PCOS and its symptoms ( $p=0.000$ ) and self-reported PCOS diagnosis ( $p=0.000$ ). *Conclusions:* Knowledge levels varied among participants of different socio-demographic backgrounds. Better knowledge was evident among younger and married participants, university graduates, participants with previous background regarding PCOS and its symptoms, as well as participants with self-reported PCOS diagnoses.

*Medical Science, 2022, 26, ms537e2649*

---

## **Impact of social media as a risk factor of increased fast-food consumption and increased bad health habits in children and adolescents in Saudi Arabia**

Nashmiah Obaid Sulaiman Alanazi, Manal Mohammed Eid Alhawiti, Saleh Ahmad Almuzini, Mashael Zayed M AlBalawi, Maram Fahad A Alsuwaidan, Abrar Abdulaziz Alanazi, Abdulkarim Muteb Mohammed Alanazi, Shoog Mohsen R Alharbi, Marwa Fahad A Alsuwaidan

*Background:* Because of the worsening health effects, fast food consumption and its effects have become a serious public health problem worldwide. *Aim:* Our study sought to determine the relationship between the effects of different social media usage and its impact on the frequency of fast-food intake, as well as the growth in poor nutritional implications in children and adolescents among the Saudi Arabian general population. *Methods:* Our study adapted a cross-sectional study design. The study included a sample of Saudi children and adolescents of both sexes. A predesigned questionnaire was used for data collection and data were managed using the Statistical Package for Social Sciences (SPSS) version 26. *Results:* The study included 300 participants of whom 80.7% were females. 95% of the participants in the study reported using social media and 45.7% reported using it more than four hours per day. Social media usage habits were reported to be high by 46% of respondents. In total, 76.7% of the participants in the research said they like fast food and 61.3% said they enjoyed soda. Only 31% believe that watching online fast-food promotions increases their fast-food consumption. *Conclusion:* Fast food choices and behaviors were significantly connected with the average daily usage of social media. People, who like fast food, consume it in restaurants, prefer salty food, dislike sweet food, drink soda and do not think that seeing online advertisements for fast food promotes consumption were more likely to use social media heavily.

*Medical Science, 2022, 26, ms538e2590*

---

## **The self perceived effect of self-monitoring blood glucose (SMBG) on clinical and behavioral outcome among diabetic patients in Saudi Arabia**

Hani Ahmed Ibraheem Abozaid, Ghadeer Mesfer Alalyani, Suha Abdul Rahman Alkhaldi, Ethar Khalid Alharth, Amani Hassan Alrumaym, Khalid Awwadh Alharthi, Abdulrahman Awadh Alharthi

*Background:* Self-monitoring of blood glucose (SMBG) is essential for optimal self-management of glycemic control. *Objective:* To assess diabetic patients and caregivers of diabetic patients' practices and satisfaction with SMBG usage in Saudi Arabia. *Methods:* Data was anonymously collected from participants across Saudi Arabia using a pretested questionnaire. Practices, experiences and satisfactions related to SMBG usage among diabetic patients and caregivers of diabetic patients were recorded. A modified version of the CGM Satisfaction Scale (CGM-SAT), which had 18 items, was used to record satisfaction regarding SMBG usage. All the data obtained data were tabulated and subjected to appropriate statistical analysis. *Results:* The majority of the diabetic patients demonstrated good satisfaction and the mean satisfaction score was found to be  $74.0 \pm 8.5$  (maximum=90). No statistically significant differences were seen in satisfaction scores between the two genders and nationalities ( $p>0.05$ ). However, satisfaction was significantly higher among those who used SMBG more than once a day ( $p=0.029$ ), those who were on anti-diabetic medication ( $p=0.004$ ) and those who were on insulin injection ( $p=0.041$ ). *Conclusion:* Better self-glucose monitoring experiences are necessary for good treatment of patients with any type of diabetes and patient satisfaction is becoming increasingly important and widely recognized as a vital indicator of the quality of the healthcare system.

*Medical Science, 2022, 26, ms539e2605*

---

## **Clinical outcome of patients after endoscopic discectomy performed by two specialists**

Rapcan Robert, Kocan Ladislav, Burianek Miroslav, Rapcanova Simona, Mlaka Juraj, Matias Michal, Gajdos Miroslav, Kocanova Hana, Vaskova Janka

*Background:* Endoscopic lumbar discectomy (ELD) is a percutaneous minimally invasive procedure used in the treatment of lumbar disc herniation. The study (NCT02742311 ClinicalTrials.gov) compares clinical outcomes after the interventional pain physician (IPP) and spine surgeon (SPS) provided transformational discectomy. *Methods:* Subjects were followed for 12 months via planned examinations by pain physicians. Leg pain and back pain intensity was assessed by an 11-point numerical rating scale (NRS). Patient's functional disability was assessed by the Oswestry Disability Index (ODI). Re-operations between both physicians were calculated by relative risk (RR). *Results:* Study subjects showed a significant decrease in ODI scores in both groups ( $p < 0.001$ ). The mean ODI in the IPP-group was  $41.1 \pm 16.4$  and in the SPS-group  $38.9 \pm 16.3$  preoperatively. Postoperatively it was  $16.3 \pm 11.5$  in the IPP-group and  $15.9 \pm 14.3$  in the SPS-group. Significantly lower pain scores for leg pain ( $p < 0.001$ ) and back pain ( $p < 0.001$ ) were also recorded at the 12-month follow-up. RR for re-herniation was 1.19 with 95% CI (0.33 to 4.26,  $p > 0.05$ ). *Conclusion:* We did not discover any significant difference between groups in the clinical outcomes during the 12-months evaluation. There was no significant difference in re-herniation rate in groups. Overall percentage of disc re-herniation was 5.26%.

*Medical Science, 2022, 26, ms540e2621*

---

## CASE REPORT

---

### **The role of intraregional dexamethasone injection in the treatment of recurrent tongue mucocele (clinical trial): A case report**

Hamad N AlBagieh, May A Alsenani, Lujain A Al Sahman, Tala M Alsulaim, Nada A Alhogail, Reema S Alshargi, Magdy Hamam

Mucocele is the most common minor salivary gland-associated disease of the oral cavity. It involves mucin accumulation causing limited swelling. In recent years, extensive evidence has been published about the usage of intralesional corticosteroid injection in treating mucoceles in adult patients. The aim of the present case report was to assess the effectiveness of intra-lesional dexamethasone injection in the treatment of mucocele. Two histological types exist: Extravasation and retention. One of the most common oral lesions to be biopsied in pediatric patients is mucocele. Mucoceles can appear at any site of the oral mucosa where minor salivary glands are present. The significant number of cases should be properly conducted in order to check for any prior trauma because the diagnosis is mostly clinical in nature. The lower lip area is where extravasation mucocele most frequently appears, while retention mucoceles can be found at any other site. Mucoceles can affect anybody, however young people are most frequently affected (20-30 years old). Clinically they consist of a soft, bluish and transparent cystic swelling which normally resolves spontaneously. Surgery is commonly used as a kind of treatment. However, other treatments including CO2 laser, cryosurgery, steroid injections and 7 micromarsupialization are also advised. This report reports a case of recurrence of mucocele on the tongue's ventral surface that was unsuccessfully managed five times. Intraregional dexamethasone injection (0.5 ml of 2 g) was found more effective than surgical removal.

