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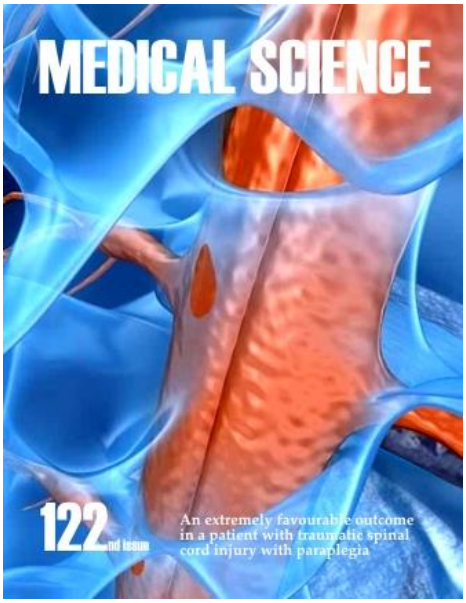
Medical Science

About the Cover



Spinal cord damage caused due to trauma are very frequent in the population presently and large number of these patients suffer severe neurological deficits which rarely regain their normalcy. Several studies indicate that patients with ASIA grade A (complete) spinal cord injury show recovery of at least 1 to 2 grades if operated within a day of trauma and this outcome becomes dismal with passage of time. This case report mentions about a polytrauma patient who came to us with complete paraplegia and incontinence of the bladder and bowel, 7 days following a traumatic lumbar spine injury, underwent spinal fixation and decompression and showed exceptional recovery in subsequent follow-ups which in itself is an interesting and fairly uncommon outcome in such patients. This case report demonstrates that there is a possibility of regaining excellent functional outcomes in patients who have suffered extreme injuries to the spinal cord where treatment was delayed and also stresses that detailed research needs to be conducted as to determine the factors that may improve outcomes in such patients. (Ref: Upadhyay P, Ambade R. An extremely favourable outcome in a patient with traumatic spinal cord injury with paraplegia: A case report. Medical Science, 2022, 26, ms113e2175).

ANALYSIS

Lactobacillus acidophilus' post biotic extracts combined with methotrexate regulated the levels of the apoptotic genes' expressions in the acute lymphoblastic leukemia cell line

Sahar EL Hadad, Hind Baik, Alawiah M. Alhebshi, Majdah Aburas, Jehan Alrahimi, Shahira Hassoubah

Acute lymphoblastic leukemia (ALL) cure efficacy depends upon the chemotherapy drugs' effectiveness, the leukemia cells' biological traits, and the early response to treatment. The apoptotic genes' pivotal roles on different stages of cancer growth and drug resistance were attracted most immunologists and chemotherapeutic developers. Lactobacillus (L) probiotic bacteria or postbiotics have antitumor impacts that enhance the apoptosis process. Hence, to examine the apoptotic effects of two different concentrations of *L. acidophilus* postbiotics and Methotrexate (MTX) chemotherapy on the ALL propagation; four groups of ALL cell line were treated as follow: N group; cells kept untreated (negative control), M group; cells were treated by 0.236 mg/ml of MTX (positive control), accompanying with two different ALL-cells groups treated as similar as M group in addition to either 0.5 ug/ml (ML5 group) or 2 ug/ml (ML20 group) of *L. acidophilus* postbiotics. We estimated the transcription levels of different apoptotic gene markers after twenty-four and forty-eight hours from treatments. We noted an earlier extremely significant elevation in the transcription levels of *BAX, NF-kB, Notch1*, and *Notch2* genes in the ML5 cells group compared to the ML20, N, and M cells groups. The transcription levels of the *JAG1* and *JAG2* genes diminished significantly in the ML5 cells compared to the ML20, N, and M cells groups. Consequently, these results verified that the *L. acidophilus* postbiotics have an early positive role on the transcriptions levels of apoptotic genes during treatment with the Methotrexate chemotherapy and may directly impact the apoptosis process considered the heroine of cancer elimination.

Medical Science, 2022, 26, ms111e2020

Knowledge and awareness of dentin hypersensitivity and different treatment modalities

Samar Hatem Abuzinadah

Background: Hypersensitivity of the dentin is a prevalent condition in dental clinic. There are numerous pre-disposing factors to this issue, for example it could be due to physical or chemical trauma, gingival recession, and periodontal diseases and many other causes. This condition has a considerable consequence on one's quality of life. *Aim:* To evaluate Saudi dentists' knowledge of dentin hypersensitivity (DH) and their diagnostic and treatment strategies. *Methods:* A digital survey, to assess the Saudi dentist knowledge and management in regards to dentin hypersensitivity issue in dental clinical practice. The questionnaire formulated based on; the demographic data and assessing the dentist knowledge about DH and the management used to treat it. The results were analysed using (SPSS) program. *Results:* The study consisted of 718 participants who completed the questionnaire. 52.6% of study candidates were general practitioners, 31.8% were residents, 12.8% were specialists, and only 2.8% were consultants. Only 37.3% of candidates described DH correctly. 40.4% of candidates agreed that DH considered a major issue affecting the standard life of the patient. *Conclusion:* Accurate dentin hyper sensitivity description was shown to be linked to employment location, younger age, male gender, years of experience, and qualifications. Dental practitioner in Saudi Arabia needs to learn more about dentin hyper sensitivity. Controversial education about DH and their management, on the other hand, can improve the quality of care provided to our patients.

Medical Science, 2022, 26, ms112e2181

CASE REPORT

An extremely favourable outcome in a patient with traumatic spinal cord injury with paraplegia: A case report

Prateek Upadhyay, Ratnakar Ambade

Spinal cord damage caused due to trauma are very frequent in the population presently and large number of these patients suffer severe neurological deficits which rarely regain their normalcy. Several studies indicate that patients with ASIA grade A (complete) spinal cord injury show recovery of at least 1 to 2 grades if operated within a day of trauma and this outcome becomes dismal with passage of time. This case report mentions about a polytrauma patient who came to us with complete paraplegia and incontinence of the bladder and bowel, 7 days following a traumatic lumbar spine injury, underwent spinal fixation and decompression and showed exceptional recovery in subsequent follow-ups which in itself is an interesting and fairly uncommon outcome in such patients. This case report demonstrates that there is a possibility of regaining excellent functional outcomes in patients who have suffered extreme injuries to the spinal cord where treatment was delayed and also stresses that detailed research needs to be conducted as to determine the factors that may improve outcomes in such patients.

Medical Science, 2022, 26, ms113e2175

Effects of female genital mutilation on diagnosis multiple uterine fibroids: A case report

Bahaaedin A Elkhader

The existence of fibroid in the uterus is a source of inconvenience and concern for females. Fortunately, is considered a benign mass and has several treatment options. A 20- single female patient, a victim of female genital mutilation, the fourth type; with pain and swollen in her abdomen, back pain, dysuria and amenorrhea since 3 months. The ultrasound report stated that multiple neoplasms

with homogenous masses inside the uterus and one mass outside it. Also, revealed hydronephrosis in both kidneys. The histopathological report stated the present form of leiomyoma. Menstrual problems were the result of female circumcision and this becomes source for blood collection, which affected the diagnosis of any intrauterine lesions.

Medical Science, 2022, 26, ms114e2180

"GossiPyboma" a retained post-operative intra-abdominal surgical sponge can lead to septicemia and septic shock: A case report

Munirah Mohammed Mosa, Mahdya Bukhari, Saif Marzouq Alanazi, Abdulaziz Alorwan

Objectives: This case report was reported as a rare case of post-surgical complication to reduce the incidence of occurrence of this near miss which can lead to sentinel event and death in such patients. *Background:* A retained post-operative foreign body inside the abdomen is a considered one of the common faults of the surgical team which can lead to infection and sepsis. *Methods:* We were working as a surgical team in a tertiary hospital and we noticed on 9th of January 2022 a retained intraabdominal sponge 4 months after an open laparotomy hernia operation with mesh repair for a 61 years old patient who admitted with infected gauze, peritonitis and septic shock due to the forgotten inflamed gauze which was diagnosed accidentally by abdominal CT as "GossiPyboma". Emergency laparotomy done, septic shock was managed and the patient condition is now stable. The case was consented for study and IRB obtained (89-45/KKJB23/89-2021). *Results:* We conducted a root cause analysis and recommended for Radiofrequency Detection Technique use in Operative Room to by Pass Human factors big role, save time consumed in looking for missed item & avoid extended LOS resulted from harm. *Conclusion:* Strict Adherence to Hospital wide policies and procedures with periodic awareness and use of modern technology is a strict requirement to reduce human errors in such patients. Also a routine abdominal CT should be done post operatively to exclude gauze retention.

