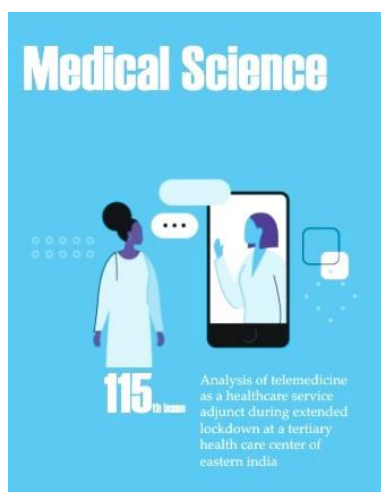


Medical Science

About the Cover



Introduction: After the recent outbreak of SARS COV2 worldwide, the governments decided to implement a lockdown to restrict or contain the spread of the contagion. Telemedicine has evolved as an adjunct/ supportive service to patients from far-off places in these troubled times. *Methodology:* A dedicated number was provided to the orthopedics department. On regular OPD, a telemedicine facility was provided from 9 am to 5 pm. On other days, the concerned duty team number was used. Patients were allowed to interact from 9 am to 11 am and 6 pm to 8 pm. *Observation and Results:* The study was conducted from March 2020 to May 2020. A total of 57 patients were given consultations through the telemedicine department out of which 41 were males, and 16 were females. Nearly 33 patients had grade 1, 16 patients had grade 2, and eight patients had grade 3 satisfaction levels. *Conclusion:* It is difficult to replace traditional consultation methods. However, telemedicine facilities may serve as useful supportive services to the existing facilities for outpatients and triage. (Ref: Yadav S, Jha AA, Dhakshanamoorthy R, Prasai A, Verma R, Agrawal NK. Analysis of telemedicine as a healthcare service adjunct during extended lockdown at a tertiary health care center of eastern India. Medical Science, 2021, 25(115), 2109-2113).

Analysis of telemedicine as a healthcare service adjunct during extended lockdown at a tertiary health care center of eastern India

Sanjay Yadav, Abhinav Anand Jha, Raghul Dhakshanamoorthy, Anukritika Prasai, Rahul Verma, Neeraj Kumar Agrawal

Introduction: After the recent outbreak of SARS COV2 worldwide, the governments decided to implement a lockdown to restrict or contain the spread of the contagion. Telemedicine has evolved as an adjunct/ supportive service to patients from far-off places in these troubled times. *Methodology:* A dedicated number was provided to the orthopedics department. On regular OPD, a telemedicine facility was provided from 9 am to 5 pm. On other days, the concerned duty team number was used. Patients were allowed to interact from 9 am to 11 am and 6 pm to 8 pm. *Observation and Results:* The study was conducted from March 2020 to May 2020. A total of 57 patients were given consultations through the telemedicine department out of which 41 were males, and 16 were females. Nearly 33 patients had grade 1, 16 patients had grade 2, and eight patients had grade 3 satisfaction levels. *Conclusion:* It is difficult to replace traditional consultation methods. However, telemedicine facilities may serve as useful supportive services to the existing facilities for outpatients and triage.

Medical Science, 2021, 25(115), 2109-2113

Saudi population preferences towards receiving medical bad news in Buraidah city 2020

Fahad Mohammed A Alkhuzayyim, Chandra Sekhar Kalevaru

Background: Breaking bad news from health care providers to patient attendees, need skills to the professionals to deliver the bad news. Same time positive attitude change also required from the population in relation to receiving medical bad news. This is high time to maintain some equilibrium and harmony of understanding is very essential to maintain successful understanding between bad news release person and receiver. Study aimed to explore socio-demographic characteristics, determine the Saudi preferences and attitude towards receiving medical bad news. *Methodology:* A cross sectional study was conducted among the Saudi population aged between 20 - 59 years population. A self-administered validated questionnaire administered to the selected Saudi population. Data entered in Statistical Package for Social Sciences (SPSS) 21.0 version and necessary statistical tests were applied. *Results:* Response rate in the study population was 84.6%. About receiving breaking bad news, 37.8% were received and among them 71.5% revealed the bad news by physicians. 52.6% were preferred as early as possible once the bad news are available and 44.9% were preferred bad news by head of medical team. Statistically significant association was found between attitude of method of breaking bad news versus gender (females 78.4% and males 64.7%, P=0.004). *Conclusions:* Based on the study, majority participants preferred to receive the bad news by themselves first. There is a need of training to the health care providers and also from the public need to accept the bad news in a proper way as a behavioural change is required.

Medical Science, 2021, 25(115), 2114-2125

Prognostic value of Prehospital Index (PHI) versus GAP scale measured in hospital emergency room

Hadi Jalilvand, Homayoun Sadeghi-Bazargani, Ehsan Sarbazi, Mohammad Meshkini, Mohammad Asghari Jafarabadi, Hassan Nouri Sari, Pir-Hossein Kolivand, Kavous Shahsavarinia, Mina Golestani, Faramarz Pourasghar

Introduction: Trauma is one of the major health problems worldwide. There are several indicators for predicting trauma mortality in the world, some of them are physiological, some anatomical, and some others are both psychological and anatomical. Our aim in this study was to compare the predictive power of GAP versus PHI in predicting mortality from trauma. *Methods:* This prospective study was performed using data from Imam Reza Hospital in Tabriz, HaftTir and Sina Hospital, in Tehran, during 2020 and 2021. Descriptive results were reported with mean, standard deviation, absolute frequency and absolute frequency percentage. Simple logistic regression, multiple logistic regression and receiver operating characteristic (ROC) were used to evaluate the predictive power of the studied indices. All analyses were performed at a significance level of 0.05. *Results:* A total of 540 trauma patients participated in this study. The mean and standard deviation of the age of the patients participating in this study was 34.71 ± 17.65 . The majority of the patients (81.67%) were male. Finally, until the 30th day of follow-up, 62 patients (11.48 %) died. Glasgow coma scale (GCS), pulse rate, age, respiratory status and level of consciousness significantly predict trauma mortality (P-value < 0.00). The area under roc curve (AUC) value was 0.926 for PHI and 0.920 for GAP. *Conclusion:* GAP is a more appropriate index than PHI to predict trauma deaths and triage of trauma patients in the emergency room. We recommend that the use of GAP be prioritized over PHI for triaging patients in the emergency room.

