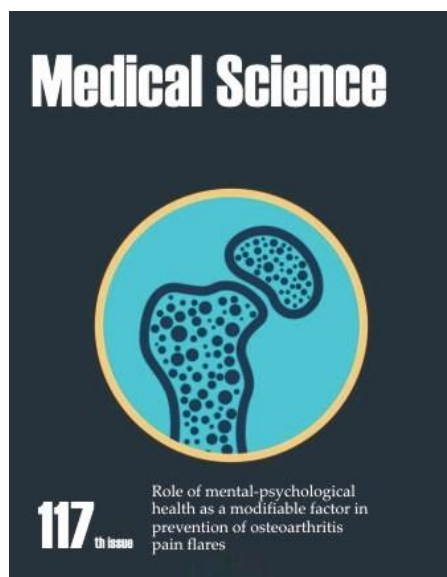


# Medical Science

## About the Cover



**Objective:** We examined the correlation between osteoarthritis (OA) pain and mental health. **Methods:** Two hundred sixty-six participants were interviewed weekly for 12 weeks from May 2021 - August 2021, with the WOMAC pain subscale and the 5-item Mental Health Inventory being measured (MHI-5). We used linear regression to investigate correlations controlling for age, gender, body mass index, and medication usage. To account for the correlation between repeated measurements, generalized estimating equations were employed. In a case crossover study, we also used conditional logistic regression to examine the relationship between MHI-5 and the probability of pain flare. Ethical approval was obtained from KSUMC number (# LP-178929). **Results:** There were 75 males and 191 women in all. The average age was 65.0, the average BMI was 31.5, and 82 percent had knee as their main location. The mean WOMAC score in the quartile was 2.93 Vs 4.57 (p for trend across quartiles 0.001). In the case crossover study (91 participants), the poorest MHI-5 quartile had 2.1 times the chances of a pain flare the following week as the best MHI-5 quartile (p0.001). **Conclusion:** We found a link between poorer mental health indicators, OA pain, and the likelihood of pain flares. General mental health is a controllable component of health that may offer a novel approach to preventing OA pain flares. (Ref: Khormi AAM. Role of mental-psychological health as a modifiable factor in prevention of osteoarthritis pain flares: An extension to leap study. Medical Science, 2021, 25(117), 2757-2764); (Image source: istock).

**Medial pterygoid muscle traumatic myositis ossificans: A case report from Saudi Arabia**

Emad A Khan

Traumatic myositis ossificans or myositis ossificans traumatica (MOT) is a heterotopic bone formation within a muscle (or group of muscles) and soft tissues. It occurs usually in deep muscles. Maxillofacial muscles including muscles of mastication are rarely affected. We report a lesion in a 49-year-old lady with a chief complaint of pain and some limitation in mouth opening and a history of trauma. Radiological examination using CBCT shows TMJ osteoarthritic changes and a lesion in the area of medial pterygoid muscle, which was diagnosed as MOT and managed conservatively.

*Medical Science*, 2021, 25(117), 2744-2747

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ANALYSIS

**The prevalence of hypertension among patients with Type 1 diabetes and its associated factors in Saudi Arabia**

Abdullah A Alrasheed, Abdulrahman M Alammam, Abdulrahman A Alrasheed, Abdulrahman N Aljurayyan, Muath A Aljufayr, Shatha G Alghaihb, Abdullah A Alelaiwi, Nora A Al Sahli

*Objective:* The present study was conducted to determine the prevalence of hypertension among patients with T1DM and its associated factors in Saudi Arabia. *Methodology:* An analytic cross-sectional study was conducted among patients with T1DM at a tertiary hospital in Riyadh, Saudi Arabia. The data were collected via a telephone survey and electronic medical record. Adult patients (>18 years) with T1DM who followed up at the tertiary hospital were enrolled in this research. Data regarding patient variables were collected (e.g., diagnosis of hypertension, duration of diabetes, smoking, glycosylated hemoglobin (HbA1c), age, sex, body mass index (BMI), urine albumin to creatinine ratio (UACR), and hemoglobin). *Results:* A Total of 240 patients (55.4% females, 44.6% males) with T1DM were included in the study. Mean age, HbA1C, and BMI were 30.6±9.6 years, 8.8±1.98 %, and 26.2±6.1 kg/m<sup>2</sup>, respectively. The prevalence of hypertension in the study was 17.9%. The study revealed that age (p = 0.000), BMI (p = 0.000), duration of diabetes (p = 0.000), eGFR (p = 0.000), triglycerides (p = 0.000), and retinopathy (p = 0.000) have significant association with hypertension among the patients with T1DM. However, Gender (p = 0.462), HbA1c (p = 0.243), LDL (p = 0.454), HDL (p = 0.086), and smoking (p = 0.986) showed no significant association with hypertension among T1DM patients. *Conclusion:* Hypertension is prevalent among patients with T1DM in Saudi Arabia, warranting making certain policies to hamper the coexistence of these two risk factors of increased morbidity and mortality.

*Medical Science*, 2021, 25(117), 2748-2756

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**Role of mental-psychological health as a modifiable factor in prevention of osteoarthritis pain flares: An extension to leap study**

Abdulrahman Ali M Khormi

*Objective:* We examined the correlation between osteoarthritis (OA) pain and mental health. *Methods:* Two hundred sixty-six participants were interviewed weekly for 12 weeks from May 2021 - August 2021, with the WOMAC pain subscale and the 5-item Mental Health Inventory being measured (MHI-5). We used linear regression to investigate correlations controlling for age, gender, body mass index, and medication usage. To account for the correlation between repeated measurements, generalized estimating equations were employed. In a case crossover study, we also used conditional logistic regression to examine the relationship between MHI-5 and the probability of pain flare. Ethical approval was obtained from KSUMC number (# LP-178929). *Results:* There were 75 males and 191 women in all. The average age was 65.0, the average BMI was 31.5, and 82 percent had knee as their main location. The mean WOMAC score in the quartile was 2.93 Vs 4.57 (p for trend across quartiles 0.001). In the case crossover study (91 participants), the poorest MHI-5 quartile had 2.1 times the chances of a pain flare the following week as the best MHI-5 quartile (p0.001). *Conclusion:* We found a link between poorer mental health indicators, OA pain, and the likelihood of pain flares. General mental health is a controllable component of health that may offer a novel approach to preventing OA pain flares.

*Medical Science*, 2021, 25(117), 2757-2764

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CASE REPORT

**Ultrasonography in diagnosis of amyloidosis of thyroid gland: Rare case**

Rania Mohammed Ahmed

*Introduction:* Amyloid goiter is a very rare manifestation of amyloidosis, can occur as a result of either primary or secondary amyloidosis of unknown etiology, leading in an increase in the size of the thyroid gland and compressive symptoms, depending on deposit location and severity. *Case presentation:* We report a case of 17-year-old patient who came with a one year history of enlarging painless neck and face swelling, presented to the Endocrine department in Tadawi international Poly Clinics in Abha City, Aseer Area, South of Kingdom Saudi Arabia. An enlarged thyroid gland with mediastinal involvement was discovered on ultrasound. The patient was diagnosed with primary amyloidosis involving only the thyroid gland, which was confirmed by histopathology. The multinodular appearance was compatible with a diagnosis of multinodular goiter. *Discussion and conclusion:* Amyloid Goiter is an extremely uncommon condition. Many previous studies revealed that a strong index of suspicion is expected

in individuals with enlarged thyroid glands and a history of persistent inflammatory processes or plasma cell disorders. Fine needle aspiration cytology/biopsy (FNAC/B) should be undertaken to rule out thyroid cancer. Thyroidectomy is required for a variety of reasons; such as confirmed diagnosis cases.