Medical Science, 2022, 26, ms115e2119

ANALYSIS

A comparative study of postoperative analgesia and safety of intravenous nalbuphine versus intravenous tramadol in patients undergoing lower abdominal surgeries

Shiras P, Sanjot Ninave, Aruna Chandak, Amol Bele, Nikhil Bhalerao, Shuguftha Sherin

Introduction: Providing excellent pain relief is one of the primary priorities in postoperative care. Nalbuphine is an opioid analgesic that works as both an agonist and an antagonist and has a superior safety profile and fewer adverse effects than other opioids. Tramadol acts on opioid receptors and inhibits neuronal uptake of norepinephrine and serotonin. *Aims and objectives*: To compare intravenous inj. Nalbuphine (0.1mg/kg) with intravenous inj. Tramadol (1mg/kg) in terms of duration of post-operative analgesia, sedation and any adverse effects. *Methodology*: Two equal groups of 30 participants each were selected randomly from 60 female patient posted for lower abdominal gynecological surgeries - Group N and Group T. The Group N candidates were administered with inj nalbuphine 0.1mg/kg IV and those in the group T were administered with inj tramadol 1mg/kg IV when they complained of pain post operatively, VAS >3 and rescue dose was repeated whenever the VAS score was >3. We compared the postoperative analgesia in both the groups along with sedation and adverse effects. *Results:* Group N showed lower VAS scores and better sedation scores than Group T. The duration of analgesia was longer in group N when compared to group T. Group N patients had comparatively less side effects than Group T patients. *Conclusion*: Nalbuphine at the dose of 0.1mg/kg not only had a better analgesic effect than tramadol 1 mg/kg, but also a more sedative effect with fewer adverse effects when given intravenously.

Medical Science, 2022, 26, ms116e2176

Awareness of the importance of physical activity among pediatric age group in Saudi Arabia

Rheem Abdulla Almhizai, Naif Ibrahim Almuhanna, Ali Saad Alqahtani, Naif Abdullah Alomar, Musaab Mohamed Al Aradi, Faisal Ibrahim Alsukairan

Purpose: The aim of the study is to assess physical activity levels (PA), knowledge, and awareness of the importance of PA among pediatric age group in Riyadh, Saudi Arabia. *Introduction:* Physical activity plays an important role in protection against many diseases in pediatric age group, which their etiology is associated with inactivity and having sedentary lifestyle. Among the most crucial issues associated with inactivity is Obesity. Childhood Obesity is associated with a multitude of disorders such as diabetes mellitus, hypertension, hyperlipidemia, and metabolic syndrome and it is well known that physical exertion is thought to be beneficial as a protective measure against chronic diseases that are affecting the pediatric age group. *Objectives:* measuring children's awareness of the benefits of physical activity. To decide the relationship between children's awareness regarding the benefit of physical exertion and their background variables. To determine the association between children's awareness regarding the benefit of PA and the amount of PA they perform. *Methods:* A cross-section study was conducted during the period from March to May among children in Riyadh, Saudi Arabia, targeting pediatric age group using an online form.

Medical Science, 2022, 26, ms117e2077

Dental service satisfaction in dental health centers in Erbil city, Iraq

Vian Mohammed Hussein

Aim: This research was designed with the purpose of investigating patient satisfaction with dental services and the factors affecting it. *Methods*: In a cross-sectional study, the satisfaction of 570 patients (58.1% female) referred to three dental health care centers in Erbil/Kurdistan region of Iraq. Satisfaction was assessed in the sub-constructors of dentists' performance, clinical setting, accessibility to dental care, reception area and staffs, and an overall satisfaction. Satisfaction was rated in a Likert scale. *Results:* In all of the sub-constructors, at least half of the individuals were in satisfied and partially satisfied group. 70.4% of patients were satisfied with reception area (sum of satisfied and strongly satisfied). Moreover, the satisfaction rate was 65.5% with clinical settings and 62.7% with reception staff. Multivariant analysis showed that dentists' performance (coefficient = 0.100; p <0.0001), clinical setting (coefficient = 1.337; p <0.0001), accessibility (coefficient = 0.191; p <0.0001) and reception area (coefficient = 0.137; p <0.0001) have a significant correlation with overall score. *Conclusion:* The findings demonstrated that more than fifty percent of patients were satisfied with overall dental services. Dentists' performance, clinical setting, accessibility and reception area are the most important factors that influence the overall satisfaction.

Medical Science, 2022, 26, ms118e1988

Meta-analysis of the effectiveness of online cognitive-behavioral therapy in the treatment of post-traumatic stress disorder

Hamed Ghiasi, Fatemeh Askarirostami, Maryam Bakhtiari, Saba Hasanvandi

Objective: Online cognitive-behavioral therapy has presented great potential for easy, cost-effective, and modern treatments for the psychiatric disorders. The purpose of this study was to review studies in the field of online cognitive-behavioral therapies for post-traumatic stress disorder. *Methods*: In this meta-analysis, 19 studies were included by reviewing related literature to clinical trials in the field of online cognitive-behavioral therapy for post-traumatic stress disorder. The research instrument was the JBI Controlled Critical Appraisal Checklist. *Results*: 19 clinical trials with a sample size of 1324 people were included in study. The results showed that online intervention based on statistical evidence is an acceptable method for treatment of PTSD and compared to control group, the experimental group obtained higher scores (WMD = 0.12 / I-Squared = 67.5%). *Conclusion*: It seems that online cognitive-behavioral interventions are appropriate cost-effective and acceptable therapies of the present age. More studies are required to examine the strengths and weaknesses of online or web-based interventions critically.

Medical Science, 2022, 26, ms119e2012

Conjunctivitis in Makkah region, Saudi Arabia: A school and university level of knowledge experience

Yaser Mohamed Elhams, Salah Mohammed Taha Bakry, Amr Ali Almousa, Saad Naif Albagami, Abdullah Yasser Fakieha, Ayoub Saleh Alzahrani, Abdullah Ahmed Alsubhi

Background: Conjunctivitis is an epidemic disease with a self-limiting and short-lasting course with varieties of causes inflecting the prevalence and the way of spread. This study surveyed school and Umm Al-Qura University students in the western region of Saudi Arabia. *Methods:* A survey-based study was conducted between October 2021 and January 2022, including high school students in Makkah region and Umm Al-Qura University students of both genders. The study compared the awareness and knowledge of conjunctivitis and discussed the informational similarities and contradictions between the educational levels. *Results:* The participant's number in this study was 367. Students with less than 20 years old predominantly represented 60.8%, compared with 20 years old or more with 39.2%. The majority were female with 50.7%, and 49.3% for males. Most of them were Saudis 88.0%. The highest respondents were school students, while university students were the least with 41.4%. Most students were single. Moreover, the correlation between students' age and educational level' were significantly positive (p-values: 0.000, 0.000 respectively). *Conclusion:* Educational programs are vital to enhancing students' recognition to control conjunctivitis spreading among communities. The current finding shows a poor level of knowledge towards conjunctivitis basic knowledge. Consequently, we recommend further studies among universities and schools.