Medical Science, 2021, 25(115), 2126-2137

Evaluation the efficacy and complications of uphold system for total organ pelvic prolapse repair

Farzaneh Sharifiaghdas, Zohreh Bartani, Rasoul Esmaeili

Objective: The aim of present study was to use an uphold system (Boston Scientific) for restoration of total organ pelvic prolapse. *Materials and methods:* Between 2014 and 2019 years, This retrospective study was conducted on forty-three women with pelvic organ prolapse stage 4, underwent pelvic repair surgery with transvaginal mesh. Pre and postoperative Pelvic Organ Prolapse Quantification (POP-Q) stage, Urogenital Distress Inventory-6 (UDI-6), Incontinence Impact Questionnaire-7 (IIQ-7), urodynamic parameters, peri- and postoperative complications were evaluated. *Results:* forty-Three female patients were followed-up for 48 month. The result showed that there were statistically significant differences between POP-Q parameters, UDI-6 and IIQ-7 before

and after surgery (p value < 0.05). Complications included seven cases (16.3%) of urinary tract infection, one cases (2.7%) of mesh exposure, three cases (7%) of recurrent prolapse, and 4 cases (9.3%) of objective stress urinary incontinence. No bladder and tract perforation occurred during surgery. *Conclusions:* total organ pelvic reconstructive surgery that done with transvaginal mesh of the Uphold System assign satisfactory anatomical and outcomes of urinary function in a median 60 months of follow-up.

Medical Science, 2021, 25(115), 2138-2144

Dynamics of respiratory ventilation function indices in patients with chronic obstructive pulmonary disease and bronchial asthma with comorbid irritable bowel syndrome

Svitlana Novychenko, Svitlana Kovalenko, Natalia Lytvyniuk, Elvira Yasynska, Olga Skrynychuk, Stanislav Roborchuk, Tetiana Shchudrova, Tetiana Unguryan

The article presents the study of the respiratory function in patients with chronic obstructive pulmonary disease (COPD) and bronchial asthma (BA) with comorbid irritable bowel syndrome (IBS). We studied the ventilation function of external respiration (FER) and the nature of its changes in response to bronchodilator in COPD and BA with comorbid IBS patients. In patients with COPD, there was a decrease in both FEV1 and FVC. The degree of spirometric disorders correlated with the severity of the disease. The obstructive type of graphic image of the curve "flow-volume", which was characterized by a decrease in the volume velocity of the airflow, was observed in all patients. The ratios of FEV1/FVC % and MEF 25%-75% were reduced in all patients with COPD. The comorbid IBS in patients with moderate BA makes it impossible to achieve complete control over the course of BA due to the persistent spasm of the peripheral bronchi, which requires increased inhalation therapy. Based on the results, in patients with COPD and IBS, the predominance of the peripheral type of persistent generalized bronchial obstruction was revealed. Transient generalized obstruction syndrome prevailed in patients with BA and IBS, completely reversible obstruction – in BA patients without IBS, and maintenance of the peripheral bronchi spasm in BA patients with IBS.

Medical Science, 2021, 25(115), 2145-2151

Use of atypical antipsychotics in the treatment of patients with schizophrenia and drug addiction: A randomized control trial

Mohammed A Alotaibi, Ahmed M Elmalky

Objectives: Aim is to study of the therapeutic efficacy of atypical antipsychotics (aripiprazole and quetiapine) in comparison with haloperidol in cases of comorbidity of low-grade forms of schizophrenia and addiction. *Material and methods:* A randomized comparative study of these antipsychotic preparations was conducted during the period Feb-May 2021. We screened 90 men admitted to treatment in a narcological hospital. Of these, 54 (60%) patients those had a previously established diagnosis of schizophrenia, 36 (40%) did not. Patients by simple randomization were divided into three groups of 30 people each, in which the appropriate antipsychotic was prescribed: aripiprazole in dose up to 20 mg / day, quetiapine at a dose of up to 600 mg / day, haloperidol at a dose of up to 30 mg / day. *Results:* Intra-group analysis of the dependent variables on the ANSS, BPRS, VAS, PVN scales showed an appropriate significant difference in all groups in the dynamics of therapy. Intergroup analysis of independent variables showed significant correct differences between aripiprazole and haloperidol according to PANSS, BPRS to visit 4, according to VAS to visit 3, according to the PVI scale to visit 2. Intergroup analysis of independent variables showed significant differences between quetiapine and haloperidol by PANSS, VAS, and PVI scale - by visit 4. *Conclusion:* Based on the results of the correlation analysis, waters about the inextricable connection between psychopathological manifestations of schizophrenia and the syndrome of pathological attraction to psychoactive substances.

Medical Science, 2021, 25(115), 2152-2162

Antibiotic use and misuse: A cross-sectional study assessing the understanding of Saudi medical students

Abdullah Almutairi, Khalid Almahmoud, Ibrahim Alrumaih, Yazeed Alsaadi, Bandar Alamrai, Jihad Alrehaili, Javed Khan, Raziq Anwer

Background: Antibiotic resistance (AMR) has emerged as a global public health concern, posing a significant economic and clinical impact on both individual and population health. The current state of antibiotic resistance is frequently blamed on its overuse and misuse. Therefore, this study was aimed to explore the knowledge and attitude of medical students from four different governmental universities in Riyadh. *Methodology:* This was a cross-sectional survey of 692 undergraduate medical students in each year group from four governmental universities in Riyadh city. *Results:* A total of 692 participants were from the four best universities of Riyadh retorted to the questionnaire with a response rate of 99%. The majority of the respondents were females (52%). Considering students' knowledge toward using antibiotic medications, we found that 73.1 % of participants had adequate knowledge where 94.9 % of students knew that antibiotics are used for bacterial infections. Furthermore, we found that 15 % of students would keep antibiotics at home to be used in an emergency for children while 13.8 % would use antibiotics as a preventive medication even with no signs or symptoms. *Conclusion:* We found that medical students in the Riyadh region had adequate knowledge about the usage of antibiotics and reasons for antibiotics resistance however, we notice some shortcoming including low knowledge about antibiotic-related sensitivity, not completing the course of the treatment, and for viral infection and using of antibiotic as preventable medications. More study on this subject, including prescription practices and antibiotics, is needed.