*Medical Science*, 2021, 25(117), 2765-2768

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## ANALYSIS

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### **Evaluation of the drugs' regimens during Ramadan, in Sudan: Patients' prospective**

Aimun AE Ahmed, Maha Jalal, Salah Eldin Abdel Hag Abdel Haleem

*Introduction:* The aim of the study was to identify the status of therapeutic regimens administration in Sudan during Ramadan month among patients observing the fast of the holy month. *Methods:* A cross-sectional, study was conducted at public teaching hospitals on patients receiving drug prescriptions and committed to fasting. Patients were interviewed using predesigned questionnaires. They were personally interviewed with regards to their drugs use; regimens; and effectiveness of the drugs. Statistical evaluation was performed with statistical tool (SPSS) package for social science. Data were analyzed by means of the Chi-square Test to compare the differences for various results. The differences were significant at  $p \leq 0.05$ . *Results:* Two hundred patients participated in the study successfully. An excess of 85 % of the patients continued their daytime- fasting following physician counselling. Enteral administration prevailed, and so did BID regimens. Almost all took nocturnal doses. The drugs' effectiveness in 71% of the adults was not affected by fasting. Seventy three percent of the adults were facing difficulties with their drugs. The majority of cases were patients with upper respiratory tract infections (25.5%). Thirty one percent of the patients used antibiotics. *Conclusion:* Findings are consistent with estimations elsewhere. Regimens were tailored to fit the break-fasting hours. A vista is open for clinical trials on the impact of daytime-fasting on the pharmacodynamic and pharmacokinetic behavior of essential drugs.

*Medical Science*, 2021, 25(117), 2769-2777

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### **The effect of the parents' anxiety and depression on the quality of life of children with cerebral palsy in Al Ahsa, Saudi Arabia**

Ali Alsaad, Narjes Alramadhan, Maryam ALjumah, Fatimah Alghareeb, Hussain Alghadeer

*Objective:* This study aims to test whether or not the parental depression and anxiety will affect the quality of life of children with Cerebral Palsy (CP) in Alahsa, Saudi Arabia. *Method:* This is a case control observational study, carried out in two study groups in Alahsa. The first group included parents of children with CP and the second group includes parents of typical children. Parental depression and anxiety assessed through The Patient Health Questionnaire (the Arabic version), using Depression modules, and generalized anxiety. QOL of the CP children assessed through the Pediatric Quality of Life Inventory cerebral palsy module (the Arabic version), and for typical children, translated Generic Core Scales have been used. *Result:* 80% of parents of CP children have depression and anxiety, and 66.6% of parents of typical children have depression and anxiety. There was no significant relationship between parental anxiety and depression with QOL of children with CP, although there is a significant relationship with movement and balance dimension. *Conclusion:* This study emphasizes that there was no significant relationship between parental anxiety and depression with QOL of children with CP.

*Medical Science*, 2021, 25(117), 2778-2788

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### **Predictors of dental care utilization in school children in Al-Madinah, Saudi Arabia**

Amal Aqeeli, Alla T Alsharif, Estie Kruger, Marc Tennant

*Aim:* To explore the factors influencing dental care utilization including sociodemographic characteristics and oral health need in 9-12-year-old school children in Al-Madinah, Saudi Arabia (SA). *Methods:* A stratified random sample was applied to select 10 schools in Al Madinah, SA and a total of 1000 students aged 9-12 years were included in the study. Information on sociodemographic factors, dental care utilization and oral health related quality of life were recorded using the World Health Organization (WHO) questionnaire. A multiple logistic regression model was used. *Results:* Almost a quarter of all participants (23.8%), have never received dental care before. Pain or trouble with teeth was the most common reason for visiting the dentist (49.4%). The percentages of both missing school, and difficulty in eating due to oral health problems, were significantly higher among those who received dental care. Children from low-income families had a reduced likelihood of receiving dental care (OR=0.571, P=0.014). Children who have caries and who reported having toothache in the past 12 months were more likely to visit the dentist (OR=1.599, P=0.028) & (OR=2.188, P>0.001). *Conclusion:* Dental care utilization is mainly driven by symptomatic dental care.

*Medical Science*, 2021, 25(117), 2789-2797

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### **Reasons and recall rate of endodontically treated cases performed by students in Riyadh Elm University - Saudi Arabia**

Abdulrahman Baghareeb, Hassan Alsaigh, Abdulmajeed Alsayari, Abdulmajeed Alahmary, Fahad Almaziad, Muhammed Abuhassna, Basil Alamassi

*Aims:* This study aimed to investigate the reasons and recall rates of endodontically treated cases performed by undergraduate students in Riyadh Elm University (REU) teaching hospital- Saudi Arabia. *Materials and Methods:* In this study, all completed conventional root canal treatment (RCT) of permanent teeth performed by undergraduate students in the Munasiyah campus of Riyadh Elm University from January 2019 to January 2020 were analyzed. In addition, patient age, gender, nationality, reasons for

treatment, presence of periapical (PA) lesion, and recall visits data were collected from the electronic filing system used in the teaching hospital. *Results:* A total of 799 cases met the inclusion criteria; 79.7% of them were male. Maxillary premolars were the most frequently treated teeth (31.7%). The most common reason for treatment was irreversible pulpitis (31%), followed by pulpal necrosis (26%). Among these cases, 84% have completed their treatment, and of them, 31.1% returned for recall visits. Gender, age group, pulpal, and periapical diagnosis did not significantly correlate with recall visits. *Conclusion:* The most common reason for treatment is irreversible pulpitis followed by pulpal necrosis. Maxillary premolars were the most frequently treated group of teeth. Moreover, the recall rates post endodontic treatment is low, and long-term recalls must be encouraged.

*Medical Science*, 2021, 25(117), 2798-2803

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## RESEARCH

### **Effect of recreational handball on sleep, well-being and psychological characteristics in untrained males**

Rakesh Tomar, John Ainsworth Allen

Aim of present study was to examine the effects of small sided recreational handball on depression, self-esteem, eating disorder, motivation to exercise, sleep and general well-being in untrained males. We randomized 24 students into two groups: intervention group (n=14) and control group (n=10). Participants in intervention group play small sided handball for 12 weeks. Control group followed their normal routine. Following questionnaires were used; PHQ-9 (depression); Pittsburgh Sleep Quality Index (sleep); EDE-Q (eating disorders); WHO-5 (well-being); BREQ-2 (motivational). Statistical analysis was done using T test to check group differences. Results showed significant difference in scores of depressions ( $t_{22} = 3.882$ ,  $P = 0.001$ ), self-esteem ( $t_{22} = 2.118$ ,  $P = 0.046$ ) and eating disorders ( $t_{22} = 4.457$ ,  $P = 0.000$ ). We did not find any significant difference in amotivation ( $t_{22} = 1.051$ ,  $P = 0.304$ ), external regulation ( $t_{22} = 0.675$ ,  $P = 0.507$ ), introjected regulation ( $t_{22} = 0.653$ ,  $P = 0.521$ ), identified regulation ( $t_{22} = 1.077$ ,  $P = 0.293$ ) and intrinsic regulation ( $t_{22} = .485$ ,  $P = 0.633$ ). There was improvement in sleep quality ( $t_{22} = 3.776$ ,  $P = 0.001$ ) and general well-being of participants ( $t_{22} = 2.559$ ,  $P = 0.018$ ) post intervention. It was concluded that small sided recreational handball was effective in reducing symptoms of depression. Contrary to popular belief we could not find any improvement in motivation to exercise, but there was notable improvement in self-esteem of participants. It was interesting to see improvement in both general well-being and sleep quality post intervention.