*Medical Science, 2022, 26, ms541e2641*

---

### **Reversal of ischemia and pain in a patient of Subclavian Artery Stenosis: A rare Case**

Vivek chakole, Jeshnu Tople, Vidur Mago

The wide array of peripheral arterial diseases (PAD) includes stenosis of the subclavian artery. Estimated around 2percent of the total population is thought to have subclavian artery, which is the incidence of subclavian artery stenosis. Individuals more than 70 years of age have a 15% prevalence of PAD. Five percent of patients will have critical limb ischemia out of this group and roughly a quarter of them will need revascularization. Left subclavian artery stenosis affects almost fifty percent of patients with documented peripheral arterial disease, accounting for 30% of all cases. Due to the sluggish course of the disease, a large population of individuals is asymptomatic. Once the vessel diameter has shrunk by 50% at the luminal end, symptoms frequently start to show. The disease is most prevalent in the sixth to seventh decade of life, with symptoms ranging from central nervous system to the circulatory system including pain, swelling, numbness, ischemic changes and vertigo to name a few. The primary method for diagnosing and treating sympathetically sustained pain disorders involving the upper extremities, such as complicated regional pain syndrome, is stellate ganglion block, a minimally invasive operation (CRPS). The stellate ganglion block can be a great treatment modality in multiple neuropathic pain disorders, including ischemic neuropathies, painful viral infections such as herpes zoster (shingles), early PHN and post-radiation neuritis, where it has been found effective in pain relief.

*Medical Science, 2022, 26, ms542e2553*

---

### **External cavitory drainage catheter for large cerebral abscess in high-risk patients: Novel technique**

Atharva Sarode, Sandeep W Iratwar, Ashishkumar Jha, Paresh Korde

The intracranial abscess is a devastating pathology that the neurosurgical community continues to face in terms of morbidity and overall prognosis despite the advances in diagnosis and outcome. Management of brain abscess is amalgamation of medical and surgical therapies. Currently, craniectomy or craniotomy with excision of abscess and burr hole aspiration of pus are the two surgical therapeutic options available for the management of brain abscess. Here we present a new therapeutic solution for the management of brain abscess in the form of burr hole aspiration followed by continuous drainage of pus through the external cavitory drain catheter.

### **An IVF pregnancy in a woman with mullerian anomaly and poor ovarian reserve: A success story**

Manisha Andela, Deepti Shrivastava, Arti Mishra, Kamlesh Chaudhary

Pregnancy in a congenitally anomalous uterus is difficult and can be often missed on routine investigation such as transabdominal ultrasonography. Here we discuss a fascinating case of an accidentally diagnosed with unicornuate uterus having a communicating rudimentary horn with a live pregnancy in a 34-year-old sub fertile primigravida with IVF conception who was a known case of hypothyroidism. This rare diagnosis of Mullerian anomaly was made intraoperatively while the patient was undergoing caesarean section. Though there is massive advancement in the fields of imaging modalities and diagnostic ultrasonography, antenatal diagnosis has still remained elusive.

Medical Science, 2022, 26, ms544e2618

---

## **ANALYSIS**

---

### **The prevalence and awareness of personal listening devices use and hearing loss among medical students in Saudi Arabia**

Yahya Ahmed Fageeh, Mohammed Abdullah Basurrah, Reuof Aali Almutairi, Wahaj Abdullah Altalhi, Norah Safar Alharthi, Zouhor Atallah Alhossaini, Hadeel Hassen Altalhi, Shumukh Khalid Alsharif

*Background:* NIHL results from irreparable damage to the inner ear's cochlear hair cells. In addition, a potential consequence of using prevalent PLDs puts the users at greater risk of hearing loss when misusing these devices. *Objectives:* This study evaluates the prevalence and awareness of PLDs and NIHL among medical students in Saudi Arabia. *Materials and Methods:* We conducted a cross-sectional study with a representative random sample of 600 medical students in Saudi Arabia. A self-administered questionnaire was distributed through social media. We collected data regarding participants' awareness of NIHL caused by PLDs and its risk factors and symptoms. *Results:* 608 students completed the questionnaire, whose mean age was 23.1±3.7 years. 27.1% of the participants reported that they were suffering from hearing loss. All of the participants reported using at least one type of PLD. The most familiar type of PLDs was Earphones (32.1%), followed by headphones (26%). The overall knowledge about NIHL was low. However, moderate to high knowledge about the causes and symptoms of NIHL was found. We found a statistically significant connection among hearing damage and: Region of residence and academic year and type of PLD, level of device volume and most common purpose of device use. *Conclusion:* The study showed that PLD use and NIHL awareness are widespread among Saudi Arabian medical students. Medical students need to pay more attention, enhance their level of concentration and use less PLDs as they prepare to offer healthcare in the future.

Medical Science, 2022, 26, ms545e2619

---

### **Adequacy of practice regarding *Helicobacter pylori* eradication in Al-madinah, Kingdom of Saudi Arabia: A cross-sectional study**

Sami Abdo Radman Al-Dubai, Osama Abdullah Alharbi, Hamza Waleed Tolah, Zeyad Khalid Alsehli, Khaled Talal Algrafi, Ahmed Abdullah Alharbi, Mohamed Hosameldin Khadrawy, Osama Madani Kiram, Abdulmajeed Ghallab Alamri

*Background:* *H. pylori* (*Helicobacter pylori*) is one of the most common infections worldwide, with a high prevalence in both developed and developing countries. *Objective:* This study aimed to assess the level of knowledge, attitudes and practices regarding *H. pylori* infection diagnosis and treatment among Primary Health Care Physicians in Al-Madinah, Saudi Arabia. *Methods:* A cross-sectional study design was employed at primary healthcare centers in Al-Madinah city between 2021-2022. Data were collected by distributing a self-administered questionnaire to primary healthcare physicians. Student's t-test and chi squared test were used to evaluate the differences in means and proportions, respectively. *Results:* In total, 100 participants were included in this study. The majority (91%) reported that the standard empirical treatment for *H. pylori* eradication was triple therapy. The treatment duration was reported to be 14 days in the majority of participants (73%). *Conclusion:* This study concluded that the current practice regarding *H. pylori* eradication in Al-Medinahis unsatisfactory. It is necessary to implement measures to increase the adequacy of practice by providing clear and updated guidelines on this important public health issue.

Medical Science, 2022, 26, ms546e2623

---

### **Impact of parents' satisfaction with the service of pediatric anesthesia on clinical and surgical outcomes**

Fawaz Alhamied, Abdallah Almaneea, Malek Alrasheed, Nawaf A Alhamied, Abdulazeez AlSaleh, Meshal Aljarallah, Faisal Alsomali, Faris Albaqami, Abdulmajeed Alqahtani, Maximiliano Boada, Mohamed Hassanin A Abdelellah, Latifah Dhafi Alharbi, Mohammed Alshabibi, Ahmed Haroun M Mahmoud

*Background:* Preoperative anxiety is considered one of the major problems for the patients, which leads to undesirable negative effects on preoperative and postoperative stress, resulting in delayed induction of anesthesia and increased risk of anesthesia. Providing appropriate preoperative information to the pediatric patients and their caregivers to enhance postoperative outcomes. Therefore, in this study we aim to evaluate the parents' satisfaction with the use of the services of the Pediatric Anesthesia Department verifying if they feel satisfaction with the services and outcomes. *Methods:* This is an observational questionnaire study of parents' satisfaction with the service of pediatric anesthesia at King Abdulaziz Medical City, Ministry of National Guard Health

Affairs, Riyadh, Kingdom of Saudi Arabia, which is a tertiary care center. The study was conducted from July 2021 to September 2021. A questionnaire was designed for the study and participants were asked to watch a video explaining the process of anesthesia in the pre-anesthesia clinic setting and fill the survey before discharge. *Results:* 111 surveys were collected. 85 (76.6%) of the guardians were mothers. The highest age demographic was 1-5 years accounting for 67 (60.4%) of the study population. Parents' satisfaction was significantly impacted by the whole care of their child by (96%). In addition, anesthesia team perceived professionalism and respectfulness were significant for the satisfaction of the parents (96.2%). *Conclusions:* Our study suggests that the benefits of parents' satisfaction after preoperative education is important to reduce patient anxiety and improve surgical outcomes.