Medical Science, 2021, 25(115), 2163-2172

Knowledge, attitude and practice of cervical cancer among female staff in outpatient department at Prince Mansour Military Hospital in Taif city, Saudi Arabia

Eyman Omar Halabi, Sultan Abdullah Almalki

Background: Cervical cancer (CC) is one of the serious diseases that affect women's lives. Fortunately, cervical cancer is a preventable and treatable disease; early detection has reduced its mortality and morbidity worldwide. *Objective:* To investigate the level of KAP of CC among female staff in outpatient department at Prince Mansour Military Hospital in Taif city, KSA. *Methods:* This study was a cross-sectional study. An English and Arabic based questionnaire was used for data collection. Data was collected through interviews with the female staff in the OPD by forms in iPad or smart phones. *Results:* The study included 303 participants, 90.76% have Bachelor degree and 2.97 had doctorate (PhD). 27.06% were physicians and 24.75% were nurses. Participants with good knowledge were 60.73% while who have poor knowledge were 39.27%. Concerning the opinion the studied population on cytological examination; 53.47% think that she should undergo cytological examination. Regarding the previous vaccination from the HPV; 5.61% only were vaccinated, 9.5% don't know and 84.82% reported that they were not vaccinated. There was a substantial relationship between the knowledge level groups and level of education, job title and whether the residence (inside or outside the Taif city) of the studied population ($P < 0.05$). *Conclusion:* in the current KAP study, the overall knowledge, cervical cancer was moderate, the practice of the HPV vaccination was very low and there was a moderate attitude toward the cytological examination and Pap smear.

Medical Science, 2021, 25(115), 2173-2180

Predicting self-harming behaviors based on attachment styles and early maladaptive schemas among adolescents; mediating roles of trauma, emotion dysregulation, impulsivity and self-criticism

Hesam Shahmoradi, Abbas Masjedi-Arani, Maryam Bakhtiari, Imaneh Abasi

Introduction: Self-harming behavior is a major clinical issue in adolescence. In this study, we aimed to clarify the pathway from attachment styles and early maladaptive schemas to self-harming behavior through the mediating roles of trauma, emotion dysregulation, impulsivity, and self-criticism among adolescents in Iran. *Methods:* A sample of 558 (263 girls and 295 boys) middle school-aged adolescents (aged 13–17) were recruited. Participants had at least one self-harming behavior in their clinical records. Self-report questionnaires in this research were completed online. *Results:* The Sobel Test revealed that attachment styles and early maladaptive schemas had significant indirect effects on self-harming behavior. More specifically, attachment styles had indirect effect on self-harming behavior with mediating roles of trauma, emotion dysregulation, and self-criticism except impulsivity. Early maladaptive schemas had an indirect effect on self-harming behavior with mediating roles of emotion dysregulation, impulsivity, and self-criticism except trauma. *Conclusions:* Our findings, which were based on the assessment of the model, provided new insight to the relationship of attachment styles and early maladaptive schemas with self-harming behavior.

Medical Science, 2021, 25(115), 2181-2190

Artificial Intelligence in Patient Care in Riyadh, Saudi Arabia 2019-2020

Mona A Al Fadeel, Nouf A Khalifah, Hotoon S Alshammari, Fatema S Smaiem, Haya A Al Qahtani, Asmaa K Al Otaibi, Reham M Al Shehri, Farah A Qari, Rayan M Seedahmed, Hanaa M Abutaima, Raghad A Al Ameer

Background: Artificial intelligence is a field of computer science that is capable of analyzing complex medical data. *Objectives:* To describe the awareness and Perception of uses of artificial intelligence among providers in Medical health care settings. *Methodology:* Data was collected by a questionnaire filled by health care physicians in king Khaled University Hospital and King Saud Medical City in Riyadh. *Results:* Out of 105 participants, about 58% of those physicians were either denied access to AI or AI was not available in the facility where they work. Access to artificial intelligence was not statistically different among the three professional groups. About 51% of those physicians rarely or never use AI. Out of 105 (64%) of the doctors chose excellent to the relationship between acquaintance and attitudes towards the AI. (16%) of the physicians chose moderate and finally (20%) of them chose poor. *Conclusion:* There's no significant difference in the attitude and acquaintance of physicians towards Artificial intelligence in relation to their gender, categories or years of experience. Although most physicians have good acquaintance and attitude towards Artificial intelligence, unfortunately there's no proper accessibility to AI.

Medical Science, 2021, 25(115), 2191-2197

CASE REPORT

Cutaneous sinus tract of dental origin in pediatric patient: A case report

Sneha Khake, Shweta Chandak, Suryakant Kumar, Arun Sajjanar, Niharika Gahlod, Miranda George, Milind Wasnik

Cutaneous sinus tract develop due to misdiagnosis of persistent dental infections as it may look similar to other cutaneous lesions and misdiagnosis may lead to cutaneous scar formation, psychological trauma to the patient so the correct identification of etiology and diagnosis is important. This is a case report of dentoalveolar abscess with extra oral sinus in relation to mandibular left first molar of an 11 year old male Pediatric patient. In this case report description of diagnosis, root canal treatment and surgical incision is presented.