Medical Science, 2022, 26, ms120e2167

Knowledge and practices of hand hygiene among the health care providers of Jimma University Medical Center, Jimma, Oromia, Ethiopia

Markos Mehertab, Dheeraj Lamba, Enisha Tekle

Background: The term "nosocomial" refers to the connection between care and the subsequent emergence of infection. When a person enters a health care facility, he contacts nosocomial or hospital-acquired infections. They may happen in different areas of healthcare delivery system, such as in hospitals, long-term care facilities, and ambulatory setups, and may also emerge after discharge. To prevent this infection proper hand hygiene practice is one of the methods that play a vital role. *Objective:* The general goal of the present study is observe and evaluate the understanding the exercise of hand hygiene the various health care employees of Jimma University Medical Center. *Method:* Cross-sectional study design was conducted at Jimma University Medical Center among 375 health care providers which were available in the hospital were included in the study. For the data collection, pretested questionnaire was used for knowledge assessment, and a checklist was used for the practical assessment. *Result:* The study shows most 344 (91.7%) of the staff have good knowledge, 20(5.3%) have fair knowledge and 11(2.9%) have poor knowledge of hand hygiene practice. The study also shows from the 103(27.5%) noncompliant health care providers (HCW) 11(73.3%) have no training on hand hygiene and 92(25.6%) have training. *Conclusion:* Even though the knowledge on hand hygiene is good and exercising

hand hygiene is adequate among the HCWs in JUMC. Continues training and updating posted general guidelines of hand hygiene is recommended.

Medical Science, 2022, 26, ms121e2115

Impact of online learning on medical and non-medical students during COVID-19 pandemic in Shaqra University, Saudi Arabia: A comparative study

Mohammed Hajraf, Khaled Saqer Almutairi, Osama Almuqaiteeb, Muhannad Alashhab, Badr Sultan, Faisal Ahmad Alrashed, Mohammed Ibrahim, Fahd Salih Aldhafeeri, Saif Hammad Alruwaili, Abdulaziz Rabea Alanazi, Abdullah Mohammed Alobaidi, Jamal M Arif, Aqeel Ahmad

Background: During COVID-19, the mode of education was changed completely to online, however, in medical colleges across Saudi Arabia, the lectures were a blend of online and offline (PBL, examination, clinical skills, and labs) activities. *Aims:* Our aim of this study to compare the learning outcomes in both medical and non-medical students and find out the challenges, limitations, and problems faced by medical students in the online and offline blended mode of teaching. *Methods*: After acquiring affirmative consent, 151 medical and non-medical students from Shaqra University were randomly engaged in a cross-sectional study. A classic questionnaire was created in Google Form and a virtual assessment was done. The acquired students' data was assessed using SPSS and Microsoft Excel software. *Results:* Over 85% of both medical and non-medical students chose online real-time training methods. In the COVID-19 duration, more than 80% of medical (M) and non-medical (NM) students said that virtual teaching was comparatively more difficult for them to focus on than the on-site teaching. Over 50% of both M and NM students believe that the COVID-19 epidemic damaged their grades this semester/block. Surprisingly, after receiving the vaccination, more than 80% of M and NM students expressed interest in on-site instruction. *Conclusions:* The study clinched that the online mode of education was disliked by many students regardless of the stream and are eager for offline mode of education.

Medical Science, 2022, 26, ms122e2123

Follow up of the health workers' responses to the preventive obligations amid changing COVID-19 pandemic behavior: A lessons from the crisis

Raouf M Afifi, Ashraf E Saad, Hassan M Aldossary, Hani M Alkhalaf, Bashir Ighile, Mazin YB Elkheer, Majed Kh Al Harthi, Fadi HA Althobaiti, Yousef Afifi

Background: Despite the emergence of potentially prophylactic vaccines, COVID-19 transmission poses a persistent threat to healthcare providers (HCPs) communities. *Aim:* Assess the progress in the knowledge and attitudes of HCPs of Armed Forces Hospital Wadi Al Dawasir (AFHWD) toward COVID-19 measures and vaccines perception. *Methods:* A questionnaire was distributed online, 09-10, 2021, to achieve study aim. SPSS-22.0 software was used for the analysis; ANOVA; t-test used for comparing quantitative variables; χ^2 for categorical data; level of materiality set to 0.05. *Results:* Out of 149 HCPs, 38 (25.5%) were "physician" 44 (29.5%); "nurse"; 31 (20.8%) "allied health" 11 (7.4%)" pharmacist"; 25 (16.8%); "other"'. HCPs averaged 39.3±9.2y of age. Overall score (84.3%) greater than cutoff, set to 70%, also greater than that assessed earlier (69.5%) was achieved ($p=0.005$). The higher profession the higher score ($p<0.05$). "Age"; "clinician"; "infection prevention and control (IPC) training; "COVID-19 infection", were significant score predictors. COVID-19 "all knowledge" (general and IPC, combined) = 79% exceeded cutoff (70%), ($p<0.001$); also exceeded that identified earlier (69.6%), ($p<0.001$). The IPC perception score behaved likewise: 86.1% vs. 70%, 86.1% vs. 71.6%, ($p<0.001$), respectively. An overall vaccine response (68.3%) comparable to cutoff was verified (68.3%), ($p=0.08$). Most (86.6%) HCPs accepted a COVID-19 vaccine; 73.2% were vaccine confident; 23.3% of those immunized were concomitantly vaccine hesitant ($p = 0.012$). "Age" and "clinician" predicted vaccine response variability. *Conclusion:* Findings imply an ongoing improvement of the HCPs' responses on COVID-19 requirements. Continued education and adherence with updated protocols provide utmost protective environment for the HCP staff against COVID-19 consequences.

Medical Science, 2022, 26, ms123e2173

Habits of contact lenses use and the associated outcomes among medical students, King Faisal University, Alahsaa, Saudi Arabia

Noor Al Osaif, Walaa Aldairi

Background: Contact lenses (CLs) are prosthetic devices used worldwide for many purposes. Inappropriate use of CLs increases the risk of complications, while adherence to CLs care and following the instructions are essential to prevent these complications. The aim of this study was to determine the pattern of CLs use, the adherence to hygiene practice, and the associated complications among medical students at King Faisal University in Alahsaa, Saudi Arabia. *Methods:* A cross-sectional study was done by an online self-administered questionnaire that was filled by medical students at King Faisal University in Alahsaa, Saudi Arabia. It included sociodemographic, history of CLs use, wear & replacement Habits, cleaning & disinfection procedures, care of accessories, complications associated with CLs use. *Results:* 110 subjects participated in the research. CLs were more commonly used by female for refractive correction. Only 30 (27%) participants were considered as real users. The average of both scores of WRH and CDP was above 3, with median of the two scores equals or above 3, indicating good compliance. However, COA score had an average of 2.48, which was below 3, with median score equal 2.5, demonstrating general poor compliance. Dry eye (88%) and acute red eye (51%) were reported as the most frequent complications of CLs use (88% and 51%, respectively). *Conclusion:* Improper use and non-

compliance to hygiene practice of CLs pose a higher risk of complications. Education and encouraging CL users are necessary to improve the users' habits and outcomes.

Medical Science, 2022, 26, ms124e2153

Knowledge and attitude of parents towards traditional cauterization and its practice on their children in Jazan region, Saudi Arabia

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Background: Al-Kai or cauterization is one of the most common practices in Saudi Arabia where parts of the skin are burnt as treatment. In developing countries, cauterization is used by 80 % of the population for prevention or treatment of disease. In this study, we aimed to assess the knowledge, attitude, and practice of the Jazan population regarding traditional cauterization in children. *Methods:* This study is an observational and analytical cross-sectional study that was conducted on a representative sample of Jazan population during the study period in Jazan. The sampling technique that used was convenient sampling technique and the total sample size was 440 participants. Data was collected via questionnaire that contains 37 questions in Arabic language. *Results:* The sample of this study consisted of 477 participants with mean age of 40.36 years old and 54.7 % of them were females. The most reliable source of the information of cauterization was from friends (68.9 %), doctors (25.7 %) and social media (24.5 %). More than half of the sample had high level of knowledge and 33.2 % of them reported using of cauterization for themselves and 21.6 % for their children. Only for 10 % of the participants, doctor in the primary care center was the first choice for treatment of their infant. *Conclusion:* There is a good level of knowledge considering traditional cauterization among populations in Jazan region, Saudi Arabia with moderate level of attitude toward cauterization among their children.