*Medical Science*, 2021, 25(117), 2804-2812

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## ANALYSIS

### **Comparison of Endodontic decision making for post-obturation flare-up: A scenario-based survey**

Ammar AbuMostafa, Osama S Alharbi, Sreen F Al Shawaf, Rahaf N Almikhem, Shahad M Aljuhayyim

*Introduction:* Endodontic management of post-obturation flare up could be confusing task for some dentist. Correct decision making on these cases will benefit on minimizing unnecessary treatment and antibiotic prescription. The aim of the study was to evaluate and compare endodontic decision making for post-obturation flare-up among dental practitioners at varying levels of education. *Methods and Materials:* A scenario-based online questionnaire was distributed among the participants via social media (WhatsApp and Twitter) during the period from (06/2020) to (08/2020). The questionnaire comprised of a demographic section and a case scenario section comprising eight hypothetical cases with supporting periapical radiographs. Participants were requested to choose one response each from seven standard treatment options and four medication options for every case. Chi square test was used to compare among different groups. Level of significance was set at  $p < 0.05$ . *Results:* The online questionnaire received a total of 391 responses from across Saudi Arabia. Results demonstrated a statistically significant difference among the different groups of participants ( $P < 0.05$ ). Endodontists showed the highest percentage of correct responses, either regarding the treatment procedure or prescribing medication, while general practitioners displayed the least. *Conclusion:* Endodontists and postgraduate residents in endodontics decision making were more conservative than undergraduate students and general practitioners. These results emphasize the need for more endodontic courses and lectures targeted toward general practitioners, and the importance of training undergraduates on decision making in endodontics.

*Medical Science*, 2021, 25(117), 2813-2821

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### **Effect of nebulized furosemide in patients with acute asthma in Iraq**

Abdullah Arnus Abdul-Hassan, Hashim M Hashim

*Objective:* Identify whether nebulized frusemide has any therapeutic benefit in patients with acute attack of asthma. *Methods:* A total of 24 patients were diagnosed with acute asthma; 12 of them were given nebulized frusemide 40mg and the other 12 patients were given nebulized saline as control. Every patient in the two groups has FEV1 measured before and after the test and received IV aminophylline over 60 minutes on admission and before the test. *Results:* a mean increase in the FEV1 of  $27.6 \pm 9.1$  in the furosemide group while there is a mean in the FEV1 of  $4.8 \pm 4.4$  in the other group. These changes are regarded as statistically significant ( $P$  value  $< 0.005$ ). *Conclusions:* When it comes to patients with severe asthma, receiving IV aminophylline, the use of nebulized frusemide produced significant improvement in the FEV1.

### **Level of awareness and perception of parents about amblyopia in children in AL-Baha city, Kingdom of Saudi Arabia (KSA)**

Mahadi Bashir, Abdullah Abu Melha, Ameera Faisal Alghamdi, Fatimah Hamad AL Hamad, Areej Eidhah Alzhrani, Mostafa Mohamed Embaby

*Background:* Amblyopia is the most common cause of monocular visual loss in children. It can be easily treated or prevented if recognized early, but due to lack of knowledge about the disease, it can be easily missed. *Objectives:* The aim of this study was to assess parents' perception and awareness about amblyopia among children in terms of causes, risk factors, symptoms, diagnosis and management at Al-Baha region, Kingdom of Saudi Arabia (KSA). *Methods:* A cross-sectional study that used an online questionnaire targeting parents of Al-Baha city, Saudi Arabia. The statistical analysis was done using the statistical package for the social sciences (SPSS, version 27.0). *Results:* A total of 342 responses were received, all of the participants were from Al-Baha region. Based on a total of 13 questions regarding lazy eye disease, only 25.1% of participants had good knowledge about the disease. The most commonly reported source of knowledge to provide good knowledge about amblyopia was "ophthalmologist". Most of the participants were females (83.3%) and they were observed to be more knowledgeable about the disease than males (16.7%). Moreover, more than 50% of the participants showed a lack of knowledge about amblyopia's causes, risk factors, diagnosis and management. *Conclusion:* The results are consistent with what previous studies concluded, which is a significant lack of knowledge regarding amblyopia. Thus, spreading awareness about the disease is crucial for early identification and treatment which will eventually decrease the burden of the disease on children and prevent unilateral visual impairment.

Medical Science, 2021, 25(117), 2827-2833

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### **A comparative clinical radiological study between using formocresol, MTA and platelet rich fibrin (PRF) in pulpotomy of second primary molars (Irreversible Pulpitis)**

Mahmoud Alawwad, Mohamed Altinawi, Mohammad Salem Rekab, Imad Katbeh, Asiyat Isaeva, Adebah Alqaisy

This study assesses the clinical and radiological success of pulpotomy of the second primary molars with irreversible pulpitis using Formocresol, MTA and Platelet Rich Fibrin (PRF) and monitors the teeth to see the success of the treatments during (6 months-12 months). The research consisted of 36 upper and lower second primary molars for children between the ages of 5 and 9 years. Each of them had one or more second primary molar with irreversible pulpitis requiring pulpotomy, and the molars of the research sample were divided into three groups equally according to the treatment method followed (treatment with Formocresol, treatment using MTA, and treatment using PRF). Treatments were evaluated through periodic child reviews and clinical and radiological examinations of the treated tooth by three specialists from the Department of Pediatric Dentistry to assess the success of the treatment. Where, we reviewed the patient to evaluate treatment after 6 months - 12 months. The treatment success rates of MTA in pulpotomy of primary molars with irreversible pulpitis were slightly higher than PRF, while formocresol had the worst prognosis among the materials used in pulpotomy. MTA is superior to PRF and formocresol in pulpotomy of primary teeth with irreversible pulpitis, and PRF was a successful and effective material in pulpotomy of primary molars and it can be an alternative to formocresol and MTA.

Medical Science, 2021, 25(117), 2834-2841

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### **Anatomical radiographic evaluation of vidian canal and its surrounding structures using Cone-beam computed tomography (CBCT)**

Nasim Shams, Mahshid Razavi, Saeid Shirafkan, Maryam Mohebinia

*Background:* Vidian canal (VC) is a vital surgical landmark in endoscopic endonasal skull base surgery. The aim of the present study was to evaluate the Vidian canal location and its anatomic surrounding using CBCT. *Materials and methods:* This study was a retrospective, cross-sectional research conducted on CBCT images of 100 patients from 2020 to 2021. The images were analyzed on the coronal and axial plane as follows: the length of VC, the VC-VC distance, VC-foramen rotundum (FR) distances, VC pterygopalatine plate (MPP) distance, pattern of VC pneumatization into the sphenoid sinus, location of the VC relative to the medial MPP, the angle of the VC and the palatovaginal canal, and the angle between the posterior of the middle turbinate and the lateral part of the VC. *Results:* The mean distance of VC-VC was  $21.42 \pm 3.27$ mm. The mean distance of VC on the right and left side was  $14.43 \pm 3.42$  and  $14.60 \pm 3.12$ mm, respectively. The position of VC relative to MPP was 39.5% medially, 53.5% on the same line, and 11.5% laterally. The pattern of pneumatization showed 24.5% of patients was in grade I pneumatization, 40.5% grade II, 32.5% grade III, and 2.5% grade IV. *Conclusion:* Preoperative radiographic of skull base is paramount to appropriate surgical procedures. Precise determination of VC and its relationships with surrounding landmarks can reduce the surgical risks and improves the success rates of surgical procedures.