*Medical Science, 2022, 26, ms547e2651*

---

### **Sunscreen use among lupus erythematosus patients in Saudi Arabia**

Saud K Alowaid, Jamal Alqahtani, Odai A Alarfaj, Ziyad T AlGhannam, Hamza H Aldossary, Bader Algamdi, Nasser Alzoabi, Omar Alakloby

*Background:* Lupus erythematosus is a chronic inflammatory autoimmune disease that affects various body systems and results in a wide range of clinical symptoms, including photosensitivity. Sun exposure/UV light is a well-known factor for disease activity. Therefore, photoprotective measures are used in patients with lupus erythematosus. This study aimed to estimate the prevalence of sunscreen use, limitations and association with disease flares among patients with lupus erythematosus at King Fahad University Hospital, Al Khobar, Saudi Arabia. *Methods:* A cross-sectional questionnaire-based study was conducted on patients with lupus erythematosus at King Fahad University Hospital between January and March 2022. *Results:* A total of 146 patients with lupus erythematosus participated in the study and the prevalence of sunscreen use was found to be 46.6% in the week before completing the survey. The study also showed that patients who were young, female, married, had a higher education level and had experienced an increased number of lupus erythematosus flares tended to use sunscreen more often. On the other hand, the most common barrier to sunscreen use was finding it inconvenient; 80% of those who found it inconvenient did not use it in the week prior the questionnaire ( $p=0.001$ ), followed by those who believed that sunscreen did not prevent lupus erythematosus flares (74.7%,  $p=0.002$ ) and those who found sunscreen to be expensive (63.0%,  $p=0.014$ ). *Conclusion:* This study revealed a low prevalence of sunscreen use among patients with lupus erythematosus. Therefore, efforts should be done to raise the awareness of importance of sunscreen use among patients.

*Medical Science, 2022, 26, ms548e2653*

---

### **A study on the prevalence of Vitamin D deficiency in sickle cell disease amongst pediatric population in Kingdom of Saudi Arabia**

Muazzam Sheriff Maqbul, Samaher Gumaan Basalib, Atheer Khalaf Almutairi, Rayan Nasser Sarhan, Layali Muneer Bakhsh, Mohammed Abdulkhaliq Alharbi, Safaa Dhaifallah Alotaibi

The important recognition of this examines changed into to research the position of Vitamin D in correlation with pediatric SCD in Saudi Arabia. Vitamin D deficiency is not unusual place in every age and nations and is in particular related to SCD in kids. Vit D supplementation reduces the chance of SCD in kids and kids however has little impact on innate immunity after publicity to contamination and at different concentrations together. The examiners used online survey questionnaires and randomly disbursed them thru social media platforms. The online pattern length calculator Raosoft (Raosoft Inc., Seattle, WA, USA) anticipated pattern sizes. Social science statistical package model 22.0 (IBM SPSS, IBM Corp., Armonk NY, USA) to carry out descriptive statistics, Shapiro-Wilk's take a look at evaluates the ordinary distribution of data. The effects received were calculated for Pearson Chi Square for importance and are truly tabulated and proven with inside the figures for every person end result type. The effects received had been categorized in one of kind sections for the specific dialogue of the reaction fee with that of P-Value esteem importance. This examines pursuits to observe the position of Vit D withinside the combat towards SCD and public belief of it with the in a position fitness government to nicely combat its effects.

*Medical Science, 2022, 26, ms549e2671*

---

### **Effects of caffeine and peppermint consumption on GERD patients in Saudi Arabia**

Waleed Alhuzaim, Reema Muqrin, Lama Albalawi, Samar Alanazi, Shahd Hadal, Abdulmalk Almadhi

*Introduction:* Dietary habits have a direct impact on the prevalence of GERD. There is convincing evidence that peppermint has a substantial pharmacodynamic impact on the gastrointestinal tract. It seems reasonable to adopt greater knowledge of dietary factors like peppermint and coffee in order to develop individualized dietary recommendations for GERD patients in order to improve the effectiveness of the environmental and dietary associated factors with therapy because studies have shown that they may influence the presence of some disease symptoms and to improve quality of life and morbidity of the disease. *Methodology:* This cross-sectional study examines the impact of caffeine and mint on the signs and symptoms of gastroesophageal reflux disease in Saudi Arabia. Study population is diagnosed GERD patients and people with GERD symptoms in Saudi Arabia. *Result:* There were a total of 382 people that responded to our survey. In terms of coffee consumption, the majority of diagnosed patients said they drank Arabic coffee fewer than three cups per day ( $n = 41, 33.3%$ ) and 22 participants (17.9%) reported consumption of three to five times per day, with no significant difference noted between diagnosed and undiagnosed participants. *Conclusion:* According to the

current study, the most often reported symptoms of GERD in patients were regurgitation sensation in the mouth, burning sensation in the stomach, epigastric burning sensation and regurgitation sensation in the esophagus.

*Medical Science, 2022, 26, ms550e2613*

---

### **Awareness of paracetamol overuse headache among Saudi's population in Taif city, Saudi Arabia**

Lotfi Fahmi Issa, Waad Mohammed Al Qurashi, Amani Hassan Alrumaym, Ethar Khalid Alharthi, Nouf Mohammed Alshamrani, Nawal Dhaif Allah Alzahrani, Hanun Mohammed Aljuaid

*Background:* Medication overuse headache has been identified as a significant issue among headache patients which can be caused mostly by overuse of mild analgesics, such as paracetamol. *Objective:* The aim of this study was to evaluate and assess the awareness of paracetamol overuse headache among Saudi's population in Taif City-Saudi Arabia. *Methodology:* A cross-sectional descriptive study was conducted. An electronic questionnaire was used for data collection. Data were collected and analyzed using SPSS program version 22. *Results:* In our study 44% of participants have experienced chronic headache, most of them have it less than five days/ month and 90% of them reported using paracetamol to relieve the headache. Moreover, knowing the maximum permitted daily dose of paracetamol was only recognized by 135 (35%) of participants. whether paracetamol overuse can cause headache was affirmed in 54 (14%) of participants. 42.3% only of the participants are aware of the side effects. The chronic headache was listed as the third most common side effect. The possibility that overdoses of paracetamol can cause headache was proven to be statistically significant correlated with age range (18-24 years), with the knowledge concerning taking paracetamol every day and knowing the maximum daily dose of paracetamol, knowledge regarding all side effects. All these listed factors are statistically significant ( $p < 0.05$ ). *Conclusion:* This study showed a limited level of knowledge and awareness regarding headache induced by paracetamol overdose among participants from Taif City in Saudi Arabia, which highlighted the need to increase the awareness in our community.

*Medical Science, 2022, 26, ms551e2610*

---

### **CASE REPORT**

#### **An unusual case of generalised subcutaneous emphysema in emergency room of tertiary care hospital: A fatal outcome**

Ibrahim Bombaywala, Akhilesh Singh Parihar, Charuta Gadkar

Subcutaneous emphysema (SE) is collection of air under the subcutaneous layer or below the dermis. Traumatic SE is caused when a patient sustains a blunt or a penetrating injury and is usually confined to the site of injury, but rarely becomes extensive enough causing pneumomediastinum which can lead to airway obstruction. It can also cause pneumopericardium leading to obstructive cardiomyopathy which can result in death of the patient. Other complications include pneumoperitoneum, *pneumoscrotum*. The treatment of choice for SE is thoracostomy tube placement. Following case describes a 25 years old male patient who presented with pelvic diastasis and SE due to fall from tractor. The patient was managed conservatively in a local hospital after which he was referred here for further management.