Medical Science, 2022, 26, ms125e2046

Protective effect of green tea in methotrexate-induced nephrotoxicity

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Green tea consumption is associated with reduced disease prevalence, and degenerative disorders. Subsequently, green tea has been included as a dietary supplement with other nutritional and vitamin supplements. Our study aimed to evaluate the effect of methotrexate administration on the kidneys and the role of green tea in its protection. It was performed on twenty-one albino rats. The animals were distributed into three equal groups. Control group, Methotrexate group and Methotrexate-green tea group whose rats were injected with methotrexate and green tea for nine weeks. Renal functions, histopathological as well as immunohistochemical changes were evaluated at the end of the study. Increased Blood urea nitrogen, Uric acid and Creatinine serum levels and marked changes in kidney architecture were obvious in the second group. These changes were in the form of glomerulosclerosis, tubular cell necrosis hemorrhages as well as inflammatory infiltrations. There was a relatively return to the normal structure of kidney structure in the group treated with Green tea plus Methotrexate.

Medical Science, 2022, 26, ms126e2200

CASE REPORT

Anesthetic management of a 13 year old child with kyphoscoliosis and complete cleft of soft palate posted for surgical repair of soft palate

Shiras P, Sanjot Ninave, Aruna Chandak, Vivek Chakole, Nikhil Bhalerao, Krishnendu S

Due to the unique anatomical and physiological variations of the airway of a child with cleft lip and palate, anesthesiologists may find it difficult to manage it properly. As a result, cleft lip and palate surgery in children will necessitate careful attention, detailed understanding, and practical application in anaesthetic preparation. While the majority of individuals have isolated CLP, a considerable percentage of them also have related abnormalities. Other issues with the formation of the branchial arch are the most noticeable (e.g. ear or upper airway defects). Anomalies of the heart, kidneys, and skeleton are among them. Associated anomalies could be part of a defined pattern, indicating which flaws to expect; the number of such disorders, including CLP, is growing by the day, ranging from the obvious, such as Trisomy 21, to the more subtle, such as Velocardiofacial Syndrome. Here we report anaesthetic management of a 13 old girl with congenital complete cleft of soft palate with kyphoscoliosis posted for surgical repair of soft palate under general anesthesia.

Medical Science, 2022, 26, ms127e2113

Congenital Genu Valgus deformity treated with osteotomy and plate osteosynthesis: A case report

Khizar Khan, Nareshkumar Dhaniwala, Aditya Kekatpure, Salahuddin Ahmed, Abhiram Awasthi

Introduction: Congenital genu valgus is a well described deformity. Various treatment modalities are available such as growth modulation using hemi epiphysiodesis or epiphysiodesis and corrective osteotomy with plate osteosynthesis. The choice of correction largely depends on the skeletal age of the patient. *Case report*: In this report we describe a case of congenital genu valgus

managed with corrective osteotomy and plate osteosynthesis. *Conclusion*: With adequate preoperative planning, the axis of lower limb can be restored in a patient of congenital genu valgus on treatment with corrective osteotomy.

Medical Science, 2022, 26, ms128e2146

ANALYSIS

Evaluation of anatomical variations of uncinate process and its relationship with radiographic signs of maxillary sinusitis in Cone-Beam Computed Tomography (CBCT) images

Mahshid Razavi, Nasim Shams, Bahareh Shams, Sina Salehin

Introduction: Anatomical features of uncinate process are associated with many variations in different people. Since this process is the main landmark in functional sinus endoscopic surgery and the first structure to be removed during surgery, knowledge of anatomical variations of the process prior to surgery is essential to prevent damage to adjacent structures. *Materials & Methods:* This is a retrospective descriptive-analytical study using cone-beam computed tomography (CBCT) images of maxilla in coronal section of 109 patients (218 Uncinate processes) available in archives of the Department of Maxillofacial Radiology, Jundishapur School of Dentistry, Ahvaz during 2020. Images were examined for typing, type of flexing of uncinate process, and symptoms of maxillary sinusitis under supervision of a radiologist. Data were analyzed by SPSS software, Excel and GraphPad Prism (ver 8.0.2). *Results:* Among symptoms of maxillary sinusitis, increased mucosal thickness was the most common and air-fluid level was the rarest symptom. In this study, a significant relationship was observed between anatomical variation of Uncinate process and symptoms of maxillary sinusitis; so that, there was a significant relationship between increased thickness of sinus mucosa and Type II on the right and Type III on the left as well as increased thickness of sinus mucosa and both types of medial and lateral flexion on the left. *Conclusion:* Based on results of our study, Type II and Type III are associated with greater susceptibility to maxillary sinusitis. CBCT is also recommended to evaluate anatomy of uncinate process and symptoms of sinusitis before functional sinus endoscopic surgery.

Medical Science, 2022, 26, ms129e1814

Gender difference in Achilles tendon length by resting angle measurement in correlation to body parameters between Egyptian physical therapy students

Medhat Taha, Bandar A Alghamdi, Amr Abo Gazya, Hany MA Sonpol, Abdullah G Al-Kushi, Mohie Mahmoud Ibrahim

Aim of the study: our study aims to report if there is a gender difference in length of the Achilles tendon by measuring achilles tendon rest angle in relation to body parameters of the physical therapy students as adult samples. *Methods:* Measuring the resting angle of the Achilles tendon by goniometer for 134 students (106) male students and (28) female students and correlate with age, gender, body height, weight. *Results:* the mean Achilles tendon resting angle in male students 21.54º, SEM 3.27º and female students 22.42º SEM 2.83º with a total of 21.73º SEM 3.20º respectively, the tendon length correlates with the male student's height mean (172.18±8.29) and female students height (164.89±7.65) with total (170.66±8.66) respectively with higher correlation in the female students (0.637) than male students (0.383). On other hand, there is no correlation to age, weight with male students (72.15±11.18) and female students (72.57±14.13) with a total (72.23±11.80) respectively. *Conclusions:* there is a gender difference in achilles tendon length in relation to height with more correlation in females than males in the age of the adulthood.

Medical Science, 2022, 26, ms130e2202

Implication of chronic obstructive pulmonary disease on the severity and outcome of covid-19 in rural India; Is COPD the hidden culprit amongst the havoc: A cross sectional study

Dhruv Talwar, Sunil Kumar, Sourya Acharya, Deepak Talwar, Shraddha Jain, Neema Acharya, Kamlesh Chaudhari, Sparsh Madaan, Vidyashree Hulkoti, Akhilesh Annadatha, Twinkle Pawar, Mansi Patel, Divit Shah

COVID-19 (Coronavirus infectious disease 2019) denotes an ever changing and varied disease which has crippled the health care systems throughout the world. There have been studies conducted across the globe to establish the important factors for severity and mortality associated with COVID-19. We tried to study the effect of chronic obstructive pulmonary disease (COPD) on the severity as well as outcome of COVID-19. *Material and methods*: A total of 180 patients with COVID-19 were enrolled in this study and were then screened for history of COPD. There were 49 patients with history of COPD and 131 patients with no history of COPD. Inflammatory markers and HRCT scores were assessed for all the patients and they were followed up to study the outcome. *Result:* COPD was significantly associated HRCT Score, inflammatory markers and outcome. The mean HRCT Score for patients with COPD was more in COPD group (15.39 ± 4.65) when compared with Non-COPD group (9.39 ± 3.98). Mortality was also significantly higher in patients with COPD (67.3%) when compared to the patients without COPD (3.3%). *Conclusion:* We conclude that COPD is an important factor which has to be considered while treating the patients of COVID-19 especially in the rural India where lockdown restrictions and lack of knowledge have provided hinderance in achieving optimal follow up as there is increased severity and mortality associated with it.

Medical Science, 2022, 26, ms131e2150

Polypharmacy usage among elderly population attending at primary health care centers in Buraidah city, Saudi Arabia 2020

Muhannad Fahad Al Sahli, Ali Mosa AlHarbi

Background: Saudi Arabia has a large proportion of elderly population related with multiple continual illnesses who need increase Interest and tracking for their medicinal drugs. *Objectives:* Assessing the prevalence and utilization of medicines for elderly population and the way to provide better health-care management. *Methods:* A cross-section study between December 2019 to December 2020 on PHCC in Buraidah above age of 60 years and taking 5 or more medication individuals visiting to the Primary Health Care Centre by Questionnaire form to assess polypharmacy usage. Necessary statistical tests were applied. *Results:* Polypharmacy (PP) was 57% among elderly subjects who were using 5 drugs or more. Males, lower educational level and suffering from 2 or more chronic diseases have been notably associated with increased levels of PP. Most of the subjects had good knowledge regarding the drugs. *Conclusion:* High prevalence of poly pharmacy among geriatric patients was associated to severity of multiple diseases, patient's older age and male gender. Health promotional measures to reduce chronic diseases incidence in the population is required.