ANALYSIS

The misuse of topical creams among females in Saudi Arabia 2020

Walid A Alghamdi, Nouf A Khalifah, Hotoon S Alshammari, Fatimah A Althamin, Batool A Althamin, Haneen H Alsultan

Background: Topical creams (TC) are agents used for the skin to treat many problems such as; wrinkles, acne, blemishes and much more. They are used commonly worldwide mostly among females but there are a few studies that concentrated on the severity of overusing or misusing these agents. *Objective:* This study aimed to measure the knowledge of females towards the usage of topical creams. *Methods:* A self-administered questionnaire was distributed among females in Saudi Arabia. The data were collected using Google forms and all statistical analyses were performed using SPSS version 21. *Results:* The most commonly misused TC was intended for acne (69.7%). More than one third (34.7%), bought TC due to the influence of social media. The knowledge of women regarding side effects and contraindications were found among 65.7%. *Conclusion:* Although there was a moderate knowledge regarding the side effects and contraindications of TC however, the misuse of topical facial cream and the influence of social media in buying TC were evidently clear in this study. Women who were using TC for the treatment of acne had better outlook than the others.

Medical Science, 2021, 25(115), 2203-2212

Prevalence and associated factors of suicidal ideation and attempts among undergraduate medical students of Umm Al-Qura University, Saudi Arabia: A cross sectional study

Omar S Alhothali, Abdullah K Bahakim, Sanad M Alharthi, Abdullah K Alsaede, Saad M Alharthi, Imad A Aljahdali, Mokhtar M Shatla

Introduction: Suicide is the second major cause of mortality amongst young adults, and medical students are vulnerable to suicidal ideation due to overwhelming distress resulting from academic and non-academic issues. This study aimed to estimate the prevalence rates of suicide ideation, behavior, and to find out their potential association with different factors among undergraduate medical students of Umm Al-Qura University, Saudi Arabia. *Methods:* This cross-sectional study was conducted in April 2021 by posting an online survey on social media platforms (WhatsApp) to collect data on participants' socio-demographics, and a validated English version of the Columbia-suicide severity rating scale (C-SSRS) to assess suicidal ideation and behavior as well as the Copenhagen Burnout Inventory (CBI) scale to measure the level of burnout. *Results:* A total of 346 subjects responded to the questionnaire. Among study participants, suicide ideation and attempt was found to be 40.5% and 9.2%, respectively. Binary logistic regression revealed that students with a history of psychiatric disorders, high burnout, smokers, and those who had parental neglect were associated with higher risk of suicidal ideation ($p < 0.05$). The single greatest risk factor predisposing to suicidal ideation was smoking. This was followed by previous psychiatric disorders and parental neglect. *Conclusions:* High prevalence of suicide ideation and attempts was demonstrated among medical students. Mental health program should be provided to reduce suicidal tendencies among undergraduate medical students.

Medical Science, 2021, 25(115), 2213-2221

A cross-sectional study of effect of stress and anxiety on neck pain among undergraduate physiotherapy and nursing students of a rural health sciences University from Maharashtra, India

Shrutika H Wankhade, Ashish Wasudeorao Bele, Divya Jain, Ajinkya Sureshrao Ghogare, Mohd Irshad Qureshi, Pratik Phansopkar, Nivedita Chandrapal Singh

Introduction: Neck Pain is one of the common public health problems all over the world. It has negative effect on health and quality of life. Neck Pain can be a leading cause of disability. Stress and anxiety may have effects on course and prognosis of neck pain. *Objective:* To investigate the effect of stress and anxiety on neck pain among physiotherapy and nursing students. *Methods:* 120 participants were included in the present study by using consecutive sampling method from physiotherapy and nursing colleges affiliated to Rural Health Sciences University from Maharashtra, India as per the inclusion and exclusion criteria after obtaining the written informed consents from all the participants. Perceived stress scale (PSS) – 10 item, and Zung's Self-rating Anxiety Scale (SAS) were used to assess stress and anxiety respectively among study participants. Numerical Pain Rating Scale was used to assess the neck pain among study participants. *Results:* Majority of participants was females (73.3%), belonged to age group of 17 to 20 years (82.5%) and physiotherapy course (61.7%). Prevalence of stress, anxiety, and neck pain were 84.2%, 53.3%, and 64.2% respectively. Female gender was associated with the higher severity of stress. Significant relationship exists between the severity of stress and presence of neck pain among study participants and such relationship was not evident between the severity of anxiety and neck pain. *Conclusion:* Findings of present study reflects an impact of stress on neck pain and stress management techniques can be used while managing the individuals with neck pain for better outcome.

Medical Science, 2021, 25(115), 2222-2232

The effect of aerobic training versus cognitive behavioral therapy in management of anxiety, depression and stress related to COVID 19 pandemic among university students: A randomized controlled trial

Nashwa S Hamed, Amr A Abdel-aziem, Alsufiany Muhsen B, Marwa M Eid, Hatem A Allam, Amira M El-Gendy, Lamiaa K El Sayyad

Background: The prevalence of anxiety, depression, and stress increased due to COVID 19 crises. Anxiety and depression are the most common psychiatric disorders. The goal of the current study was to compare the effects of aerobic training to cognitive behavioral therapy on university students suffering from mild to moderate anxiety and depression as a result of the Covid 19 pandemic. *Methods:* an online invitation to participate in the study was sent through the university system. Fifty four undergraduate students with mild to moderate anxiety and depression voluntarily participated in this study (mean age: 20.77±1.16) and assigned into two groups; aerobic training aerobic training and cognitive behavioral therapy. The International Physical Activity Questionnaire and the Depression, Anxiety, and Stress Scale were used in an online assessment, performed before and after the treatment. For 8 weeks, an online treatment guide and follow-up were provided, with 5 days per week of AT and one session per week of CBT. *Results:* A significant improvement of DASS scores after treatment in both groups ($p \leq 0.001$). IPAQ scores showed a significant improvement in GA and GB with non-significance in vigorous activities; category. GA showed a significant reduction of anxiety more than GB with a non-significant difference in stress and depression ($p \geq 0.05$). *Conclusions:* In students with mild to moderate anxiety and depression, both AT and CBT are effective in improving manifestations of anxiety, depression, and stress following the COVID-19 pandemic. Aerobic exercise is more effective in treatment of anxiety.