Medical Science, 2021, 25(117), 2842-2849

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### **Parental awareness about non-steroidal anti-inflammatory drugs use and its side effects among their children in Qassim region**

Ali A Al-Akhfash, Nawaf Hamdi Obaid Alharbi, Abdulrhman Salem Meqhem Alharbi, Marwan Dhahi E Aljohani, Ahmed Abdulaziz M Alharbi, Osama Mohammed R Almaneai, Alwaleed Muneef M Alharbi, Turki Saud M Alharbi

*Background:* Non-steroidal anti-inflammatory drugs, (NSAIDs) are widely used for various conditions, mainly as an analgesics and anti-pyretics in adults as well as in pediatrics. Most of the users of NSAIDs aren't aware of the serious side effects of these

medications. *Aim:* Estimation of parental awareness about NSAIDs use and their side effects among their children in Qassim region. *Materials and methods:* The participants involved in the study are the parents whom have child/children aged 14 years old or younger. The population sample was selected randomly and they participated in the study with their own volition. The questionnaires were distributed through social media. Data analyses were done by using SPSS version 26. This study is cross-sectional study with a sample size of 516 conducted in Qassim region, Saudi Arabia. *Results:* 516 were recruited (153 males and 363 females). The most common age group was from 36 to 55 years (47.9%). 84.5% have heard about NSAIDs. 77.1% used NSAIDs for their children below 14 years, but only 36.2% knew about NSAIDs side effects. Among the responders, 12.6% experienced NSAIDs side effects. The most commonly experienced side effect was allergy (50%) and gastroenterology problems (30%). The awareness toward NSAIDs use was more common among females. *Conclusion:* The parental awareness of NSAIDs use was within the adequate range. However, parent's knowledge of the potential side effects was low. Females with 2-5 children, were most likely to administer NSAIDs for their children below 14, contradictorily informed of NSAIDs and its indication of use, yet not aware about NSAIDs side effects.

*Medical Science*, 2021, 25(117), 2850-2858

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### **The awareness and impression of pediatric oncology and childhood cancer among health-related students at Umm Al-Qura University in Makkah city, KSA: Cross-sectional study**

Salah Bakry, Hammad Alharbi, Abdulrahman Kabli, Ammar Aljohani, Abdullah Allehyani, Abdelelah Mofti, Ahmad Hasan Mufti

*Background:* childhood cancer encompasses a rare high risk of mortality worldwide. Our study surveyed health students in Makkah city of western Saudi Arabia. We compared the awareness and attitude of childhood cancer and pediatric oncology and recommended strategies to bridge this awareness gap. *Methodology:* A survey-based study was conducted among health-related students at Umm Al-Qura University in Makkah, Saudi Arabia, between March 2021 and September 2021. *Results:* The number of participants in the current study was 342 students. Their mean age was  $22.7 \pm 1.95$  years. Overall, 198 (57.9%) were males, and 144 (42.1%) were females. The majority of students were 5th-year students, with interns being the least represented. Among the colleges, the College of Medicine had the most significant percentage of students. Most students were unmarried (single). *Conclusion:* early diagnosis of childhood cancer is an essential goal in pediatric oncology; our study concluded that while most students were aware of childhood cancer, their basic information was not sufficient to allow an opportunity for early treatment and intervention while the disease burden is in its earliest and treatable stages.

*Medical Science*, 2021, 25(117), 2859-2867

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### **Knowledge, attitude and practice of general population in Arar towards Bell's palsy**

Abdelrahman Mohamed Ahmed, Awwatf Satam R Alshammari, Wurud Muteb D Alshammari, Marwa Mutlaq Awad Al-Anzi, Rawan Fayeze Khalaf Alsaadi

*Background:* Knowledge and attitude of General Population towards Bell's palsy vary greatly from place to another and depending on various aspects as sociodemographic aspects. *Objectives:* To assess knowledge, awareness and attitude of general Saudi population in Arar towards symptoms, causes and management of Bell's palsy. *Methods:* A cross sectional study design was adopted. The study was carried out in Arar, Northern Province in Saudi Arabia, during a period of two months from 1 July to 31 September, 2021. *Results:* 87.9% of the participants had heard about Bell's palsy before. All participants who heard about Bell's palsy before or knew any of its symptoms got their information either from family and friends, newspaper, medical staff, or social media. Females had heard about Bell's palsy more than males did with 70.9% in females compared to 29.1% in males ( $P=0.001$ ). More than half of the participants (52.6%) who heard about Bell's palsy were from 19-30 years ( $P=0.001$ ). University students or with higher education who heard about Bell's palsy were 59.9% of the total population ( $P>0.05$ ). Also, 69.0% of the people heard about Bell's palsy were females ( $P=0.001$ ). *Conclusion:* Knowledge and attitude of Bell's palsy among population in Arar, KSA was not satisfactory as people's knowledge was limited to some extent.

*Medical Science*, 2021, 25(117), 2868-2875

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## **RESEARCH**

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### **The role of Dihydroartemisinin in suppression of experimental Dexamethazone-Induced Osteoporosis in adult female albino rat**

Yassmin G. Salem, Mona A. El-Shahat, Omnia S. Erfan, Mamdouh Basheir Eldesoqui, Walaa F. Awadin, Huda Eltahry

*Background:* Osteoporosis is a major public health problem leading to morbidity and mortality in many individuals. Osteoporosis is one of the main complications of glucocorticoid (GC) application. Currently, the employ of medical herbs has emerged as one of the main popular and preferred complementary and traditional therapy. Evidence provided that certain vegetables and fruits are essential for maintaining bone mass and preventing osteoporosis. *Artemisia annua* is a Chinese traditional herb which was used safely for long time in treatment of malaria. Artemisinin possess anti-inflammatory, anti-oxidant, anti-adipogenic, anti-cancer and anti-microbial activities. Dihydroartemisinin (DHA) is the active metabolite of all artemisinin compounds. *Aim of the study:* This study was designed to link these documented prophits of dihydroartemisinin to the management of dexamethazone induced osteoporosis. *Materials & methods:* This study was designed to link these documented prophits of dihydroartemisinin to the

management of dexamethazone induced osteoporosis. *Materials & methods:* 18 female adult albino rats aged 3 months were divided into 3 groups; control, Dexamethazone and Dexamethazone +Dihydroartemisinin 20 mg. We evaluated the osteoporotic changes by histopathology (HE staining, masson-goldner and immunological examination of Beta catenin (Bone formation marker), RANKL (Bone resorption marker) in lumbar vertebrae. *Conclusion:* Dexamethazone clearly inhibited bone formation and induced osteoclastogenesis as proved by masson-goldner staining and immunological staining. The osteoporotic changes were reversed with dihydroartemisinin treatment. We have demonstrated that treatment with dihydroartemisinin at the same time with dexamethazone has significantly improved the histological bone indices as compared to dexamethazone osteoporotic group. Dihydroartemisinin may be a new treatment strategy for the prevention of glucocorticoids-induced osteoporosis.

*Medical Science*, 2021, 25(117), 2876-2884

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## ANALYSIS

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### **Online cross-sectional survey to assess the mental health and coping strategies used by health professionals during covid-19 pandemic**

Raman Deep, Anamika Gautam, Poonam Ahlawat, Ruchika Duggal Choudhary, Jyoti Dahiya, Arti Atri

*Background:* COVID-19 poses a great challenge to the global health Care system all over the world. The contribution of your frontline worker toward defeating the pandemic is immeasurable on the other hand the health care professional also burdens up and faces disturbance in the mental and physical health. *Methodology:* Study was conducted with an objective to assess the mental health and coping strategies used by health professionals during COVID -19 Pandemic. A cross sectional survey design was used and sample was collected by Snowball sampling technique from different state and union territories of India. A total 106 healthcare professionals responded and enrolled themselves in the study. *Result:* In present study most of the participants 53(50.0%) reported moderate depression, 53(50.0%) moderate anxiety and 49 (46.2%) had mild stress. The data analysis reported that maximum numbers of participants had access to psycho-educational material like leaflet, brochure and books provided by the institution (60.4%) compared to (39.6%) who did not get this privilege, next, majority of the participant (76.4%) had availability of resources like internet, TV, newspaper, social media etc. More than half of the participants were able to avail counselling services (55.7%), psychotherapy (63.2%) etc. *Conclusion:* This pandemic has led to anxiety, stress, depression and other mental health issues among the people especially in health care profession. Mental health problems like stress, anxiety and depression can adversely affect the physical health of the health professionals as well as their competency to care for sick.