*Medical Science, 2022, 26, ms552e2608*

---

### **ANALYSIS**

#### **The effectiveness of transdiagnostic integrative treatment on sleep quality and symptoms of premenstrual syndrome: A trial study**

Nazanin Ahangari, Maryam Bakhtiari, Zahra Naeiji

*Purpose:* The present study was aimed at determining the effectiveness of integrative transdiagnostic treatment on sleep quality and premenstrual symptoms. *Method:* This study was carried out based on clinical trial including pre-test, post-test, and follow-up with control group. The participants of the study included all women in reproductive ages with a diagnosis of premenstrual syndrome who had referred to Shahid Beheshti University of Medical Sciences in during November 2020 to December 2021. Forty participants were selected via purposive sampling. Twenty participants were then assigned into each group. Experimental group participants received 8 transdiagnostic treatment sessions. To collect data, Pittsburgh Sleep Quality Index and Premenstrual Symptoms Screening Tool were employed and analyze the data was done by SPSS statistical software; and paired t-test, and repeated measures analysis. *Results:* The mean and standard deviation of participants' age were  $30.90 \pm 8.06$  for experimental group and  $33.25 \pm 9.58$  for control group. Based on the results of repeated measures analysis, there was a significant difference between experimental and control groups with respect to sleep quality and PMS. Moreover, according to the results of paired t-test, there was a significant difference between groups in post-test and follow-up phases with regard to sleep quality and PMS. *Conclusion:* Therefore, transdiagnostic treatment has significant effects on sleep quality and PMS. It is thus suggested that gynecologists, clinics, and medical centers concerned with PMS patients can use the results of the present study as a guide.

*Medical Science, 2022, 26, ms553e2117*

---

## **Knowledge and attitudes toward amblyopia among parents in Madinah, Saudi Arabia: A cross-sectional study**

Hanan Mustafa Makhdom, Shatha Ahmed Albadawi, Amenah Salman Tashkandi, Mashael Abdullah Abdulmaqsud, Alhanouf Dhaifallah Alharbi

*Objectives:* This study aimed to assess the knowledge and attitude toward amblyopia among parents in Madinah City, Saudi Arabia. *Methodology:* A cross-sectional study was conducted among 385 parents in Madinah, Saudi Arabia from August 2021 to September 2021. The questionnaire had four parts: Socio-demographic data of the child's parents, knowledge-related questions contain participants' self-assessment questions, attitudes about amblyopia and if the participant has an amblyopic child. *Results:* A total of 385 parents were included in this study, of which 73.3% were mothers. Most of the mothers were bachelor's degree holder (62.7%) compared with only 41% of the fathers. Only 16.4% of the parents claimed to have adequate knowledge of amblyopia and nearly two-thirds (67.3%) did not know amblyopia. The correct definition of amblyopia was identified by 44.2% of the participants. The most frequently known causes were myopia and farsightedness (21.3%). The results showed that parents with an adequate knowledge of amblyopia were more likely to assent that amblyopia is curable with treatment compliance than those with inadequate knowledge (96.8% vs. 67.2%;  $p < 0.001$ ). *Conclusion:* This study assessed the knowledge and attitude about amblyopia through parents in the Medina region, which will greatly influence early diagnosis and effectiveness of treatment. In this study, few participants had adequate knowledge of amblyopia. Thus, raising the level of awareness about amblyopia for early diagnosis is crucial to improve treatment outcomes.

*Medical Science, 2022, 26, ms554e2614*

---

## **Effectiveness of lifestyle intervention among medical college students at Al-Madinah, Saudi Arabia**

Magda Hassanein Metwally Youssef, Lama Sulaiman Saad Alahmadi, Khalid Waleed Hassan Mahrous, Smaher Sultan Alhejaili, Nada Mobarek Aljohani, Abdullatif Firas Makhloata, Yousra Hamid Jaaoini, Reem Salamah Alrasheedi

*Objective:* The aim of this study is to identify lifestyle behaviors among medical students as well as the findings of healthy lifestyle before and after the intervention. *Methodology:* The study included both pre-and post-intervention. It was carried out; from October till the end of November 2021. Eight weeks of follow-up and evaluation by researchers guided 360 out of 670 students, both male and female, at Taibah University and Al-Rayan Colleges. *Results:* By the end of the post-intervention, only 266 students had completed the questionnaire. The study showed that the number of students walking increased from 36.5% to 44.7% and those who didn't exercise decreased from 33.1% to 26% ( $P=.033$ ). Regarding GPA, there was a statistically significant decrease ( $P<.001$ ) in the number of students with a GPA of 3 to 3.49 (16.8% to 1.6%). Also, there was an increase in GPA from 3.5 to 3.9 (0.0% to 13.7%) and from 4 to 4.49 (31.9% to 33.7%). A significant correlation between exercise and GPA was found pre- and post-intervention, which increased after the intervention ( $r =.519, P =.04, r =.752, P =.02$ , respectively). Furthermore, fast food consumption decreased after the intervention ( $P =.002$ ) and eating white bread among medical students declined from 74.8% to 66.9% ( $P =.045$ ). *Conclusion:* Lifestyle intervention could assist medical students in adopting a healthy lifestyle that improves their health behaviors, physical activity and academic performance.

*Medical Science, 2022, 26, ms555e2662*

---

## **CASE REPORT**

---

### **Timely lifesaving recanalization in two cases with De winters T wave: Case series**

Gajanan N Umalkar, Charuta Gadkari, Gaurav Sahu, Gajanan Chavan, Akash Lohakare

Acute coronary syndrome (ACS) is one of the major life-threatening conditions encountered on daily basis in the emergency department and one of the leading causes of death in middle and old age with predominant symptom as chest pain. ST elevated myocardial infarction (STEMI) can be detected early by a vital assessment tool called Electrocardiogram (ECG). De Winter T-wave ECG pattern is a rare incidence which is often unrecognized by physicians, first described by Robert J De winter and colleagues in 2008 as STEMI equivalent which signifies left anterior descending coronary artery (LAD) occlusion. This case series highlights the use of thrombolytic agents in absence of STEMI to prevent further myocardial damage and improve the patient's outcome much before percutaneous coronary intervention (PCI). Coronary revascularization on an emergency basis reestablishes coronary blood flow and reduces mortality and hospital stay. The thrombolysis was successful and the patient symptoms improved along with reversal of initial ST-segment and T-wave changes. LAD was later confirmed by coronary angiography and appropriate cardiac interventions were done.

*Medical Science, 2022, 26, ms556e2637*

---

### **The wolf in the skin of krait: The innocent Indian wolf snake, a case series**

Govind Nagdev, Gajanan Chavan, Gaurav Sahu, kuldeep chhatbar

Snakebite is a time-limiting, acute dreadful medical emergency. It is a preventable public health hazard often faced by rural populations in tropical and subtropical countries with heavy rainfall and humid climate. A new species of snake i.e Wolf snake (*Lycodon*) which morphologically as well as clinically, closely resembles Common Krait has been identified. We here discuss 2 cases



of snake bite which were presented to our emergency department creating a diagnostic dilemma between Common Krait and Wolf Snake.

*Medical Science, 2022, 26, ms557e2644*

---

## ANALYSIS

---

### **Efficacy of post mastectomy exercises on reduction of lymphedema among patients undergone mastectomy: A pre-experimental study from central rural India**

Amruta Kothe, Ruchira Ankar, Mayur B Wanjari, Pragati Alnewar

Breast cancer is commonly treated with a surgical intervention called mastectomy. The feared complication of mastectomy is lymphedema. Post-mastectomy exercises are very essential for patients who have undergone mastectomy which help to prevent constriction of muscle and joint contractors and also improve lymph and bloodstream. To assess pre interventional level of lymphedema and effectiveness of exercises after mastectomy at reducing lymphedema in breast cancer patients and associated with demographic variables. The research design used in the study is one group Pre test Post test research design. Sixty post-mastectomy patients took part in the research. Quantitative variables were described as frequency and percentages. A structured demographic sheet that includes information on age, marital status, co-morbid illnesses and family history, as well as the American Lymphology Lymphedema Scale by using inch tape and a goniometer. Both descriptive and inferential statistics was used do analysis. There is a significant difference between the pre-interventional and post-interventional level of lymphedema score interpreting effective post-mastectomy exercises on reduction of lymphedema among patients undergoing mastectomy. The calculated 't' value i.e., 20.47 and the p-value was 0.001. Hence it is statistically interpreted that post-mastectomy exercise in the reduction of lymphedema among patients undergoing mastectomy was effective. An effective intervention in the prevention of lymphedema in women following mastectomy involving dissection of axillary lymph nodes could be early exercise after surgery. Breast cancer survivors can exercise safely after their mastectomy at any point during their cancer journey, including while receiving treatment.