Medical Science, 2021, 25(115), 2233-2246

ANALYSIS**Prevalence of food allergy and associated risk factors among children in eastern region, Saudi Arabia**

Hussain A Al Ghadeer, Jaber A Al Habeeb, Amal S Alsultan, Ghofran M Almosailem, Fatimah M Al Musallam, Maryam A Alramadhan, Wejdan H Al Musallam, Fadi N Busaleh, Ahmed Y Alghadeer, Ahmed M Al Qassimi, Muntaher S Al Hejji, Ahmed M Alhamrani

Background: Food allergy is an adverse immune-mediated reaction after exposure to certain types of food. Food allergy is considered a major public health issue worldwide. Therefore, parents with an allergic child are responsible for the management of their children based on their knowledge toward food allergy. This study aims to estimate the prevalence of food allergy and associated risk factors among children in Eastern region, Saudi Arabia. *Methods:* An observational cross-sectional study was conducted among 1522 caregivers in Eastern region, Saudi Arabia from May to July 2021. Data was collected through a self-administrated questionnaire which was distributed online. The data were analyzed using Statistical Package for Social Science version 25. *Results:* A total of 1522 primary caregivers who fulfilled the inclusion criteria. Out of 1522, 524 (34.4%) caregivers stated that their children have a food allergy. Near half of the allergic children, 43.7% were diagnosed by a pediatrician while 29.6% of them underwent medical investigation. The most common food causing allergy was fish (26.2%), followed by Peanuts (19.6%). Preterm, parental and family history of food allergy or atopic diseases showed significant relationships ($p=0.001$) for developing food allergy. *Conclusion:* Our results show that food allergy is a common health problem in Eastern region, Saudi Arabia. The food allergy is not only confined to the child, but it also affects the whole families' well-being. So, a health education program about food allergy is recommended to educate caregivers about food allergies and its management.

Medical Science, 2021, 25(115), 2247-2258

Comparative evaluation of the levels of fibroblast growth factor-2 prepared from Advanced Platelet Rich Fibrin (A-PRF) in diabetic patients and healthy subjects in Saudi Arabia

Hanan Abdullah Mohammed Al Mozher, Hesham Abdulatif Al-Mashat, Osamah Mohammed Al Mugeiren

Background: Recently, attempts have been made to alter the centrifugation time in platelet-rich fibrin (PRF) preparation protocols; it was believed that low-speed centrifugation (LSCC) improves growth factor release via PRF scaffolds. Diabetes mellitus is a serious, chronic human metabolic disease that has a tremendous impact on patients, families, and society. The objective of this study was to compare the levels of fibroblast growth factor-2 in advanced platelet-rich fibrin (A-PRF) in diabetic patients and those of healthy subjects from Saudi Arabia. *Methods:* Blood samples were obtained from diabetic patients at Riyadh Elm University, Saudi Arabia. Eligibility for the participants to be involved in this study was assessed. Samples were obtained from 38 volunteers, 30 patients with type1 and type 2 diabetes mellitus (test group), and eight non-diabetic volunteers (control group). Blood was extracted using 10 mL syringes and then processed using advanced platelet-rich fibrin (A-PRF) centrifugation. A total of 10 milliliters of complete blood without anticoagulant was centrifuged at 1300 rpm ($\sim 200 \times g$) for 14 min at 21–30 °C. *Results:* Measurements done at four different times (Days 1, 7, 14, and Day 28) revealed that the amount of FGF-2 released from A-PRF was significantly lesser among diabetes mellitus patients than in healthy volunteers. *Conclusions:* Compared to the non-diabetic individuals, a decrease in the FGF-2 level released from APRF in diabetic patients was observed.

Medical Science, 2021, 25(115), 2259-2267

Anticardiolipin antibody level in hypertensive disorders of pregnancy and its association with pregnancy outcome

Eman Kamal Abdulwahhab, Ghada Al-Sakkal

Objective: Find out the association of anticardiolipin antibodies between normotensive hypertensive disorders of pregnancy and pregnancy outcome, and investigate the possibility of making anticardiolipin antibodies as a biomarker for hypertensive disorders of pregnancy involving preeclampsia. *Methods:* A case control study conducted at maternity teaching hospital in Erbil city. The participants were selected from the obstetrical outpatient clinic or from inpatients with matching age, body mass index and gestational age. *Results:* Seventy-four pregnant women were enrolled in the study; 34 of them were diagnosed with hypertensive disorders of pregnancy (case group) and the other 40 were healthy pregnant women (control group). There was no statistical significance between anticardiolipin antibodies between the two main study groups, and neither between severe and non-severe hypertensive pregnant women. Hypertensive pregnant women with positive anticardiolipin antibodies had significant association with preterm delivery and neonatal weight of below 2500g ($P < 0.05$). *Conclusions:* There is an association between anticardiolipin antibody and preterm labor and low birth weight in hypertensive pregnant women.

Medical Science, 2021, 25(115), 2268-2274

Evaluation of cyclic fatigue resistance of four heat-treated nickel-titanium single file systems in canals with single curvature - An in-vitro study

Mohammad Daher Altufayli, Basem Salem, Imad Katbeh, Pierre Georges, Roua Kamel Moualla

The anatomy of root canal system has a complex variation, so it is important to have a flexible system that would require minimal preparation of the canal. Nickel-titanium (NiTi) instruments can be separated and broken without previous warning during the root canal preparation, and this separation has been a problem. However endodontic instruments are unable to achieve a complete clean to the root canal system because of many high variability of root canal system complex anatomy, the endodontic instruments which are chosen for root canal preparation play a critical role in accomplishing the main goal for obturation and for the prevention of ledging, zipping, root canal transportation, file separation, and save the root canal original shape, NiTi instruments properties of memory shape, super elasticity, and resistance to torsional and cyclic fatigue are advantages to their use in preparation of the curved root canal. This study aims to compare the cyclic fatigue resistance of four heat treated nickel-titanium single file systems in Reciprocation movement and rotary movement in curved canals.