Medical Science, 2022, 26, ms132e2141

Post covid-19 syndrome among recovered cohort during the convalescence: prospective study

Omer Quayid Kh Alanazi, Turki Ibrahim Al-khalaf, Saif Abdullah A AlQahtani, Saif Marzouq Alanazi, Ahmed M El-Malky, Munirah Mohammed Mosa, Ghada El Gohary

Background: Hospitalization is not normally necessary in all COVID patients, nor is lab tests and PCR. There is subjective evidence that patients with "slight" COVID-19 may complain of persistent symptoms weeks after the infection. *Methods:* A group of 489 patients was tracked for 8 months after recovering from mild to severe COVID-19 infection at a Saudi tertiary hospital between March 6th and December 2nd 2021, IRB and informed permission acquired #89742/2022, and participation was freely. We evaluated the clinical condition, lab findings, and demographic features of the patients and used SPSSversion26 to perform our statistical analysis. *Results:* All of them were followed up until the second follow-up visit at 4.3 months (median 131 days (IQR 112-149). Age was a significant indicator of post CL syndrome, obtained p-value for age, 0.032, was less than critical alpha level of 0.05. BMI was a significant indicator of post CL syndrome, obtained p-value 0.032 (odds ratio (OR) 1.04;95% confidence interval (95% CI): (1.00 - 1.073)), body aches was a significant indicator of post CL syndrome, obtained p-value 0.040 (OR 0.59;95% CI (0.36-0.98)), fatigue was a significant indicator of post CL syndrome, obtained p-value .005 (OR 2.05; 95% CI (0.99-4.22)). *Conclusion:* Manifold signs are present around 3 months after the onset of signs in formerly hospitalized and non-hospitalized participants with established or suspected COVID-19. This suggests the presence of a "(post-COVID-19 syndrome)" and peaks the final healthcare needs in a subset of individuals with "slight" or "Spartan" COVID-19.

Medical Science, 2022, 26, ms133e2156

Shared decision making and its impact on medications adherence among diabetic patients in Buraidah, Saudi Arabia

Waleed Alresheedi, Unaib Rabbani

Background: Shared Decision Making (SDM) is a method in which patients and doctors share knowledge about patient needs, care choices, and tradeoffs in order to reach treatment decisions. *Objective:* To assess the medication adherence and SDM and association between them among diabetic patients visiting primary health care in Buraidah, KSA. *Methods:* Cross sectional study was carried out between diabetic patients visiting primary healthcare centers in Buraidah, Al-Qassim, Saudi Arabia. Data were collected by structured interview conducted by trained researcher assistant using two valid questionnaires; 9-item Shared Decision-Making Questionnaire (SDM-Q-Doc-patient version), and General Medication Adherence Scale (GMAS). Logistic regression is being used to evaluate the association of medication adherence with SDM. *Results:* A total of 377 participants were included. We found that (79.5%) of diabetic patients were conscientious about taking their medications. The rate of shared decision making on scale of 100 was 71.8. We found a significant negative association between score of SDM and risk of non-adherence adjusted OR 0.97 (95% CI: 0.96 -0.98). *Conclusion:* Overall about 20% of the diabetics were non-adherent which may lead to complications and burden on health system. SDM was positively in regard to medication adherence. Therefore, SDM should be implemented in the primary medical services and physicians should be provided with required training in order to improve the outcome of diabetic care. We also recommend further large-scale studies to see effects of SDM on adherence among patients of other chronic diseases and quality of life.

Medical Science, 2022, 26, ms134e2130

Impact of COVID 19 pandemic on breast cancer management and reconstruction in Saudi Arabia

Anas Abdulqader Fathuldeen, Muhannad Saud Alshammari, Rema Ahmed Almarshedi, Reem Saud Alabedah, Raghad Ali Alshareef

Background: COVID-19 pandemic was a real challenge to healthcare systems worldwide, particularly in emerging nations; this study aims to provide a vision of the impact of COVID-19 pandemic on breast cancer (BC) management and reconstruction in Saudi Arabia. *Methods: A* cross-sectional study was conducted across health care practitioners; we accumulated data by an online questionnaire from 58 physicians in different specialties about the effect of COVID-19 pandemic on their practice from March 2021 to May 2021. *Results*: About 45% of participants reduced medical practice during Covid-19 pandemic by 10 – 30 %, and 41% reduced medical practice by 31-50%. About half of the participants (48%) treated less than five breast cancer patients infected by Covid-19,

and about 36% of patients developed Covid-19 infection under chemotherapy. *Conclusion:* there was a considerable reduction in providing health services to patients affected by breast cancer, yet Saudi Arabia managed to get out of this pandemic with the least damage possible due to governmental efforts. In capable countries and organizations, health authorities should share their expertise and experience to prevent damage to people already suffering from a devastating disease like breast cancer.

Medical Science, 2022, 26, ms135e2064

The use of over the counter aspirin as prophylaxis for cardiovascular diseases among adult people in Saudi Arabia

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Objectives: Our aims to assess knowledge and attitudes regarding over-the-counter (OTC) aspirin use as prophylaxis from cardiovascular disease among adult population in kingdom of Saudi Arabia, to assess the factors associated with aspirin use in adults with cardiovascular disease. *Method:* This research paper (cross-sectional) was carried out in all Saudi Arabia regions. A self-administered electronic questionnaire used as a data collection tool. *Results:* total of 876 participated in this study, 50.6% males and 26.7% between 31-40 years. 35.7% of the participants reported taking OTC medications and 17.2% reported using aspirin. Only 45% of those taking aspirin reported taking it after the prescription. Additionally, we found higher prevalence of using aspirin in hypertensive patients (41.4%vs13.1%, P=0.000), diabetes mellitus (33.3% vs 14.8%, P=0.000), heart condition (55.6% vs 14.0%, P=0.000), hypercholesterolemia (36.6% vs 12.6%, P=0.000). *Conclusion:* 17.2% of participants used aspirin, 55 % used it with prescription. Aspirin use was high among old people with lower educational levels and those with CVD risk factors.

Medical Science, 2022, 26, ms136e2155

Evaluation of predictive value of anterior cerebral artery to umbilical artery Pulsatility Index Ratio and its comparison with medial cerebral artery to umbilical artery Pulsatility Index Ratio for FGR and appropriate for gestational age (AGA) fetuses

Mahyar Mohammadifard, Edris Alishahi, Nasrin Khorashadizadeh, Alireza Mirgholami, Gholamreza Sharifzadeh

Background: This study is aimed to investigate the anterior cerebral artery (ACA) to umbilical artery (UA) pulsatility index (PI) ratio as a new Doppler parameter in comparison with the medial cerebral artery (MCA) to umbilical artery (UA). *Material and Methods:* This descriptive cross-sectional study was performed on pregnant women aged 24 to 36 weeks referring. Based on ultrasound criteria, the embryos were separated into two groups, the ones appropriate for gestational age (AGA), and the ones small for gestational age (SGA). *Results:* Mean gestational age and fetal weight in the two groups were not found to be statistically different. The difference between the mean RI of the MCA among the two studied groups was significant ($P < 0.05$). Moreover, the difference between the mean PI of the MCA and ACA between the two groups was significant ($P < 0.05$). Comparing the two ratios of CPR and CPR2, a statistically significant difference was observed between these two ratios ($P < 0.05$) so that CPR2 was <1 with a higher frequency than CPR, indicating that CPR 2 is more sensitive than CPR. *Conclusion:* Early detection of FGR can lead to faster and more effective treatment.