*Medical Science*, 2021, 25(117), 2885-2890

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### **Evaluation of psychometric properties of child post-traumatic cognitions inventory in Iranian children and adolescents**

Sepideh Hoseini, Maryam Bakhtiari, Maryam Aslzaker Lighvan, Imaneh Abasi

*Background:* The crucial role of post-traumatic cognitions in the development or non-development of post-traumatic stress disorder in children and adolescents prompted us to first provide appropriate assessment tool for future research in this field. For this purpose, we have included in our agenda the investigation of psychometric properties of the Persian version of the child post-traumatic cognitions inventory (CPTCI) in Iranian children and adolescents, which is one of the best assessment tools in this field. *Methods:* In this descriptive study, a total of 195 Iranian children and adolescents in the age range of 8 to 18 years participated. Sample was selected by available sampling method. Instruments, including the Post-Traumatic Stress Disorder Symptom Scale Self Report (PSS-SR), the Child Depression Inventory (CDI), and the Revised Children's Manifest Anxiety Scale (RCMAS) were used to assess convergent validity of the CPTCI. Confirmatory factor analysis method was used to determine the construct validity of CPTCI. Also, reliability was measured using Cronbach's alpha, and then retest reliability was assessed. *Results:* The confirmatory factor analysis results showed the model's satisfactory fitting. Considering the correlation results, CPTCI has good convergent validity. The test-retest reliability was 0.76 and Cronbach's alpha for all questions of the CPTCI was 0.944, which indicates that this test has good reliability. *Conclusion:* Results of this study showed that CPTCI could be used with considerable confidence for Iranian children and adolescents that experienced a traumatic event.

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### **Knowledge, attitude and practice of influenza vaccination among type 1 and type 2 diabetes patients in King Khalid University Hospital (KKUH) Riyadh, Saudi Arabia**

Saad M Alsaad, Khaled Alghamdi, Abdulmalik Khalid Alangari, Abdulmohsen Khalid Alangari, Ahmed Abubakr Badahdah, Meshal Ahmed Aleiaidi

*Aim:* This study aimed at investigating the knowledge, attitudes and practices of influenza vaccination among diabetic patients attending diabetic outpatient clinics in King Khalid University Hospital (KKUH). *Method:* A cross-sectional survey was conducted through a conveniently selected sample consist of 406 type-1 and type-2 diabetic patients. To collect data, the study used a questionnaire consisting of 32 items distributed as 20 items to assess the diabetic patients' knowledge, seven items to assess the diabetic patients' attitudes and 5 items to assess the diabetic patients' practices related to influenza vaccination. Data were analyzed using SPSS software. *Results:* A total of 406 diabetic patients were enrolled in this research. About 94.8% (n=385) of the patients reported that seasonal influenza is a viral infection, can spread from one person to another (96.3%), and 386 (95.1%) as main

complications of seasonal influenza, respectively. The results revealed that participating diabetic patients had a good seasonal flu knowledge (70.9%, n=288), good vaccine knowledge (64.3%, n=261), and positive attitudes towards seasonal flu vaccination (65.7%, n=267). In addition, multivariate logistic regression showed that diabetic patients with DM duration of 6 to 10 years were 1.62 times more likely to be vaccinated compared to patients having DM for five years or less (OR: 1.62, CI: 1.13 – 3.27), diabetic patients who had DM for 11 to 15 years were 3.27 times more likely to get vaccinated *Conclusion:* The study concluded that diabetic patients attending diabetes outpatient clinics in KKHU have a good knowledge and positive attitudes towards seasonal flu and seasonal flu vaccination.

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## RESEARCH

### **Effect of flaxseed oil on acetaminophen-induced hepatotoxicity in male rats**

Reham A Arafat, Ghaidaa M Baghdadi

The goal of this study was to explore if flaxseed oil (FSO) could protect male rats from hepatotoxicity caused by acetaminophen (APAP). Feed intake (FI), feed efficiency ratio (EFR) and body weight gain % (BWG %), as well as serum levels of liver enzymes (alanine aminotransferase (ALT), aspartate aminotransferase (AST), and alkaline phosphatase, (ALP)) used to investigate these impacts. A liver histopathological investigation was also carried out. *Methods:* Fifty male Wister rats were divided into five groups at random: Group 1 is the negative group (Cont -), while Group 2 is the positive group (Cont +). The other three groups; rats were received oral gavages of FSO (1.5, 3 and 4.5ml/Kg/day) for 30 days and received the single dose of APAP (3 g/kg) at day 30 1 h before FSO respectively. *Results:* The results demonstrated that pretreatment with FSO (1.5, 3, and 4.5 ml/kg b.wt.) for 30 days improved FI, EFR, BWG percent, and lowered high serum levels of liver enzymes in hepatotoxic rats compared to the Cont+ group. The histopathological alterations generated by APAP were reduced in liver sections of rats given flaxseed oil. *Conclusion:* The results suggest that FSO induces potent hepatoprotective in acetaminophen hepatotoxic rats. Flaxseed oil consumption may be useful for people who have liver disorders, according to this study.

*Medical Science*, 2021, 25(117), 2910-2916

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## ANALYSIS

### **COVID-19 impact on emergency department trauma visits in Eastern Province Saudi Arabia-2020: A cross-sectional descriptive study**

Ahmad N Boeisa, Ali A Alsakkak, Ahmed W Alrashed, Hesham M Alsquair, Abdulrahman A Alarfaj

*Background:* The new pandemic, COVID-19, is posing an enormous threat to people and huge workload to emergency departments (EDs) worldwide. *Purpose:* To study the impact of COVID-19 pandemic on preventing trauma patients from visiting Emergency departments. *Methods:* A cross sectional study was conducted using an electronic survey, all the patients who live in the eastern province and had to visit the Emergency departments and either delayed or decided not to visit ED due to COVID-19 pandemic were targeted. *Results:* A total of 390 out of 809 respondents (48%) in the Eastern region suffered from an orthopedic injury during lockdown due to covid-19 pandemic. A total of 244 (62.6%) respondents were afraid to visit hospital during lockdown. The main reasons for that were being afraid of being infected with covid-19. *Conclusion:* The COVID-19 pandemic resulted in preventing orthopedic trauma patients from visiting emergency departments which delayed them from receiving proper management.

*Medical Science*, 2021, 25(117), 2917-2924

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## CASE REPORT

### **An extremely favourable outcome in a case of severe myositis ossificans of elbow**

Hitendra Wamborikar, Prateek Upadhyay, Naresh Dhaniwala, Arzoo Chadha, Ankit Jaiswal

*Introduction:* Myositis ossificans (MO) is a self-limiting, reparative disease characterised by growing fibroblasts in soft tissues that develop bone and cartilage Fractures of the distal humerus, on the other hand, account for around 2% of all fractures. Most cases progress to malunion if left unaddressed, but myositis ossificans is a large concern that contributes to increased deformity and compromised limb functioning. Delay in obtaining treatment is rather problematic because of the passage of major nerves and vessels around the distal humerus and delayed operative management has no positive effects on regaining the normalcy in the limb function. Surgical intervention requires open reduction and internal fixation with plate osteosynthesis, ulnar and median nerve preservation and rigorous post operative rehabilitation. *Case:* A 21 years old male came with 2 months old history of pain, restricted mobility in right elbow. Xray and CT scan of right elbow showed Bi-columnar low T fracture of the right distal humerus. Patient was managed with open reduction and internal fixation with bi-columnar plating, meticulous dissection of the myositis ossificans and ulnar nerve release.