Medical Science, 2021, 25(115), 2275-2280

Knowledge and education level of dental sleep medicine among undergraduate dental students in Riyadh, Saudi Arabia: A cross-sectional study

Sanjeev Khanagar, Abdulsalam Thekkiniyakath Ali, Arwa Alhassoun, Hala Alshalawi, Linah Yassin Alali, Maram Ali Alqahtani, Rahaf Alahmadi, Reem Bin Zaid

Objective: Knowledge assessment of Dental Sleep Medicine DSM between undergraduate dental students in Riyadh, Saudi Arabia. Moreover, to improve the student's recognition and treatment of sleep disorders. *Methods:* A cross-sectional conducting analytical studies to evaluate knowledge of DSM. The data was collected using a self-administered structured online questionnaire which consisted of demographic details, questions related to students' interest in DSM, and 9-items validated modified version of ASKME (Assessment of Sleep Knowledge in Medical Education) survey. *Results:* In a total of 485 responses among seven universities, (62.1%) were female and (37.9%) were male. The majority of the respondents (82.4%) have a decreased level of knowledge according to the Modified ASKME tool. *Conclusion:* Low level of education among students can lead to a community of dentists with poor knowledge of sleep disorders.

Medical Science, 2021, 25(115), 2281-2291

Dietary patterns in adult patients with Non-Alcoholic Fatty Liver Disease in Iraq

Nawal Mehdi Al Khalidi, Zainab Ghanim Kadhim, Hayat Yahya Almousawi

Objectives: The aim of this study was to assess the dietary patterns of Iraqi patients with non-alcoholic fatty liver disease (NAFLD) and compare it with controls. *Subjects and methods:* A case control study, that included 88 Iraqi patients, aged between 18 and 70 years, of the 88 patients, 46 Iraqi patients were having NAFLD (identified as cases), and 42 patients were free of liver disease and they were considered as controls. The assessment of the dietary intake during the last 6 months was done through utilizing Food frequency questionnaire. NAFLD was diagnosed by using ultrasonography showing specific changes of that disease together with no excessive drinking of alcoholic beverages. *Results:* There were statistically significant higher rates of daily consumption of processed meats (p-value 0.03), pasta (p-value 0.010) and soft drinks (p-value 0.023) regarding daily portion of most western food items in comparison between patients with NAFLD and control group. And there were statistically significant higher rates of daily consumption of corn oil (p-value 0.027) and soft drinks (p-value 0.023) in the traditional Iraqi food items in comparison between patients with NAFLD and control group. Regarding body weight (p-value 0.003), BMI (p-value 0.033) and waist circumference (p-value <0.001), they were significantly higher among cases with NAFLD. *Conclusion:* The current study has found that the western diet patterns in particular processed meat, pasta and soft drinks were associated with a higher risk for NAFLD in Iraqi adults.

Medical Science, 2021, 25(115), 2292-2301

The association between physical activity and burnout among medical students in Riyadh, Saudi Arabia

Abdulrahman M Alothman, Ibrahim Ahmed, Mohammed A Alfadhel, Ahmad M Khalaf

Background: The prevalence of burnout among physicians is significantly high. Although the cause of burnout is unclear, many have reported that it originally begins during medical school. Burnout has been found to cause lower academic achievements and bad quality of life in addition to poor levels of mental and physical well-being. It was originally reported that physical activity is associated with decreased frequency of burnout events. There are few studies on the connection for both physical training and burnout among medical students. The goal of this research is to see if there's any correlation in both physical training and burnout among medical students in Riyadh, Saudi Arabia. *Methodology:* Maslach's burnout instrument and Baeck's physical activity tool were used in this cross-sectional study on male and female medical students from several medical colleges in Riyadh, Saudi Arabia. The questionnaire measured physical activity and burnout levels, as well as the relationship between the two. *Results:* A total of 411 responses were received, with males accounting for 50.6%. Nearly half of medical students (49%) reported emotional exhaustion at a modest level, while 11.4% reported severe emotional exhaustion. 56% had low physical activity levels whereas 41.6% had moderate physical activity levels, with 2.4% reporting high physical activity levels. Physical activity was shown to be positively correlated with academic efficacy and negatively correlated with emotional exhaustion and cynicism. *Conclusion:* Medical students in Riyadh had lower levels of burnout and physical activity in comparison to other studies. Physical activity was concluded to have a substantial negative correlation with emotional exhaustion and cynicism, and a positive correlation with academic efficacy.

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Knowledge, attitude, and behavior of family medicine residents regarding low-dose computed-tomography lung cancer screening at primary care setting in Riyadh, Saudi Arabia in 2020

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Objective: The present study aimed to assess the knowledge, attitudes, behaviors and encountered obstacles of Low-Dose Computed Tomography (LDCT) lung screening among family medicine residents in Riyadh city, Saudi Arabia. *Method:* A cross-sectional survey was performed over a sample of 202 family medicine residents in Riyadh city. A structured questionnaire consisted of 29 items was used to achieve the study objective. The Statistical Package of Social Sciences (SPSS) was used to analyze the participants' responses. Descriptive statistics were used to analyze the participants' responses to the questionnaire items. *Results:* The findings of the study showed that the recruited family physicians had adequate level of knowledge, neutral attitudes (2.55 ± 0.90) regarding LDCT lung screening. In addition, it was found that discussing the benefits and risks of LDCT lung screening and ordering LDCT for lung screening were the most practiced aspects related to LDCT lung screening by family physicians. Finally, it was found that Concerns of the patients about radiation exposure (1.56 ± 0.78), Difficulty scheduling patients (1.58 ± 0.81) and Limited/lack of CT machines (1.64 ± 0.77) were the most perceived barriers of LDCT lung screening as reported by the recruited family physicians. *Conclusion:* The study concluded that family medicine residents in Riyadh city had an adequate level of knowledge and neutral attitudes towards LDCT lung screening. In addition, the study concluded that patients' concerns of radiation risks and lack of appropriate LDCT scheduling and lack of CT devices were the most barriers limiting the LDCT lung screening in Riyadh city.