*Medical Science, 2022, 26, ms558e2557*

---

### **The importance of timely management: Large bowel obstruction - Aetiology and its outcomes**

Mahesh Kalloli, Rahul Kenawadkar, Priyanka Gadvi, Rhea Sarkari

*Introduction:* Large bowel obstruction (LBO) is one of the most frequent cases encountered by a surgeon in the emergency department. It accounts for 6.3% of all intestinal obstructions. In the acute setting, it often presents with abdominal distention, vomiting and constipation. This study aims to analyse clinical and aetiopathological features associated with large bowel obstruction and the outcome of various modalities of managing LBO. *Patients and Methods:* In this prospective study, patients above 18 years of age presenting to the emergency department of our hospital with features suggestive of dynamic intestinal obstruction were selected. After confirmation of the diagnosis and its underlying aetiology, they were managed either surgically or conservatively. The patient outcome in terms of complications and mortality were evaluated. *Results:* Out of 53 patients, 29 were males and 24 were females. The most common cause of large bowel obstruction was colonic malignancy in 27 patients (50.94%) followed by colonic volvulus in 15 patients (28.30%). Majority of patients (45) underwent surgery. The most common procedure done in our study was resection and anastomosis in 29 patients. 20% of the cases suffered from wound infection. Out of 53 cases in our study 27 patients had an uneventful post-operative period and 13 patients had delayed recovery. The total number of deaths in the study was 5 (12.5%). *Conclusion:* Prompt diagnosis and timely appropriate surgery in large bowel obstruction with available modern equipment and anaesthesia reduces morbidity, mortality, hospital stay and gives a satisfactory outcome.

*Medical Science, 2022, 26, ms559e2536*

---

### **Accelerated media and mental health: A descriptive study among Saudi general population**

Elaf Saleh Heji, Anas Atiyah Alzahrani, Ibrahim Ali Alasmari, Shatha Hassan Aljefri, Hiyam Mohammad Sadiq Qanadily, Hanoof Alkhalaf, Deemah A Alateeq

Media acceleration behavior has been increasing recently. According to cognitive behavioral theory, acceleration behavior could affect a person's feelings, which may affect his/her mental health. This study aimed to explore the prevalence of accelerated media behavior and its correlation with depression and anxiety among the general Saudi population. A cross-sectional study was conducted among 1091 media users in Saudi Arabia. An online survey included socio-demographic characteristics, accelerated media characteristics, Patient Health Questionnaire-9 (PHQ-9) and General Anxiety Disorder-7 (GAD-7). The mean participant age was  $27.76 \pm 7.95$  years, 68.5% were females, 92.9% were of Saudi nationality and 22.4% were from the Southern region of Saudi Arabia. Most participants accelerated both video and audio formats (68%) within the last two years (72.1%) and 42.2% accelerated their use at 1.5 speed. Significant predictors of media acceleration included female, Saudi nationality, desire to accelerate life, previous history of depression and/or anxiety ( $p \leq 0.05$ ). Current symptoms of severe depression and severe anxiety were associated with media acceleration. Media acceleration is a prominent behavior among technology users. Routine checkups of mental status should be recommended for excessive media users. Further studies in this area using different study samples and methodologies would be valuable.

*Medical Science, 2022, 26, ms560e2570*

## RESEARCH

---

### **Estimation of clinical phase medical students' performance in diagnosing critical findings on abdominal X-ray**

Ziyad Almushayti

*Objectives:* This study aims to determine the performance of medical students as they diagnose critical abdominal X-ray findings. In addition, it aims to analyze the impact of emergency medicine and radiology courses on their performance. *Methods:* A cross-sectional study was to collect data on the various aspects of undergraduate medical students' experiences in Saudi Arabia's Qassim. The data were collected through an electronic questionnaire. *Results:* 359 individuals, who were all from different medical colleges, participated in this study. Half of them, about 54.4%, correctly identified the type of bowel obstruction depicted in the image, while the other 33.3% believed it was a small bowel obstruction. Of students who had completed their radiology course, about 58.0% were more likely to acknowledge the large bowel obstruction pattern. In comparison, 44.2% of those who had not completed it were more likely to do so, which was found to be statistically significant in difference ( $p=0.03$ ). The study's results revealed that the students who had completed and not the course correctly interpreted the X-ray image of small bowel obstruction about 71.6%. A total of 34.5% of them were able to identify a normal abdomen X-ray pattern among those who completed the course, while 28.5% of them did not complete the course and recognize it. *Conclusion:* The results of this study suggest that completing emergency and radiology courses in medical schools can positively impact a student's performance. Also, the findings of this study suggest that more training is needed for medical students to improve their abilities to diagnose abdominal X-rays.

*Medical Science, 2022, 26, ms561e2589*

## ANALYSIS

---

### **Knowledge, awareness and attitudes toward AB use and antimicrobial resistance among Medina population**

Lobna Mohamed Hassan, Renad Talal Alkaki, Sibaa Hameed Alsuheyami, Omnyah Abdulzaq Sanyour, Ghofran Saleem Alhejaili, Hanin Mohammed Mulla, Lama Ahmad Azali Amara

*Background:* Antibiotics (AB) resistance is a threat to public health and safety globally. The irrational use of ABs is alarming and steps must be taken to prevent AB resistance. The global issue of AB resistance has developed due to multiple factors related to inappropriate and uncontrolled dispensing use of AB. We aimed to measure the awareness of AB use and antimicrobial resistance among the Medina population. *Methods:* A descriptive cross-sectional study using a self-administrated questionnaire. Participants (aged  $\geq 18$  years) were invited to complete an online questionnaire through social media. A random sample of 412 participants was studied. *Results:* Out of 412 participants, 85% were females, 92.23% were Saudi's and 72% were bachelor's degrees. 23.3% of the studied population used ABs without a prescription in the past 12 months. The main reason for self-medication was saving time and effort (44.4 %). The primary sources of ABs were those purchased from community pharmacies (61.7%) and leftovers from previously prescribed pharmaceuticals (28.9%). 60.4% of participants heard about bacterial resistance. *Conclusion:* In conclusion, although most participants were aware of AB use, they had negative attitudes towards AB use, the dangers of self-medication and misuse and insufficient knowledge regarding AB resistance. Thus, continuous education and awareness campaigns must continue to ensure improvement in the knowledge of the population and awareness of AB resistance.

*Medical Science, 2022, 26, ms562e2629*

### **Work-related musculoskeletal disorders among physiotherapists in Jouf region: A cross-sectional study**

Nesma Allam, Reem Alradi, Amjad Alruawily, Kholoud Alruwaili, Taif Alsaiani, Reham Alruwaili

*Background:* Musculoskeletal disorders are most common in physiotherapists due to bad posture and repetitive movement of different body parts. *Aims:* To find out how common musculoskeletal disorders and risk factors are among physiotherapists in Jouf region. *Methods:* The present study was conducted in a cross-sectional manner. It depended on both the written and the online version; the Nordic musculoskeletal questionnaire was used to evaluate the work-related musculoskeletal disorders among physiotherapists in Jouf region. The study included both female and male physiotherapists in Jouf region who obtained at least a bachelor degree in physical therapy, their ages ranged between 25 and 45 years and working in public or private hospitals. *Results:* In the last 12 months, the neck had the most pain and discomfort (74%), followed by the low back region (56%) and the lowest area was the elbow (8%). *Conclusion:* The highest areas with pain were the neck and lower back regions among physiotherapists, due to prolonged restricted posture, improper positions and repeated tasks.