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**A cross-sectional study of perceived stress caused by COVID-19 pandemic and the coping skills used by health care professionals of a government medical college from central India**

Shilpa Avinash Telgote, Swapnil Ganesh Karwande, Ajinkya Sureshrao Ghogare

*Introduction:* Novel corona virus has spread rapidly which created a crisis situation and took toll of lots of people all over the world. This sudden upsurge of patients with high infectivity rate and unexpected complications placed health care system under burden all over the world. Particularly at places like India, where there was scarcity of resources and health care professionals more stress was expected. Although there was enormous stress, yet the individual perception varies and accordingly coping strategies also. *Aim:* So, we tried to assess the perceived stress and coping strategies used by health care professionals during COVID-19 pandemic. *Methods:* We collected data of 153 participants by using Perceived Stress scale and Brief COPE scale. Data was analyzed using Mann Whitney U test and Spearman's correlation coefficient. *Results:* We found high levels of perceived stress among 18-45 years age group when compared to older population. We found more use of total avoidant coping style and humor among participants staying alone than those staying with families. We also found more use of coping style humor among males and younger population. We found more use of coping style religion among females and participants staying with family. We found positive but weak correlation between perceived stress and total avoidant coping styles. *Conclusion:* Present study highlighted the need of support groups and special training programs for health care professionals to deal with the pandemic stress. We also recommend workshops for promoting positive coping strategies among health care professionals so that they can deal with stressful conditions of the pandemic in better ways.

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**Knowledge, attitude and practice of primary school teachers towards students with hypoglycemic attack in Tabuk Region, Saudi Arabia**

Hyder Mirghani, Alsaiari Reem Ali Y, Rawabi Wajdi A Gabban, Esraa Yehea Hasan Ma'ashi, Nura Jamil Ahmed Abubaker, Amal Naif Muidh Althobaiti

*Background:* Hypoglycemia is common among school children with type 2 diabetes, if not managed promptly brain damage might happen. Therefore, the current study aimed to assess the primary school teacher's knowledge and attitude about hypoglycemia among students with type 1 diabetes. *Methodology:* This is a cross-sectional study conducted among 434 primary school teachers in Tabuk City, Saudi Arabia during the period from March 2020 to September 2020. A non-probability convenience sampling method was used to recruit the participants. A self-administered questionnaire involves questions on demographic data, knowledge, and attitude regarding hypoglycemia was used. All the participants signed a written informed consent and the Statistical Package for Social Sciences (SPSS) was used for data analysis. *Results:* Out of 434 primary school teachers, the majorities were females; the knowledge regarding hypoglycemia was sub-optimal (only 68% showed excellent and good knowledge). Regarding the attitude, a major defect was observed as only 75.6% know how to use a glucometer, and a minority (6.7% knew the rule of 15, 15, and 15). The school facilities for hypoglycemia management are alarming (47% and 41.7% had glucometers and school clinics respectively), the majority of teachers recommend sessions on glucometer use and hypoglycemia symptoms. *Conclusion:* Knowledge and attitude were sub-optimal among primary school teachers in Tabuk City, campaigns are to be held to increase the awareness regarding hypoglycemia.

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**Measuring the knowledge and confidence of family medicine residents on doing minor surgical procedures in Taif, KSA**

Hani Abozaid, Samah Alshanbari, Amjad Alotaibi, Jamal Faydh, Saad Althuwaybi, Norah Alsuwailem, Khames Alzahrani

*Background:* Family doctors are being sought for positions in remote regions where there is no easy access to specialty facilities or high-tech equipment. A family physician's everyday practice includes dealing with surgical issues. While certain treatments are routinely performed in the hospital, others, such as come downs surgical care, abscesses, ingrown toe nails, or minor wound management, are considered more difficult, and these people are usually sent to a surgeon. This study was conducted to assess the level of knowledge and confidence among family medicine residents in Taif, Saudi Arabia. *Methods:* This is a cross-sectional observational descriptive study that started in July 2020. The study's population includes Family medicine residents in Taif, Saudi Arabia, at all levels from R1 to R4. The instrument used was an electronic questionnaire in English. *Result:* This study included responses from 114 family medicines residents from the western province of Saudi Arabia. The assessment of practices related to different M.S.P.s (minor surgical procedures) showed that 'wound closure and dressings' was the most common procedure performed independently by residents. The most common barriers in performing M.S.P.s were lack of training (49.1%), lack of trainers (49.1%), and lack of facilities (25.4%). *Conclusion:* Most of the F.M. residents had basic knowledge and were interested in improving their practicing skills related to M.S.P.s but were not confident enough to do certain procedures. Constant preceptor supervision and critical analysis while performing M.S.P.s in primary care are essential for enhancing the surgical skills of medical graduates.

*Medical Science, 2021, 25(117), 2953-2961*

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### **Improvement of hearing after myringotomy with tympanostomy tube insertion in young patients with otitis media with effusion**

Abdullah D Alotaibi, Hussam Ahmed Alruwaili, Sultan Faisal Alrubayyi, Norah Sulaiman Aljabarah, Shumoukh Saleh AlAfnan

The aim of this study is to explore the hearing improvement after MTT and evaluate the operation outcome in terms of the postoperative complications and hearing improvement stated by the patients. *Methods:* A hospital based cross-sectional study was conducted in Hail General Hospital in Hail, Saudi Arabia, during the period from 1 June to 31 September, 2020. *Results:* In most of cases (96.7%), there was hearing improvement after MTT. Postoperative complications were only 3.3% of tympanic holes and the same number of postoperative bleeding, but 14.4% had transient secretions or fluids after surgery and 4.4% of patients had blood, mucus or other. The tube was clogged with secretions. 11.1% of patients have a damaged or weakened eardrum. *Conclusion:* In most cases (96.7%), our study showed improvement in hearing after MTT. The most common postoperative complications were transient.

*Medical Science*, 2021, 25(117), 2962-2968

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### **Knowledge attitude and practice among primary health care physicians toward diabetic retinopathy in Almadinah Almunawara, Saudi Arabia in 2020**

Majed Mosad Alharbi, Khaled Saad Alghamdi

*Objectives:* To assess the knowledge, attitude and practice of primary health care physician toward diabetic retinopathy in Almadinah in 2020. *Materials and methods:* This is a descriptive cross-sectional study carried out in Almadinah Almunawara city on December, 2020 included a random sample of the Ministry of Health- primary health care physicians. *Results:* The study included 155 primary healthcare physicians. Almost one-third of them (36.1%) had special training on diabetes management. Majority of them (98.1%) followed any guideline for care of diabetes in practice; American Diabetic association and Saudi guidelines were followed by 69.7% and 53.9% of physicians, respectively. The total DR knowledge score ranged between 7 and 14 (out of a possible maximum of 14). Family physician had the highest score of knowledge about DR (mean rank was 90.87). Physicians who reported having special training on diabetes management expressed better knowledge about DR than others. The attitude towards DR score ranged between 14 and 28. The practice of DR score ranged between 17 and 48. Physicians who reported >40% of their seen patients were diabetics had the highest practice related to DR score (mean rank = 95). *Conclusion:* Knowledge and attitude of physicians working at primary healthcare centers, Ministry of Health in Almadinah Almunawara regarding DR is overall accepted. However, their practice-related to diabetic retinopathy is deficient in some important aspects.