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Evaluation of response to treatment in iron deficiency anemia after coronary artery bypasses graft surgery

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Introduction: Anemia is a decrease in hemoglobin and red blood cells that decreases oxygen-carrying capacity. There are different types of anemia, the most common of which is iron deficiency anemia. Anemia is common in patients undergoing surgery, especially cardiac surgery. Therefore, the goal of this research was to evaluation of the response to treatment in iron deficiency anemia after CABG surgery. *Materials and Methods:* This study was performed on patients with CABG surgery at the Rajaie Cardiovascular Medical and Research Center, Tehran, Iran. The data collection tool was a questionnaire. For patients who were anemic ($Hb < 11 \text{ gr/dl}$) at discharge from the ICU, standard oral treatment with ferrous sulfate was started three times daily. To evaluate the response to treatment, hematological tests were followed at discharge from the ICU, one week, three weeks and three months after treatment. Data analysis was carried-out by Chi-square, Mann-Whitney test, and ANOVA test. *Results:* 380 patients underwent on CABG surgery, of which 110 had iron deficiency anemia at discharge from ICU. Of these 110 patients, 32 could not be followed up due to the Covid 19 pandemic, Forty-eight patients responded to standard oral iron therapy, and 30 did not respond adequately to various causes. Hemoglobin, hematocrit, ferritin, Iron, transferrin saturation (TS) and reticulocyte levels in patients who responded appropriately to treatment increased significantly during treatment. *Conclusion:* Although the standard treatment for iron deficiency anemia is oral iron, but there are several factors such as a pandemic, gastrointestinal complications, long duration of treatment, and cultural problems which make the effectiveness of oral treatment questionable, thus intravenous iron should be considered in certain conditions.

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Socio-economic impact on families with diabetic foot ulcer and amputation patients

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Background: The price of a one admission to treat acute diabetic foot infection is approximately 7717.39US Dollar per year. *Objective:* To detect the social and financial influence of diabetic foot ulcer and amputation patients on their families, in Arar city, KSA. *Methods:* This study was a cross-sectional survey study. The data was collected during a period of two months from April 1st to May 31st, 2021, from all adult DM patients and their relatives who will attend the diabetes center during the study period. *Results:* Discussing the relation between diabetic foot and socioeconomic status we found that age, educational level, marital status, and average household monthly income were the most significant parameters that affected diabetic foot and socio-economic status related to this complication (P value <0.005). The low socio-economic condition was associated with worse results in patients with diabetes. Also, patients with average household monthly income who claimed that diabetic foot disease affected their economic condition were 45.7% gained less than 5000, patients with monthly income from 5000 to 10000 who were 28.3%, and patients with monthly income greater than 10000 were 26.1% (P=0.002). *Conclusion:* This study demonstrates the high burden and cost of amputation, which is why there is a direct correlation between socioeconomic status and diabetic foot and amputation. Prevention of diabetic complications particularly diabetic foot is mandatory, through adherence to treatment and access to proven pathways for early assessment when diabetes complications increased, especially for patients from low socioeconomic groups.

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RESEARCH

A cognitive behavioral perspective about awareness and quality of management of knee osteoarthritis: A cross-sectional survey

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Background: Osteoarthritis is a prevalent and costly condition. The aim of this study was to investigate the quality of care being offered to people with osteoarthritis and common pathways of care using a validated patient-reported outcome measure. *Design:* A Cross-sectional Survey was conducted in internal medicine and Rheumatology department in prince Sattam university medical college. *Patients and Methods:* The study included 307 participants (53.1% female, participants 98% Saudis). *Main Outcome Measures:* Almost half of the participants said that they never exercise (48.5%), 34.2% said that they exercise once to three times weekly. The most common chronic diseases are hypertension (21.5%), hyperlipidaemia (21.2%), and type 2 diabetes (16.3%). *Sample Size:* Descriptive statistics are presented in the form of frequency and relative frequency (percentage) for all variables as they were categorical variables. A total of 307 osteoarthritis patients participated in this study. *Results:* Almost half of the participants 49% were you diagnosed with OA within less than one year. Most patients had mild to moderate level of pain as 29.3% had a level of 1-2. 67.8% had positive family history. The most commonly used medication was the analgesics as Brufen and Panadol by 62.2%, followed by Gel or creams that are used by 48.5% of the patients. *Conclusions:* The results suggest that implementation of evidence-informed conservative treatments for osteoarthritis in primary care is suboptimal, although evidence from a larger representative sample is needed.

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ANALYSIS

Awareness and attitude toward the usage of fake braces as an intermaxillary fixation for diet control purposes in Saudi Arabia

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The increased demands towards the usage of fake braces are relatively high. One possible reason behind its usage is to lose weight. The use of Intermaxillary fixation for diet control (IMFDC) is ethically questionable since it causes more harm than good for the patients. No studies have reported the use of Fake Braces as an Intermaxillary Fixation in Saudi Arabia. Therefore, the aim of this study is to evaluate the knowledge and awareness toward the usage of Intermaxillary Fixation (fake braces) for diet controlling in Saudi Arabia. The study utilized a cross-sectional questionnaire with random sampling. An online-based questionnaire was distributed through all social media platforms, and it consisted of two sections. The first section included demographic data of the participants, and the second section included questions about fake braces in relation to diet control. Out of the 1230 respondents, only 72 participants believed that fake braces could be used as an intermaxillary fixation for diet control purposes. Out of the 72 participants, only 2 of them have worn fake braces for diet control purposes. 58.33% of the participants were aware that wearing fake braces has many drawbacks. Knowledge and awareness toward the usage of Intermaxillary Fixation (fake braces) for diet controlling in Saudi Arabia was high. The prevalence of the population in Saudi Arabia who use it in the five main regions was very low and insignificant. More studies discussing intermaxillary fixation for the purpose of diet control on a larger sample size are needed.