*Medical Science, 2022, 26, ms563e2643*

### **Knowledge and practices related to burn first aid among Saudi population**

Mohammad Eid Mahfouz, Nora Abdulrahman Alghoraibi, Balsam Ghazi Alshareef, Nwarah Anwar Basha, Wasn Turki Alotaibi, Reema Saeed Alzaidi

*Background:* Burn is a breakdown of skin continuity which is considered a major problem worldwide. The best approach to manage burns is to start with first aid. Numerous studies conducted in several regions revealed a widespread lack of understanding about first aid for burns. To assess the general knowledge and practices related to burn first aid treatment among the population in Saudi

Arabia. *Methods:* We conducted a cross-sectional study with a representative random sample of 449 Saudi residents in the Kingdom of Saudi Arabia using a self-administered questionnaire that was distributed through social media sites. For data analysis, we used Statistical Package of Social Science Software (SPSS) version 24. *Results:* Out of 449 participants that met our inclusion criteria, most study participants were females, 371 (82.6%) and 203 (45.2%) aged between 18-29 years old. Also 239 (53.2%) didn't believe that cold water could be poured if hot oil spills on the hands and only 95 (21.1%) agreed that all burn injuries must be treated in the hospital. *Conclusion:* The results of the research suggest that the general community of Saudi Arabia has a significant lack of awareness about burn wound treatment. This survey also showed a number of gaps in awareness and practices that will need to be corrected in the near future. Various media platforms should be used to create public programs aimed at increasing community knowledge.

*Medical Science, 2022, 26, ms564e2657*

---

#### **Expectant versus aggressive management of severe preeclampsia at 24–34 weeks of gestation**

Sarah M Ghazali, Ohoud A AlGhamdi, Nora N Sahly, Kholoud K Nagadi, Reem M Khalifah, Sedrah M Hanbazaza, Danah I Krimli, Sarah M Allaf, Renad A Turkistani, Haifa'a A Mansouri

*Background:* Preeclampsia is characterized by the onset of hypertension beyond 20 weeks of pregnancy, in addition to proteinuria and/or end-organ dysfunction, including high liver enzymes, elevated serum creatinine, thrombocytopenia, pulmonary edema, new-onset headache not responding to medications and visual disturbances. The study aimed to assess maternal and perinatal outcomes between expectant (delivery 48 h after admission) and aggressive management (delivery within 48 h) in patients with preeclampsia according to the newly defined 2020 American College of Obstetrics and Gynecology preeclampsia guideline to determine the optimal management approach.

*Medical Science, 2022, 26, ms565e2659*

---

#### **Awareness and knowledge of obstructive sleep apnea among the general population in the western region of Saudi Arabia**

Yahya Ahmed Fageeh, Mohammed Abdullah Basurrah, Jumanah Ali Alzahrani, Atheer Ahmed Alzahrani, Ghadi Mohammed Aljuaid, Afrah Mohammad Al Sulimani, Nada Ibrahim Maghrabi, Amjad Hassan Alharthi, Khames T Alzahrani

*Background:* Obstructive sleep apnea (OSA) is a common medical condition that causes pauses in breathing during sleep (SDB). It is distinguished by recurring episodes of partial or complete collapse of the upper airways. To assess the level of awareness and knowledge about obstructive sleep apnea OSA among adults in the western region of the Kingdom of Saudi Arabia. *Methodology:* This is cross-sectional observational study was conducted on a random sample of 500 participants from the general population of the western region of Saudi Arabia. It is including all participants over 18 year's old, female and male gender and Saudis and non-Saudis. For data analysis, we will use (SPSS) software version 24. Approval from the local Ethics Committee was obtained. *Results:* The study recruited 500 responses from the general community, 377 of whom were women (75.4%). The majority of participants (57%), were between the ages of 18 and 25, followed by those between the ages of 26 and 35 (17.4%) and 349 (70.2%) had a university education. Total of 403 participants (80.6%) felt that a person requires 7-9 hours of sleep every day. More than half of the participants (54%) stated that the mental benefits of enough sleep were the most significant, followed by the physical benefits (41.2%). *Conclusion:* The level of awareness of Saudi general population about obstructive sleep apnea in this study was poor. Knowledge of obstructive sleep apnea was correlated significantly with gender ( $p=0.049$ ) and employment in the health industry ( $p=0.001$ ).

*Medical Science, 2022, 26, ms566e2661*

---

#### **Knowledge and awareness about gallbladder stones and their complications among the general population in Saudi Arabia**

Metrek Almetrek, Abdullah Alsharabi, Mashaal Al jarfan, Ahmed Alganmi, Sultan Alotaibi, Fahad Almalki, Rahaf Alshehri, Taif Alshehri, Khames Alzahrani

*Background:* Gallbladder stone disease is a common and frequently encountered biliary disorder. Most patients with gallstones are asymptomatic and do not require medical management. However, some patients experience biliary colic pain as a result of acute or chronic inflammation. Gallbladder stones can lead to a variety of problems and might be ended by a life-threatening case. To assess knowledge and awareness level about gallbladder stones and their complications among Saudi general population. *Methodology:* This is an observative cross-sectional study in Saudi Arabia. The simple size was calculated using Raosoft with confidence level of 95% and margin error of 5%. This survey information was collected by medical students using an online questionnaire containing 25 questions divided into four parts. Data were converted to the Excel and afterwards analyzed with the (SPSS) software. *Results:* The study had 1710 respondents, including females accounting for 63.6% and males accounting for 36.4%. 53.2% of participants were amongst 20-30 years old. 44.9% of participants had a family history of gallstones (15.7% were mothers, 8.5% were fathers and 9.3% were sisters). Only 5.6% of participants had high knowledge score, 61.8% had average knowledge score and 32.6% had poor knowledge score of gall bladder stones. *Conclusion:* The level of awareness of Saudi public citizenry's gallbladder-stones was poor, among the previously reported Figures in Saudi Arabia and other nationwide studies. Knowledge of gallbladder stones was significant-correlated with participant ages, sex and education levels.

*Medical Science, 2022, 26, ms567e2663*

---

## **Association between sleep quality and secondhand smoke among non-smoker university students in Saudi Arabia: A multiple logistic regression analysis**

Najim Z Alshahrani, Amal M Alshahrani, Naser Abdullah Al Habjer, Fayeza Mula Ali Alasmari, Mohammed Saeed M Alamri, Saud Faisal Aljuraysi, Rahaf Naif A Alenezi, Meshal F Almutairi, Tuqa Abdulmonem Al Shaikh, Hawra Hussain Al Radhwan, Salem Mohammed S Alshahrani

*Introduction:* Sleep quality and secondhand smoke are two different, complex health problems that can be life-threatening for humans. The purpose of this study was to determine the linkage between secondhand smoke exposure and poor sleep quality among non-smoker university students in Saudi Arabia. *Methods:* A cross-sectional investigation was undertaken among students from two universities in Saudi Arabia. Data were collected by using an online platform with a structured questionnaire. Participants' sleep quality was assessed by Pittsburgh Sleep Quality Index. A score of more than five was categorized as a poor level of sleep. Multiple logistic regression models were employed to assess the relationship. *Results:* Of the total 500 participants, 57.2% were males and 42.8% were females. The prevalence of poor sleep and secondhand smoke among non-smoker university students was 60.2% and 46.2%, respectively. The adjusted regression analysis demonstrated that students exposed to secondhand smoke were four times more likely to have poor sleep compared to their counterparts (adjusted odds ratio, aOR = 4.08; 95% confidence interval, CI: 2.55, 6.52). A significant relationship between secondhand smoke exposure and poor sleep quality was also found in both male (aOR = 2.55; 95% CI: 1.17, 5.60) and female (aOR = 5.39; 95% CI: 2.88, 10.09) subgroups. *Conclusion:* A statistically significant linkage between secondhand smoke exposure and poor sleep quality was found among Saudi Arabian students. Therefore, taking precautions against secondhand smoke exposure and encouraging smoking cessation to improve university students' sleep quality is crucial.