Medical Science, 2022, 26, ms137e1875

Evaluating micro shear bond strength of two different materials in permanent teeth

Rahbaryfar Sayeh, Rahimian Emam Sara, Nabavi Saide

Aim: Caries on the grooved surfaces of posterior teeth is the most common type of caries in children and adolescents; a prerequisite for achieving a successful fissure sealant is proper isolation of etched enamel against saliva contamination. Recently, self-adhering flowable composites have received more attention due to simple application of this type of material, which allows proper insulation. Therefore, this study tends to compare microshear bond strength of fissure sealant and self-adhering flowable composite in permanent teeth. Methods: This experiment was performed on 30 dental samples in vitro in 2019-2020. After initial preparation, the teeth were randomly divided into 3 groups; the first group: acid etch (Den fil Etchant-37 / USA) + bonding (Tetric N-Bond / USA) + fissure sealant (Clinpro, ESPE 3M); the second group: acid etch + Vertise Flow; the third group: Vertise Flow. After thermocycling (500 cycles, 5-55ºC), shear bond strength was tested using Universal testing machine at 0.5 mm/min. Finally, the obtained data were evaluated using SPSS 21 statistical software and Independent T-test. Results: Composite of the third group was isolated from the tooth surface after thermocycling. Shear bond strength of the first group is 12.3±44.97 MPa and shear bond strength of the second group is 11.184±47 MPa. According to Independent T-test analysis, there is no statistically significant difference between group 1 and group 2. Conclusion: Self-adhering composite without acid etching has very low bond strength, so the use of this composite without acid etching is not recommended.

Medical Science, 2022, 26, ms138e1893

CASE REPORT

Post covid pregnancy related haemolytic Uraemic syndrome masquerading as HELLP syndrome-A twisted tale of gravid

Tanvi Chaurasia, Deepti Shrivastava, Kamlesh Chaudhary, Rahul Agola, Geeta Chaurasia

Pregnancy associated atypical haemolytic uremic syndrome (p-aHUS) is an infrequent condition to be encountered during the puerperium period and is associated with microangiopathic haemolytic anaemia, thrombocytopenia as well as acute kidney injury.

This syndrome is triggered by pregnancy in the women who are predisposed genetically leading to an unfortunate haemolytic disease which is associated with endothelial diffuse damage and consumption of the platelets. This is a dangerous condition which required prompt diagnosis as well as management. Diagnosing p-a HUS can be challenging for the treating clinicians as it may mimic other conditions like HELLP Syndrome during the pregnancy as well as postpartum period. Plasma exchange should be started within 24 hours of diagnosing the condition in order to prevent mortality. With the emergence of the corona virus pandemic, atypical SARS Covid -2 presentations during pregnancy have emerged, ranging from COVID-19-associated HELLP syndrome to intrauterine death. COVID-19 has been linked to an atypical haemolytic uremic syndrome, with COVID-19 causing ischemic acute tubular necrosis or thrombotic microangiopathy through a complex complement activation process. We are presenting a case of 28 year old female with nine months amenorrhea who presented with bilateral pedal oedema and oliguria since one week and had severe thrombocytopenia along with acute kidney injury following 28 days of contracting COVID-19. She was diagnosed as Post COVID-19 p-a HUS following diagnostic work up and was treated promptly with plasmapheresis leading to complete recovery.

Medical Science, 2022, 26, ms139e2128

ANALYSIS

Chylothorax complicating adult cardiovascular surgery: Multi-centres experience

Ehab Mohamed Kasem, Ehab Fawzy Salim, Gaser Ali

Background: Chylothorax is a rare complication after adult cardiovascular surgery. Chylothorax directly affects postoperative course and morbidity. *Methods:* Data for this prospective study was collected between July 2017 and August 2021. Twenty patients who had adult cardiac surgery were included in our study. Demographic characteristics, operative and postoperative data were collected and analyzed. Somatostatin injections were used to control chyle leakage. Failure of conservative treatment was the indication of surgery. *Results:* This study included 20 patients, 13 males and 7 females, who recently underwent adult cardiovascular surgery. The mean age was 47.7±13.27 years. The mean duration for chyle effusion was 4.35±1.98 days, while the mean duration of drainage was 12.15±2.56 days. Analysis of pleural fluid revealed mean pH value = 7.3±0.05, mean total protein =2.7±0.3 g/dL, mean pleural glucose concentrations =123±33 mg/dl, mean cholesterol level =43±17 mg/dL, mean triglyceride level =489±39 mg/dL, and mean chylomicron level =7±0.4 mg/dl. There was a statistical significance regarding the response of postoperative chylothorax to somatostatin therapy (p=0.001). Surgery (mass ligation) was indicated in 4 cases secondary to failure of conservative treatment. There was a significant difference between ICT drainage/day in patients who were managed conservatively and those who were managed surgically (p =0.0001). *Conclusion:* Chylothorax is more common following CABG and Aortic arch surgeries, and it has a significant impact on the postoperative course and morbidity. The diagnosis and therapy should be initiated as soon as possible. Conservative management is feasible in 80% of cases.

Medical Science, 2022, 26, ms140e2227

Awareness of osteoporosis among medical and health-related students of Umm Al-Qura University, Saudi Arabia

Salah Bakry, Wael Abdullah Hamed Alqurashi, Ibrahim Ali Hasan Alasmari, Mohammad Ghazi Fintyana, Saad Naif Saad Albagami, Younis Abdulrahman Alharbi, Fawaz Mohammed Alzubaidi, Mohammed R Alhayli, Mohamed A Elhefny

Background: Osteoporosis still encompasses a health problem worldwide that can lead to critical complications if not managed properly. *Aim:* The current study aimed to explore the awareness and knowledge of osteoporosis among medical and health-related students of Umm Al-Qura University (UQU), Saudi Arabia. *Methodology:* A cross-sectional survey, based on a self-administered questionnaire was conducted using a google form during December 2021. All students of medical and health-related colleges of UQU were targeted in this survey to investigate their Awareness of osteoporosis. *Results:* The number of participants in this study was 351. Their mean age was 22.01 ± 1.77 years. Overall, 67% of students were males, and 33% were females. The majority were 6th-year students. College of medicine represents the highest responding among all colleges 84%. Importantly, about 94.02% of the students had good knowledge regarding osteoporosis with no significant variation among students of different colleges. *Conclusions:* Medical and health-related students of UQU had a good awareness regarding osteoporosis. However, studies targeting the non- medical students are necessary to evaluate the degree of knowledge of osteoporosis in order to ensure early recognizing and prevention of its serious consequences.

Medical Science, 2022, 26, ms141e2116

The perception of sun exposure as predictor for skin cancer among health-related students in Umm Al-Qura University: A cross-sectional study

Salah Bakry, Abdullah Meshal Alharthi, Amer Abdulaziz Eisa, Ammar Adel Bakhsh, Ammar Khalid Mandili, Omar Abdulaziz Althobity, Mohanned Mohammed Alomairi, Mokhtar Mahfouz Shatla

Background: The significant increase in the incidence of skin cancer emphasizes the need to learn how to prevent it. Throughout this study, we polled health-related students at Umm Al-Qura University on their perception of sun exposure as a risk factor for skin cancer. *Objective:* The aim of this study was to determine the perception of sun exposure as a predictor for skin cancer among health-related medical students. *Methodology:* From January to February 2022, an analytic cross-sectional study was conducted at

Umm Al-Qura University in Makkah, Saudi Arabia. *Results:* The current study involved 354 health-related students as participants. The average age of participants was 21.97 ± 1.75 years. Males made up 72.8 percent of all responses, while females made up 27.2 percent. The vast majority of students were sixth-year medical students, accounting for 25.2 percent of total participation. In addition, the medical faculty was the most responsive of all the health colleges. The percentage of students with a high degree of knowledge in our study was the smallest. Sunscreen should be applied during sun exposure was answered correctly by 80% of respondents, while 20% wrongly responded that you do not need to apply sunscreen on cloudy days. *Conclusion*: Skin cancer is a serious disease requiring early detection and treatment. Excessive sun exposure causes most skin malignancies, which are preventable. These results indicate that there should be more campaigns in the future that emphasize the importance of sunscreen products and the correct way to apply them.