*Medical Science*, 2021, 25(117), 2969-2986

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### **Perception and dental fear toward dental treatment among Saudi population who received Coronavirus disease-19 vaccine**

Afra El Rashid, Hadeel Albarkheel, Sadeem Abahussain, Fai Abahussain, Arwa Alhassoun

*Aim:* To assess the perception and fear of Saudi population who took COVID-19 toward dental treatment. *Methodology:* A cross-sectional pilot questionnaire study with 32 questions was distributed from 18 June, 2021 till 30 June, 2021 via social-media platforms. In addition, the inclusion criteria were Saudi, above 18 years old, and who took COVID-19 vaccine. A questionnaire included sociodemographic data, COVID-19 fear scale, dental clinic avoidance structured questions, and perception scale. After developing and translating the questionnaire into Arabic, Google Form was used to create an anonymous, self-administered web-based survey. For the categorical variables, descriptive statistics of frequency distribution and percentages were calculated using SPSS. *Result:* A total of 580 participants completed the survey; however, 48 were excluded because they did not fit with our inclusion criteria. In regarding to the fear of COVID-19, majority of male disagree with the fear of COVID-19 statements and have less fear than female ( $P<0.05$ ). Yet, in one statement Q4 people with higher income were more afraid to lose their life ( $P<0.05$ ). Furthermore, Educational-level and income were two variables that showed a significant relationship with  $P=0.05$  in terms of perception. *Conclusion:* Fear scale after getting the vaccine is becoming less and people started seeking dental treatment with different concerns other than pain or emergency. Educational-level and income were the cause of different perceptions in participants. Although participants with postgraduate education mainly agree that dental office has strict disinfection route, but the dentist can get and transmitted COVID-19 from/ to the patient.

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### **The awareness of lung cancer risk factors among health-related students at Umm Al Qura University in Makkah, Saudi Arabia**

Salah Bakry, Mohammed Ibrahim Alshinkity, Naif Ahmad Abeer, Saad Albagami, Ammar Sami Felemban, Suhayb Bakry, Raid Jastania

*Background:* Lung cancer has a highly significant rate of mortality in both genders nationally and globally. A variety of risk factors are linked to lung cancer; however, smoking is the most significant one. Countless research has looked into the public's knowledge of lung cancer and its risk factors; however, few studies have targeted health students, which demands further investigation. Our study surveys health students from different health-related colleges in the Makkah region of western Saudi Arabia. We compare the knowledge and awareness of lung cancer risk factors and recommend strategies to improve this knowledge gap. *Methodology:* A survey-based study was carried out among health-related students in different medical colleges at Umm Al-Qura University between December 2020 and January 2021. *Results:* A total of 309 students participated in the current study. The mean age of participants was  $22.2 \pm 1.33$  years; 244 (67.4%) participants were male and 118 (32.6%) were female. The majority of respondents

were fifth-year students, while intern students were the least represented. The majority of students did not smoke. Furthermore, our finding suggests that the majority of students have poor knowledge of lung cancers' risk factors (76.6%). *Conclusion:* Our research found that the students had a low level of knowledge. Furthermore, only gender showed a strong correlation with the level of awareness and knowledge, out of all the variables studied.

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### **Eating disorders among Majmaah University Students, Saudi Arabia**

Fahad Mohammad Alfheid, Abdulaziz Saqer A Alanazi, Mohammed Mohammed R Alraddadi, Afrah Saleh M Alrashidi, Layla Shoqair O Alrashedi, Anas Mohammed Ali Alothaim, Mohammed Abdullah M Alqarni, Mubarak Ali M Almanaah

*Background:* Eating disorders (ED) are one of the most prevalent mental issues that today's teenagers confront, characterized by a distorted attitude toward weight and form, as well as a distorted sense of body shape. The purpose of this study is to identify the prevalence of eating disorders in students at Majmaah University in the KSA and the variables that affect them. *Methodology:* Majmaah University students were selected for this cross-sectional study. Subjects will be asked to complete a previously tested questionnaire about socioeconomic status, eating habits, Eating Attitudes Test 26 (EAT 26), height, weight, and BMI. *Results:* Of the 516 students, 82.2% of the survey participants are between the ages of 20 and 30. 62.8% were male and 37.2% were female. 28.6% of the participating students were at high risk of ED and 71.4% were at low risk of ED. There was a significant correlation between male gender ( $P = 0.001$ ), BMI ( $P = 0.02$ ), and risk of ED due to current smoking status ( $P = 0.001$ ). *Conclusion:* In summary, the ED risk reported among college students in this study is below the reported figures, but relatively high compared to the global figures. This study highlights an underestimated health problem among Saudi Arabian college students.

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### **The prevalence of thyroid nodules among Saudi radiography technicians**

Amin Elzaki, Hamid Osman

*Background and Objectives:* Exposure to radiation is more likely to develop thyroid nodules. Radiography technicians are exposed to radiation. This study compares the prevalence of thyroid nodules among Saudi radiographic technicians compared to other health professions not exposed to radiation. *Methods:* A case-control study was conducted to determine thyroid nodules among Saudi radiographic technicians. The case and control groups included 200 and 710 individuals, respectively. Participants were interviewed and given a questionnaire about their past exposure to radiation and subjected to a thyroid gland ultrasound scan after giving written permission to participate in the study. *Results:* Thyroid nodules were recorded in 34% of cases and 9% of controls. Females outnumber male thyroid nodules by a factor of two for both groups. Thyroid nodules were more common in those over 45 in both groups. The study recorded thyroid nodules in the case group in association with the long duration of exposure to radiation ( $P$  value  $< 0.05$ ) whereas no such difference was reported in the controls. The two groups had varied numbers of thyroid nodules. The case group had more thyroid nodules. Single echo abnormalities were seen in 41.8% of cases, numerous anomalies in 20.5%, and diffuse anomalies in 38.2%. The research showed a link between age and thyroid nodules in both groups ( $P 0.05$ ). *Conclusion:* The research discovered significant evidence that chronic low-dose radiation exposure may increase thyroid nodules. When radiographic technicians deal with radiation, they must adhere to safety precautions.

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### **Comparison of pain score changes following CT- guided and fluoroscopy- guided epidural injection of methylprednisolone in patients with lumbar disc herniation**

Robab Ghorban Pour, Shahrokh Yousefzadeh Chabok, Alireza Ghorbanpour, Majid Pouremamali

*Background:* Imaging- guided ESI performed under the guide of fluoroscopy or CT- scan, is an effective non-surgical treatment for lumbar disk herniation. Theoretically, CT- scan is superior over fluoroscopy regarding its higher spatial resolution; however, it is not clear whether CT- guided ESIs yield better treatment outcomes. *Purpose:* We hypothesized that the choice of imaging guide impacts the treatment outcome after ESI. This study aimed to evaluate the influence of imaging guide on the treatment outcomes of ESI. *Materials and Methods:* This is a non-randomized interventional study involving 30 patients with clinical and MRI findings of lumbar disk herniation, half received CT- guided and the other half fluoroscopy-guided trans-foraminal epidural injections of methylprednisolone. Sampling method was convenient. Student t test and SPSS 10 statistical software were employed for statistical analysis. *Results:* The mean pain scores before and after ESI in CT- scan group were  $7.06 \pm 2.18$  and  $2.26 \pm 1.79$  compared to  $7.06 \pm 2.34$  and  $2.53 \pm 2.03$  in fluoroscopy group, respectively. The difference between mean pain scores in each group were statistically significant ( $P$ - value  $< 0.0001$ ). The mean pain score differences between CT- scan group (4.80) and fluoroscopy group (4.53) were statistically non-significant ( $P$ - value = 0.643). *Conclusion:* Both CT- guided and fluoroscopy-guided ESIs significantly improved low back pain in patients with lumbar disk herniation; however, we observed no association between the treatment outcomes and the type of imaging modality at all evaluated time points of this study.