*Medical Science, 2022, 26, ms568e2665*

---

## **Is there a misuse of brain computed tomography in children? A retrospective record-based study in Al Kharj**

Ali Hassan A Ali, Ismail Abdelfattah M Hassan, Omar O Serhan, Saad Hamad Aljuaydi, Khaled Ibrahim Fahad Alrasheedi, Nasser Shudayyid Alharbi, Khalid Fahad Alanazi, Khalid Mohammed S Alasiri, Abdulaziz F Alyahya, Mohammed Hoshan Almajed

The aim of this study was to examine and document all brain CT examinations performed in 2022 at King Khalid Hospital in Al-Kharj, Saudi Arabia, along with the results of those examinations, which were based on the reasons for the scan. The study's goal is to compare asking for a CT scan of the brain to reporting the results. Between 1 January and 31 October 2022, a retrospective study was conducted at the department of radiology at King Khalid Hospital. To create the study's sample, 355 kids had CT brain scans; the information about them was examined and analyzed from radiology records. According to the study, a significant portion of radiological data from brain CT scans did not support the clinical diagnosis. Cases for this study were seen in the three emergency, inpatient and outpatient departments. According to this finding, some kids who underwent CT brain scans from the radiology department were exposed to radiation inadvertently. The study found that, although the brain CT may be significant in some circumstances, the majority of brain CTs performed on children was not justified and that more brain CT data did not support the clinical diagnosis. Therefore, the rise in demand for pointless brain CT scans is a major worry. As a result, pediatricians should be more cautious when asking for a brain CT unless it is absolutely necessary.

*Medical Science, 2022, 26, ms569e2669*

---

## **Fecal microbiota transplantation and ulcerative colitis remission: A meta-analysis**

Hyder Osman Mirghani, Abdulaziz Abdullah AlShalawi, Mohammad Omar Algabri, Turki Suleman Albalawi, Ahmed Mohammed F Albalawi, Abdulaziz Nasser Saleh Albalawi, Omar Sabah Alzamhari, Muteb Muflih M Alshahrani, Mohammed Ahmed I Albalawi, Hatem Hamad Mohammed Alquthami, Waleed Muslih B Albalawi

*Introduction:* Fecal microbiota transplantation's role in ulcerative colitis was discussed controversially. Literature regarding the route of administration lack. *Aims:* we aimed to assess the different routes of fecal microbiota transplantation in ulcerative colitis remission. *Methods:* A systematic literature search was conducted in PubMed Cochrane Library and Google Scholar from January 2011 up to September 2021. Two reviewers searched the databases for relevant articles. The terms microbiota transplantation, fecal transplantation, ulcerative colitis, inflammatory bowel disease, colonoscopy route, upper gastrointestinal route and oral capsule were used. The author's name year and country of publication, the study methodology and the results of the included studies were entered in Excel before data analysis by the most RevMan system. *Results:* Out of 762 studies retrieved, 25 full texts were screened and ten cohorts from 7 studies were included in the final meta-analysis. The colonic route (five cohorts), odd ratio, 4.06, 95% CI, 2.19-7.50, observed a higher rate of ulcerative colitis remission compared to placebo. The chi-square was 1.94 and the P-value for overall effect was < 0.0001. However, five cohorts including 35 events and 60 patients showed that fecal transplantation administered by the upper gastrointestinal tract was not different from placebo regarding clinical remission, odd ratio, 1.45, 95% CI, 0.48-4.37, P-value for overall effect, 0.51 and endoscopic remission, P-value, 0.91. *Conclusion:* Fecal microbiota transplantation administered by colonoscopy was effective in ulcerative colitis remission. However, upper gastrointestinal administration was not. Further, longer multicenter studies assessing the characters of donors, frequency and duration of microbiota administration are needed.

*Medical Science, 2022, 26, ms570e2672*

---

## **The antimicrobial vulnerability testing of *Linum flavum* hydrocolloids against pediatric surgical MRSA isolates with qualitative bio-phytochemical analysis quantified by GC-MS-UV-Vis spectrophotometry**

Muazzam Sherif Maqbul, Rayan Nasser Sarhan, Fatima Aqeel Saeed Alzubaidi, Aljawhara Talal Hejji, Mariam Aqeel Saeed Alzubaidi, Ibrahim Khaled Abdul Baqi, Sundas Yousef Wali Yousuf, Raha Mohammed Garout, Norah Ali Alhasawi, Wajid Ahmed Aljohani, Reem Mussaed Aladwani, Tarteel Mohammad Alaali, Ameera Tariq Yaghmour, Afnan Mahmoud Hanbazah

The primary goal of this review was to decide the adequacy of *L. flavum* medicinal oil hydrocolloids against MRSA by antimicrobial weakness testing and decide its phytochemical properties. *Linum flavum* (Golden Flax seed) is an herbaceous plant that has long been used since ancient past to combat pathogens particularly those caused by bacterial, viral and fungal agents. This study attempted to rediscover the forgotten past by treating the plant derivative in the form of the hydrocolloids obtained from *L. flavum* and testing its antimicrobial vulnerability testing against pediatric surgical isolates of MRSA and comparing its data with the standard antibiotics available on the market. The qualitative Kirby-Bauer disc diffusion techniques and the quantitative standard antimicrobial techniques employed in this study. The qualitative bio-phytochemicals of *L. flavum* hydrocolloids was carried out using standard biochemical tests to detect the presence of phytochemical components, which were then quantified using GC-MS-UV-Vis spectrophotometry. The bio-phytochemical nature of *L. flavum* hydrocolloids was assessed and the results were promising, along with MRSA vulnerability test data, proving to be an asset for the phytol-pharmaceutical industries. This study was to analyze the antibacterial effect of *L. flavum* oil hydrocolloids against pediatric surgical isolates of Staphylococcus aureus resistant to methicillin antibiotics (MRSA). This study was also designed to analyze the bio phytochemical properties of *L. flavum* oil hydrocolloids in order to provide adequate future drug availability for combating dangerous pathogens.

*Medical Science*, 2022, 26, ms571e2688

---

## **Digital Eye Strain (DES) among children attending online classes during COVID-19 pandemic in Al-Madinah region, Saudi Arabia**

Montaser Yousef Alshawawreh, Majed Tale Alharbi, Rawabi Ahmed Albeladi, Rahaf Adel Afandi, Razan Abdulaziz Alharbi, Ahmed Marshud Alrehaili, Fai Anas Mahrous

**Background:** Digital eye strain is a group of eye disorders caused by usage of digital devices. Online learning has replaced the traditional methods during the COVID-19 pandemic. **Objectives:** To determine the prevalence, symptoms, frequency, and associated risk factors of Digital eye strain and the pattern of digital device usage among children attending online classes during the COVID-19 pandemic. **Methods:** A cross-sectional study was conducted using an online questionnaire distributed among parents of children. **Results:** Out of 443 participants, the majority were females (51.5%). Tablets (47.6%) and smart phones (40.6%) were the most commonly used for online classes. The commonest Digital eye strain symptoms were headache (27.5%), excessive blinking (25.6%), redness (25.3%) and itching (24.8%). Severe eye strain was reported among (14%) of children. Children's preference for smart phones and tablets and an increase in hours spent on digital devices were some of the risk factors of Digital eye strain in our study. **Conclusions:** A high prevalence of Digital eye strain has been reported among children who attended online classes during the COVID-19 pandemic.