Medical Science, 2022, 26, ms142e2158

The efficiency of Articaine only buccal infiltration technique as alternative local anaesthesia technique to inferior alveolar nerve block

Samira Osailan

Background: The Inferior Alveolar Nerve Block (IANB) and other nerve blocks are associated with an increased risk of nerve injury. Articaine-only infiltrations, which include buccal injections, are recently showing comparable effectiveness to Lidocaine IAN blocks for mandibular teeth, therefore reducing the need for an IAN block. The study aims to assess Articaine only infiltration (AOBIT) effectiveness in administering local anaesthesia for monotonous mandibular teeth extractions in adults. *Methods:* This research consist 172 patients, both male and female, varying in age from 18 to 75 years. In all 204 mandibular teeth in which 182 excessively decayed mandibular molars and 22 premolars were extracted. The local anaesthesia was given by a specialist OS and extraction was done by UG students under the super-vision of consultant. AOBIT effectiveness was assessed in contrast to the necessity for repeated Articaine infiltrations or rescue IANB with Lidocaine 2%. *Results:* From the total of 172 patients; 96 (55.8%) were males and 76 (44.2%) were females. Age range was from 18-75 years with the mean of 40 ± 13.7 years. depending only on the AOBIT, sufficient anaesthesia was obtained in 86.7 % of 172 patients and 204 teeth, In the remaining 13.3% of patients, a 'rescue' 2% Lidocaine IAN block is required. *Conclusion:* For normal adult mandibular tooth extractions, Articaine 4% alone (AOBIT) technique of buccal infiltration might be a good alternative to Inferior-Alveolar-Nerve-Block with Lidocaine 2%, success rate was remarkable and this technique could help in reducing nerve injuries due to IAN and lingual nerve blocks.

Medical Science, 2022, 26, ms143e2215

Awareness and knowledge of medical ethics in undergraduate medical students at Umm Al-Qura University: A cross-sectional study

Ahmad H Mufti, Anwar Almuqati, Bushra Aldajani, Sarah Alduayah, Shahad Bamerdah

Background: Medical ethics is a field that involved in human lives therefore it needs more attention. In the medical ethics education, undergraduate medical students have been reported to have distinct weakness in ethical awareness and knowledge. The aim is to evaluate the general knowledge, and perceptions of medical ethics among undergraduate medical students at Umm Al-Qura University (UQU), Mecca, Saudi Arabia. *Method:* A quantitative cross-sectional survey was conducted at Umm Al-Qura University, College of Medicine, Mecca from September to October 2021. A total of 468 undergraduate medical students, ranging from 19 to 25 years have been involved in the research. An online structured questionnaire included questions about knowledge of medical ethics and consent. *Results:* The study results showed that undergraduate medical students' knowledge regarding medical ethics 35.5% of students demonstrated a good level of knowledge regarding medical ethics and consent. In comparison, 64.5% had a poor knowledge level. A statistically significant association showed that a good level of knowledge was detected among 38.6% of students in their clinical years compared to 30.9% of those in their pre-clinical academic years (P = 0.048). In addition, 39.2% of male students had a good knowledge level, compared to 32.3% of females (P = 0.120). About 76.7% of the participants acknowledged the importance of medical ethics. *Conclusion:* Medical students at UQU generally appreciate the significance of knowledge about medical ethics, and the majority showed significant variability to individual questions. In general, about a third of the participants had a great understanding of medical ethics and consent.

Medical Science, 2022, 26, ms144e2149

Perception and health care seeking towards dysmenorrhea among female students at Umm Al-Qura University, Makkah, Saudi Arabia

Imad Ali Aljahdali, Alaa Alharbi, Afnan Alalyani, Jana Alhadhrami, Ruba Alotaibi, Sarah Alduayah, Shahad Bamerdah, Mokhtar Mahfouz Shatla

Background: Some women experience dysmenorrhea (painful cramps during menstruation) which can significantly affect their daily activities. We purposed to assess the perception and health care seeking towards dysmenorrhea among students of Umm al-Qura University in Makkah. *Methods:* This cross section study directed to Umm Al-Qura undergraduate female students aging 18 to 30 years was conducted during the period from September to October 2021. We collected data using online questionnaire, which covered student's socio-demographic data, dysmenorrhea clinical data, student's perception towards dysmenorrhea and healthcare seeking. *Results:* Exact of 412 participants with mean age of 20.5 ± 1.7 years old were included. Of them, exact 373 (90.5%)

experienced dysmenorrhea during their menstrual cycle. The dysmenorrhea was severe among 167 (44.8%), moderate among 176 (47.2%), and mild among 30 (8.0%). The frequently reported self-care practices towards dysmenorrhea were home remedies (44.2%), followed by ignoring the pain (23.6%), and self-medication (23.3%). Only 54 (14.55%) students consulted a health-care profession for dysmenorrhea. A total of 198 (53.1%) students had good perception level towards dysmenorrhea. *Conclusions:* High dysmenorrhea prevalence was noted. About half of participants showed good perception level towards dysmenorrhea except for being undesirable and bothersome pain. The pain was moderate to severe among the majority of females contributing to social withdrawal, lack of concentration, and poor academic performance.

Medical Science, 2022, 26, ms145e2090

RESEARCH

The mediating role of parenting stress, psychosocial stress and attention deficit hyperactivity disorder in explaining the relationship between borderline personality traits and childhood trauma

Hamed Ghiasi, Maryam Bakhtiari, Fatemeh Askarirostami, Sajjad Reisi

Introduction: The aim of this study was to provide a model to explain the relationship between borderline personality traits and childhood trauma using the mediating role of parenting stress, psychosocial stress and ADHD in students. *Materials and Methods:* The present study was a descriptive correlational study. 342 male and female students from Kermanshah University of Medical Sciences were selected using cluster sampling method. They were asked to fill out the questionnaires of childhood trauma, borderline personality traits, parenting stress and ADHD and participate in the psychosocial stress test. The collected data was evaluated via LISREL-8.7 software, structural equation method, AMOS-23, and path analysis. *Results:* The final results of the evaluation of the proposed model indicated a good fit of the model. Therefore, the proposed model can provide a good explanation for mediating role of parenting stress, psychosocial stress and ADHD in predicting relationship between borderline personality traits and childhood trauma. *Conclusion:* In addition to proposed model, this study can provide researchers and experts with important clues about the role of family as well as social and psychological factors in predicting borderline personality traits.

Medical Science, 2022, 26, ms146e2025

CASE REPORT

Extra-gestational choriocarcinoma of colon - Diagnostic challenges and management issues

Harshal Tayade, Surekha Tayade, Meenakshi Yeola, Sparsh Madaan, Dhruv Talwar, Arzoo Chadha, Nidhi Makhija

Choriocarcinoma is an unfrequently encountered malignant tumour arising from the placenta in the females and the gonads in males. Extra-gonadal or non-gestational choriocarcinoma are rare tumors which arise from sites which include the mediastinum, lung, stomach, cervix, ureter and pancreas. Primary choriocarcinoma arising from the rectum or the colon is extremely rare to encounter with very few cases reported till date. It is usually associated with poor prognosis. We present a case of 29 year old third gravida with known case of rheumatic heart disease who was referred to our rural tertiary care centre with a diagnosis of probable ruptured ectopic pregnancy which turned out to be a case extra gestational choriocarcinoma of the colon upon investigations. The patient was started with chemotherapy however she succumbed due to pulmonary embolism secondary to her high risk pregnancy due to rheumatic heart disease. This case highlights that though extra gestational choriocarcinoma is rare to encounter it is important for the clinicians to be vigilant for the same as it is often a misdiagnosed condition specially in the rural peripheral centres where there is lack of resources and investigations to confirm the diagnosis.

Medical Science, 2022, 26, ms147e2135

Physiotherapy succeeding split skin grafting in a case of degloving injury of hand and keloid formation

Tasneem Mustafa Lakkadsha, Madhu Lakhwani, Pratik Phansopkar, Shivani Satish Lalwani, Sakina Shoeb Hussain Saifee

A degloving injury is a fairly common outcome of road traffic accidents, and if the soft tissues are not rescued in a short period, it can result in death. Even after soft tissue salvage, if the mobility component is not prioritized, the affected structures will be permanently disabled. This case report follows a case of degloving injury that was treated with split skin grafting, after which the patient developed partial disability for which physiotherapy was implemented that resulted in a significant decrease in pain, decreased restrictions in ranges of joints of hand and foot, and improvement in gait pattern.