*Medical Science, 2021, 25(117), 3024-3031*

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### **Assessment of knowledge, attitude and practices of parent's first aid towards their children injuries in Saudi Arabia**

Ahamed M Mahah, Ftoon Badroun, Amal Abualola, Reem Albaqami, Malak Alqarawi, Wesal Murad, Khames T Alzahrani

*Background:* Trauma and violence are the primary causes of mortality among children worldwide, with about 950 000 children and young people under the age of 18 dying each year. Adequate parental involvement can reduce handicap and improve the wounded child's chances of survival, making a big difference in the result. The goal of this study is to determine the baseline level of first-aid knowledge and attitudes among parents of children aged <14 years. *Methodology:* A questionnaire was used to collect data, Between July 2020 and September 2021. The survey is made composed of many validated questionnaires and will be verified in a pilot test. So, because study would include participants from all of Saudi Arabia's regions, a probability stratified sampling approach was used. SPSS version 20.0 was used to enter and analyze the data, and a P-value of less than 0.05 was considered significant. *Results:* 69.8% of the 1042 parents who took participated in our study were women, whereas 30.2 % were fathers. 40.1% of all participants ages between 31- 40 years old while 33.6% ages between 20- 30 years old. 41.4 % of all parents have completed a first-aid course. 78.1% had reported having knowledge on first aid in home injuries. *Conclusion:* Parents have a generally positive attitude and practice when it comes to first aid procedures, according to our research. It is recommended that educational programs on first aid training improve awareness among parents as well as the general community. Parents should be aware of and follow safety precautions at home.

*Medical Science, 2021, 25(117), 3032-3043*

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### **Manipulation under general anesthesia with hydrodistention versus manipulation under general anesthesia with steroid injection in the treatment of frozen stage adhesive capsulitis of the shoulder**

Aso Khalil Mahmood, Ali Abdalnabi Alwan Al-tamimi, Areewan Muhammadsalih Saeed

*Background and objective:* Frozen shoulder can result in severe pain, stiffness, and movement failure. Anesthesia manipulation is on management method to control pain and improving motion under general anesthesia combined with hydrodistention or steroid injection. This study aimed to compare the effectiveness of manipulation under general anesthesia with hydrodistention versus manipulation under general anesthesia with steroid injection in the frozen shoulder treatment. *Patients and methods:* The present prospective study was conducted on 40 patients with frozen shoulder. Eighteen patients were treated with manipulation under general anesthesia and hydrodistention, and twenty-two with manipulation under general anesthesia and steroid injection. They were followed up in the one, three, and six-month after the treatment. At each follow-up, the patients' pain and disability were evaluated through the shoulder pain and disability index (SPADI) questionnaire. The collected data were analyzed through SPSS software. *Results:* The results revealed that most of the patients were females, aged over 60 years with an average of 56.38 years. Patients undergone manipulation under general anesthesia with hydrodistention and manipulation under general anesthesia with steroid injection were not significantly different regarding their total pain score, total disability score, and total spadi score at the base ( $p$ -value>0.05). A significantly difference was observed between them in terms of their pain score, total disability score, and total spadi score ( $p$ -value<0.001). *Conclusion:* In comparison with manipulation under general anesthesia with steroid injection, manipulation under general anesthesia with hydrodistention was found significantly more effective in treating patients with frozen shoulder.

*Medical Science, 2021, 25(117), 3044-3053*

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### **Saudi mothers' awareness and first aid management of unintentional injuries to children in the home 2021**

Asmaa Ghmaird, Walaa Alabdullah, Sarah Alquayr, Maram Alhejaili, Sultan Alshomrani, Nouf Alsofyani

*Background:* Unintentional injuries in children are regarded as a major public health concern since they are one of the primary causes of pediatric death and morbidity. The majority of these injuries happen at home, and many of them are preventable. *Objective:* To evaluate the level of mothers knowledge regarding home accidents and safety measures and assess their skills in First Aid. *Methodology:* A cross sectional questionnaire based study was done to evaluate the knowledge of mother toward first aids and prevention of common home accidents among children under five years, to identify the most common home accident take place, to determine the risk factors and measure the association between factors contributed to home accident. *Results:* The study included 740 mothers. Finding revealed that most of mothers were in between age (31-40). Otherwise (46.8%) of mothers had more than 3 children. (39.2%) of the mothers had good knowledge regarding measures to prevent home accidents. While (48.5%) of children had a falling accident. (52%) of mothers had a good knowledge of how to prevent injuries at home. (93.8%) of mother has good knowledge. While the mothers regarding prevention of burns. Good knowledge in (63.2%) regarding choking first aid, and (89.6%) regarding poisoning prevention. (91.6%) of mothers are willing to take course about first aid. *Conclusion:* Overall mother's knowledge about home injury prevention and first aids is poor. The present study highlights the need of increasing mother's awareness regarding home accidents through campaigns and social media.

*Medical Science, 2021, 25(117), 3054-3063*

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### **Knowledge, risk perception and precautionary actions taken by residents regarding COVID -19: An online cross sectional survey**

Raman Deep, Vedamurthy R

*Introduction:* COVID-19 is probably the most recent example of an unavoidable illness the world is facing. The basic knowledge regarding the disease affects the perception of risk of acquiring the illness and using precautionary practices to prevent it. *Objective:* Study was done with an aim to assess the basic knowledge, risk perception and preventive precautions used by the residents

regarding COVID-19. *Method:* An online cross sectional survey was done on 328 residents selected via convenience sampling. Tools used were questionnaire to assess knowledge, Risk perception Scale and questionnaire to assess preventive actions. Tools for data collection were sent to the participants using WhatsApp or email. *Result:* Regarding knowledge, 60.4% (198) of the residents had moderate knowledge; 36.6% participants had adequate knowledge and 3% were having poor knowledge. Regarding Risk perception, 15.5% participants perceived that they are at no risk of having COVID 19 and 32.0% perceived high risk of having COVID 19 as compared to HIV/AIDS for which 7.9% participants perceived no risk of acquiring HIV/AIDS and 68.6% participant reported high risk of acquiring HIV/AIDS. Majority of residents took measures to prevent the spread of Covid-19. *Conclusion:* Having moderate to adequate knowledge led the participant to follow necessary precautionary actions and thus prevent getting infected with COVID -19. So, we can say that equilibrium is maintained and there is no dread of COVID -19. This level of knowledge also led the residents to practice most of the preventive actions in their day to day life to prevent COVID -19 infections.

*Medical Science, 2021, 25(117), 3064-3071*

## CASE REPORT

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### **Yellow Urticaria in a patient with gallbladder stones: A case report and review of literature**

Moteb Alotaibi, Abdullah Khojah, Asmaa Khojah, Hadeel Alseleem, Maha Binsaqr, Mai Alshammari, Rahaf Aldawish

Yellow urticaria is a rare type of urticaria and the exact etiology behind it is still unclear. We report a case of 53-years-old medically free male with pruritic yellow to orange wheals over his trunk and extremities after receiving his first dose of COVID-19 Vaccine (Pfizer-BioNTech) with no evidence of angioedema or anaphylaxis. All the reported cases of yellow urticaria almost share the same cause which is hyperbilirubinemia due to wide spectrum of liver diseases. In conclusion, it is crucial for clinicians to be familiar with this presentation of yellow urticaria and correlate it with the patient history related to liver disease , as this urticaria often signify the presence of various liver disorders.

*Medical Science, 2021, 25(117), 3072-3077*