*Medical Science*, 2022, 26, ms572e2638

---

## **Self-ear cleaning practice and the associated ear-related symptoms and injuries among medical students**

Waleed Abdulaziz Alhazmi, Ahmed M Alshammari, Abdulrahim S Almutairi, Moath K Alshweash, Saif M Alshammari, Haneer M Alrashidi, Abdulmonem A Alsalmi, Ali F Almetrafe, Nasser A Aljazwa

**Objectives:** The study sought to ascertain the prevalence; various methods used for self-ear cleaning practice and identify injuries during self-ear cleaning malpractice among medical students. **Methods:** A descriptive cross-sectional study with an online validated questionnaire conducted electronically from January to October 2022 among first, second, third, fourth and fifth-year medical students at Qassim University, including males and females in Qassim Region, Saudi Arabia. The study sample consisted of 386 participants: Males (n=202; 52.3%) and females (n=184; 47.7%). The distribution on the level of education was 1st year (n=85; 22%), 2nd year (n=67; 17.4%), 3rd year (n=81; 21%), 4th year (n=66; 17.1%) and 5th year (n=87; 22.5%). **Results:** The prevalence of self-ear cleaning practices among medical students is 83.2%, males (78%) and females (89%). The association between self-ear cleaning and experiencing ear or damage to the eardrum had no significant finding ( $\chi^2 (1) = 0.017, p = 0.895$ ). The students in the study acknowledge that they experienced different forms of ear symptoms. In terms of ear symptoms, itching was the most common (32.9%), followed by earache (27.2%) and a feeling of fullness (26.2%). The least frequent symptoms were vertigo (7%) and ear discharge (7.5%). Overall, there were significant differences between the methods used to clean the ears especially ear buds (93%) were the most common method. **Conclusion:** Our study demonstrates that, despite senior medical students' knowledge of medicine, self-ear cleaning still exists. This brings to a close the widespread lack of knowledge regarding how the ear naturally cleans itself. Therefore, the study advises highlighting the requirement for a medical education program on the issues with public health brought on by self-ear cleaning.

*Medical Science*, 2022, 26, ms573e2660

---

## **Assessing the level of stress among medical students at the medical college of Um Al Qura University in Al-Qunfudhah**

Saad M Alhatmi, Safiah O Aldabali, Zahra A Alzubaidi

*Objective:* One of the major problems affecting medical students is the stress that is perceived during their academic studies. This investigation sought to understand the prevalence and sources of stress among medical students at Umm Al-Qura University in the city of Al-Qunfudhah, Saudi Arabia. *Methods:* A cross-sectional study was conducted using a validated 20-item Medical Student Stressor Questionnaire (MSSQ) that was distributed among medical students (Year 2 – 6) to establish the areas of stress. *Results:* This study found that 42.9% of the medical students suffered from moderate stress and 31.7% experienced high to severe levels of stress. The most leading source of stress was academic-related stressors (ARS), with female students exhibiting more stress than male students, a difference that was statistically significant ( $P = 0.013$ ). *Conclusion:* ARS such as 'Lack of time to review what has been learnt' and 'Heavy workload' were the main reasons that cause psychological stress to medical students. The level of stress decreased incrementally with study progression except for the fifth year. We conclude that ARS are a principal concern in the early years of study for medical students, particularly female students and therefore represent an important area for intervention by student support services.

*Medical Science, 2022, 26, ms574e2674*

---

### **Outcome and risk factors of failure after Orchidopexy, a single institution experience**

Osamah Almosallam, Nawaf Sulaiman Alrubaysh, Abdulaziz Khalaf Alanazi, Ali Khalid Alshaya, Feras Khalid AlGhofaily, Saleh Fahad Aldubayyan, Waleed Almutairi

*Introduction:* Cryptorchidism, or undescended testis (UDT), is the failure of one or both testes to descend to the base of the scrotum. It is a common problem that increases the risk of infertility and testicular malignancy. We aimed to review the outcomes of orchidopexy and evaluate the risk factors for failure after surgery. *Methods:* We retrospectively reviewed all boys who underwent orchidopexy between 2018 and 2021 at a tertiary pediatric hospital. Data on patient demographics, surgical approach, complications and follow-up period were collected. Descriptive data were generated and compared using t-test and chi-squared tests. Statistical significance was set at  $p < 0.05$ . Multivariate and univariate analyses were used to assess the significance of each factor studied. *Results:* One hundred patients aged  $< 14$  years underwent orchidopexy. Among them, 76 patients underwent the open approach, and 24 underwent the laparoscopic approach. Among the laparoscopic approaches, six patients were operated on in one stage while the remaining underwent a 2- stages approach. Postoperative complications, including Hematoma (8%), wound infection (2%), testicular atrophy (4%) and recurrence (5%), occurred in 16 patients. When analyzing the risk factors for testicular atrophy after orchidopexy, only the intra-abdominal location of the testis was found to be significant ( $P$ -value $<0.0001$ ). However, no factors were found to be significant when assessing for recurrence. *Conclusion:* Intra-abdominal testes are associated with a higher risk of postoperative testicular atrophy. Parents of patients with intra-abdominal testes should be aware of the higher risk.

*Medical Science, 2022, 26, ms575e2677*

---

### **The prevalence and risk factors of lower back pain among the general population in Al-Baha region, Saudi Arabia**

Hasan Ali Al Aidarous, Abdulrahman Abdulkarim Hanash Alzahrani, Talal Saeed Mohsen Alghamdi, Suhaib Abdulrahman Ali Alzahrani, Loay Youssef Al Thobaiti, Khalid Abdulkarim Hanash Alzahrani, Abdulaziz Ali Awad Alzahrani, Rayan Ahmed Hamed Alghamdi

*Background:* LBP is defined as back pain below the costal margin. It is one of the most seen complaints leading people to seek medical attention and it is even a leading cause for requiring surgical intervention. Our main target in this study is to measure the overall prevalence of LBP and discover its possible pre disposing factors and identify its burden on the general population of Al-Baha region, KSA. *Method:* A cross-sectional method by a self-administered questionnaire was conducted among the general residents of Al-Baha. Participants were informed beforehand of the study objectives, details and confidentiality policy. Multiple independent variables have been considered, such as socioeconomic status, health status and occupational factors. *Results:* The research participants were (409), 60.9% females and 39.1% males. 68.8% (282) of participants were positive for having LBP issues and the remaining 31.1% (127) were not. 67% of females and 33% of males have LBP problems, indicating a high variation between the two genders. From a social perspective, the study revealed that 71.63% of participants with LBP problems are married, while 25.18% are single. 72.86% of all participants have a family member with LBP. It is noted that 28% of participants think that LBP affects their working and personal life. *Conclusion:* Research outcomes demonstrated that LBP is a significant health issue among Al-Baha population and that has been attributed to multiple predisposing factors, which are: Regular physical activity, sitting position, work nature and previous arthritis diagnosis. Lastly, LBP was a significant burden on peoples' personal, social and occupational life.

*Medical Science, 2022, 26, ms576e2712*

---

### **Cognizance of hernia risk factors among adult in northern region, Saudi Arabia: A cross sectional study**

Fauwaz Alrashid, Alfatih Alnajib, Boshra Alzahrani, Shuruq Alshammari, Ziyad Alanazi, Hamoud Alsawwah, Farah Alturk

*Objective:* Global public awareness on the risk factors of abdominal wall hernia is limited, this is particularly scanty in our region. The purpose of this study is to examine the knowledge and awareness about risk factors of abdominal wall hernia among the citizens of the northern regions, in Kingdom of Saudi Arabia. *Method:* In this cross-sectional, community-based study 1037 citizens were surveyed using an online questionnaire composed of 15 questions. *Result:* About one-third (34.2%,  $n=355$ ) had a good knowledge about hernia. However, more than half of the participants (54.3%,  $n = 563$ ) showed poor level of knowledge, while only

(13%, n=135) had a satisfactory level of knowledge about hernia. Satisfactory knowledge was observed in the age group between 18-25 years (18.1%, n = 365) compared to the other aged groups. *Conclusion:* There was significant incognizance about hernia among older populations of Northern regions. Future studies on adult education and public awareness, is imperative.

*Medical Science, 2022, 26, ms577e2633*