Medical Science, 2022, 26, ms148e2159

Management of radicular cyst using platelet rich fibrin- A case report

Meghna Dugar, Anuja Ikhar, Nidhi Motwani, Pradnya Nikhade, Manoj Chandak, Saurabh Rathi

Radicular cysts are inflammatory lesions of the jaws in the tooth-bearing areas. These lesions more commonly involve the apex of the associated tooth and have a well-defined radiolucency. Platelet rich fibrin is known as a healing biomaterial in oral surgical defect with the new aspect of advanced healing of a bony defect. The present case is of large radicular cyst associated with root canal treated maxillary permanent incisors in a 28-year-old boy and its surgical management with PRF augmentation as a healing

biomaterial in the bony defect. One-year follow-up showed satisfactory healing. Healing was relatively fast and enhanced by placement of PRF without any post-operative complications.

Medical Science, 2022, 26, ms149e2058

Fallopian tube block induced secondary infertility in a case of unicornuate uterus treated successfully: A long covid sequalae?

Madhurima Sachan, Kamlesh Chaudhari, Sparsh Madaan, Saunitra A Inamdar, Priti Varma

Infertility arising from infections is alarming cause of secondary infertility which is growing in number by the day. Mullerian anomalies can result in female infertility. A unicornuate uterus with a rudimentary horn is an abnormality induced by a faulty mullerian duct fusion. On Hysterosalpingogram, the uterine cavity has a spindle-shaped that tapers at the tip and drains in to a single oviduct. A 30 years old female with secondary infertility post COVID 19 infection, which upon investigated turned out to be unicornuate uterus with single fallopian tube on left side cornual block visualized in fallopian tube. All the causes of fallopian tube block including pelvic inflammatory disease, tuberculosis, trauma and bacterial infections were ruled out yielding COVID19 as the probable cause of infertility. Fallopian tube cannulation was done following which she conceived spontaneously. Elective encirclage done at 12 weeks and she was asked to report at 37 completed weeks for cervical stitch removal. After that emergency LSCS done. She delivered baby boy of 2.7kg with APGAR score 9/10. We concluded that angiotensin convertase enzyme 2 receptor were present on the fallopian tube might be responsible for post COVID fallopian tube blockage which is a topic for further studies. Prompt detection and management of long COVID sequelae in the form of infertility, particularly in predisposed people who are more likely to develop such difficulties, is thus critical to preserve infertility.

Medical Science, 2022, 26, ms150e2100

Integrative management of open apex with regenerative endodontic therapy: A case report

Payal Chaudhari, Madhulika Chandak, Manoj Chandak, Swayangprabha Sarangi, Akshay Jaiswal, Aditya Patel

In clinical practice, treating teeth with an open apex necessitates caution and diligence. In such circumstances, the grade of apical obturation has a direct bearing on the prognosis of endodontic treatment. Previously, a calcified barrier using calcium hydroxide treatment was advised as a therapy option for these patients; however, due to the method's numerous drawbacks, the current management approach advises apexogenesis via regenerative endodontic therapy. This report describes a case of “regenerative endodontic treatment” performed in “immature permanent tooth with pulp necrosis & apical periodontitis” as well as the effectiveness of a PRF-based “regenerative protocol in non-vital young permanent tooth”. After 1 year follow up, the tooth was clinically and radiographically asymptomatic and the healing of the apical area is visible.

Medical Science, 2022, 26, ms151e2124

ANALYSIS

COVID-19 protocols in dental office and its awareness among parents; a survey-based study among the parents attending Riyadh Elm University clinics

Ali Yahya Al fari, Nawaf Mohammed Alabdullatif, Hussain Mesfer Alqahtani, Yazeed Abdullah Alghamdi, Anas Hussam Ramadan, Ateet Kakti

Introduction: COVID-19 has changed the overall perception of public towards infection control and people are mainly concerned about their family’s safety when planning a visit to the dental office. *Materials and methods:* This is a cross sectional study conducted among the parents of pediatric patients using an online survey. 519 parents were contacted in the two campuses of REU. *Results:* 45.3% participants felt that a visit to dental clinic is more dangerous than public places, 11% were not worried about contracting virus from dental clinic, fathers were more positive since the beginning of COVID-19 pandemic (24.9%). *Conclusion:* The overall level of knowledge and awareness regarding dental clinics infection protocol among the study participants is satisfactory.

Medical Science, 2022, 26, ms152e2107

Knowledge, attitudes and behaviors about dental health among undergraduate medical students in a tertiary care institution in Nagpur city, India

Venugopal Reddy

Background: Dental health is a reflection of general well-being of a person and is thus an inseparable component of the health profile of an individual. Accordingly, a basic understanding about dental health should constitute a crucial component of the medical training. *Purpose:* To evaluate the awareness towards oral health among students of a medical college in Nagpur, India. Subject and *Methods:* A cross sectional survey was organized to assess the awareness about oral health among students of a medical college in Nagpur in November 2020 for duration of one month using a validated self-administered questionnaire. *Results:* There was a significant difference observed between students of various academic years for knowledge ($p \leq 0.001$) and behavior ($p \leq 0.001$). *Conclusions:* Oral health knowledge of higher academic years was significantly better than first year students. Significantly high proportion of first year students were having positive attitude towards oral health than other academic years.

Medical Science, 2022, 26, ms153e2136

Knowledge and practice of family medicine residents towards screening for gestational diabetes and undiagnosed diabetes mellitus in pregnancy, in 1st and 2nd health clusters, Riyadh, Saudi Arabia

Alanoud Z Alzamil, Fatimah H Alshehri, Malak A Alghamdi, Ahmed T Ahmed

Background: We are aiming to assess, compare, and to correlate between the knowledge and practice of family medicine residents towards screening for gestational diabetes and undiagnosed DM in 1st and 2nd health clusters, Riyadh, Kingdom of Saudi Arabia. *Methodology:* This is a quantitative analytic cross-sectional study targeting family medicine residents of 1st and 2nd health clusters, Riyadh, Kingdom of Saudi Arabia. Data were collected using predesigned validated questionnaire. *Results:* In this study, we were able to collect 204 responses for our questionnaire divided into two clusters; cluster 1 consisted of 95 participants (46.6%) and cluster 2 consisted of 109 participants (53.4%). 36.3% of the participants reported that they routinely screen any women for diabetes early in pregnancy at their first visit and the most used test was 75 gm Glucose Tolerance Test (32.8%). 85.3% of the total participants would screen all pregnant women at gestational age of 24 – 28 weeks (P=0.243). *Conclusion:* The study concluded that there was a limited knowledge about screening for undiagnosed diabetes in pregnancy. However, the level of knowledge regarding GDM screening was sufficient.

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RESEARCH

COVID-19 in Type 1 Diabetes Mellitus adult patients; effect of infection and vaccination

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Background: The impact of severe acute respiratory syndrome corona virus (SARS-CoV-2) infection on Type 1 Diabetes Mellitus (T1DM) patients and their humoral response against the virus infection or vaccination is presently unclear, as in extant research Type 1 and Type 2 DM is rarely distinguished. *Objective*: we aimed to investigate the impact of SARS-CoV-2 infection, any associated risk factors for hospitalization, and the COVID-19 IgG antibody levels in T1DM patients versus those obtained from healthy individuals. *Methods and subjects*: 58 T1DM patients and 56 healthy adults with documented COVID-19 diagnosis and/or documented vaccination were recruited from different clinics in Al-Karak Governmental Hospital to complete a questionnaire before collecting their serum samples for measuring IgG levels. *Results*: Our results revealed a statistically significant decrease in SARS-CoV-2 NP IgG antibody levels in COVID-19 infected T1DM patients compared to infected healthy individuals who served as controls, while, no significant difference was noticed in the levels of SARS-CoV-2 S1/S2 IgG antibody among vaccinated T1DM patients versus controls. After adjusting for associated risk factors, the risk of hospitalization due to COVID-19 for individuals with uncontrolled T1DM was significantly increased compared to controls, and among patients with T1DM, glycosylated hemoglobin (HbA1c) correlated negatively with the IgG levels. Moreover, IgG seropositivity was significantly associated with old age and smoking. *Conclusion:* Our findings point towards an increased need for vaccination for patients with T1DM, and suggest that glycemic control could be a vital measure for diminishing the impact of COVID-19 on these individuals.

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