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Knowledge, attitude, and diagnostic ability of oral cancer among dental students in Riyadh, Saudi Arabia

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Aim: To assess the awareness, knowledge, attitude, and diagnostic ability of oral cancer and its early signs and risk factors among undergraduate dental students in Riyadh, Saudi Arabia. *Material and method:* In this cross-sectional study a total of 468 participants responded to a close-ended online questionnaire consisting of 24 pre-tested items on oral examination, risk factors of oral malignancies, and their attitude towards the oral cancer approach. The relationship between the questionnaire items and characteristics of the study participants (academic year and gender) was assessed using the Chi-square and Kruskal-Wallis tests. *Results:* A high percentage of fifth-year students identified tobacco (30%) and alcohol usage (30.9%), viral infections (30.7%), UV exposure (32.5%), older age (33.5%), poor-fitting denture (31.1%), consumption of spicy foods (37.7%) and low consumption of fruit and vegetables (29.4%) as the risk factors for oral cancer. The knowledge of risk factors of oral cancer was noticed between the 2nd year and 4th year, 2nd year and 5th year dental students did not differ significantly. Similarly, the knowledge of the diagnostic ability between 4th and fifth years students did not differ significantly. In general, the fifth-year students had a higher percentage of correct responses to the items. *Conclusion:* Dental students lacked sufficient knowledge of diagnostic ability in detecting oral cancer. Hence it is necessary to focus on providing knowledge in diagnosing oral cancer patients within the dental schools of Riyadh. Thus, it will help dental students in the proper screening and early diagnosis of oral cancerous lesions.

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Comparative characteristics of the clinical picture of COVID-19 in children in 2020 and 2021

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Background: In Ukraine there have been two periods of increased incidence of COVID-19 in 2020 and 2021. The pandemic has wavy character, which may be due, to the high mutational activity, which leads to the rapid formation of new variants of the virus. *Materials and Methods:* There was an analysis of 530 case histories of children from birth to 18 years old, who were hospitalized with coronavirus disease in the period from June 2020 to May 2021. *Results:* In 2021 the share of children aged 1 to 5 increased significantly (from 26.2% to 41%) and the percentage of adolescent visitors decreased (from 24.7% to 15.8%). We found that the average number of patients in 2021 increased in some children with chronic controversial pathology (14.7% in 2021 and 5% in 2020). In 2021, the part with general symptoms and local manifestations of airway lesions significantly increased ($p < 0.05$) 81.15% in 2020). During the wave of 2021, 18 (9.5%) children were involved in intensive care units and the average in 2020 - only 7 (2%). *Conclusions:* During the second wave of coronavirus infection in Ukraine, we observed an increase in the proportion of young and preschool children among inpatients. In the clinical picture of the disease of patients during the second wave of COVID-19, we observed an increase in the absolute number and proportion of children with severe and complicated forms of the disease.

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The association between smartphone usage and musculoskeletal pain among medical residents in Riyadh, Saudi Arabia during covid-19 pandemic

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Background: The association between smartphone addiction and the increased prevalence of musculoskeletal pain is still a controversial issue. The present study aimed at investigating the association between smartphone addiction and musculoskeletal pain among medical residents in Riyadh city, Saudi Arabia during COVID-19 pandemic. *Methods:* This study was cross-sectional that included a 3-part questionnaire over a sample of 195 medical residents. The questionnaire consisted of participants' demographic data, Smartphone Addiction Scale – Short Version (SAS-SV), and “the Nordic Musculoskeletal Questionnaire (NMQ)”. *Results:* The prevalence of musculoskeletal pain among the study participants was as following: neck (69.7%), shoulder (75.9%), Elbow (26.2%), wrists/hands (82.1%), upper back (72.3%), and lower back (91.8%). There were significant statistical differences in smartphone addiction scores in favor of the medical residents who had shoulder pain ($p=0.000$), wrists/hands pain ($p=0.000$), and neck pain ($p=0.000$). The SAS-SV score were significantly correlated to the participants' duration of exercises ($r=-0.305$, $p=0.037$), neck pain ($r=0.419$, $p=0.000$), shoulder pain ($r=0.261$, $p=0.029$), wrists/hands pain ($r=0.618$, $p=0.000$), upper back pain ($r=0.207$, $p=0.016$), and lower back pain ($r=0.138$, $p=0.000$). Finally, it was found that the smartphone addiction score significantly predicting the neck pain (OR=2.36, CI: 0.58-2.44, $p=0.000$), upper back pain (OR=2.68, CI=0.50-3.11, $p=0.000$), lower back pain (OR=2.30, CI=0.84-3.51, $p=0.000$), shoulder pain (OR=2.69, CI: 0.41-3.01, $p=0.002$), Elbow pain (OR=2.15, CI: 0.80-2.94, $p=0.027$), and wrists/hands pain (OR=2.97, CI: 1.51-4.18, $p=0.001$). *Conclusion:* The study concluded that smartphone addiction is significantly associated with a higher prevalence of musculoskeletal pain in the neck, shoulders, elbow, wrists/hands, lower back, and upper back.

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Low back pain among physicians, Saudi Arabia 2020

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Background: Low back pain is defined as pain and discomfort located below the costal border and superior to the inferior gluteal sulcus, with or without leg pain. It is an important cause of disability among physicians. *Objectives:* To describe the pattern of LBP among physicians and determine factors those affect it in Saudi Arabia 2020. *Methods:* An online survey was carried out from August through October 2020 including 213 physicians. They were divided according to their functional disability level into: group I with no disability (N=95) and group II with disability (N=118) using Oswestry questionnaire. Mean percent scores for comorbidities, obstetric and gynecological histories, Oswestry functional disability and life styles were calculated. *Results:* Group II mean age was substantially higher than group I [46.9 years (8.91), 41.3 years (7.52), $p=0.043$]. 75.4% of group II significantly worked in surgical specialties ($p=0.026$). Both score percent for menopausal and menstruating females and life styles score were significantly higher in group II [52.9 (9.35), 54.1 (9.53), $p=0.032$, 0.023, 66.3 (11.86), $p=0.045$ respectively]. The overall functional disability score for group II was 59.9%. Significant predictors for LBP were: age (OR=3.8, $p=0.030$), specialty (OR= 2.5, $p=0.005$), marital status (OR= 1.6, $p=0.038$), obstetric and gynecological scores (OR=4.8, $p=0.002$), life style total score (OR= 3.2, $p=0.006$), BMI (OR=2.5, $p=0.01$) and total comorbidity score (OR= 2.1, $p=0.034$). *Conclusion:* Predictors for LBP functional disability were age, specialty, marital status, obstetric and gynecological histories, life styles and comorbidities. Disability affects walking, sitting, standing, travelling and social life.

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The association between smoking and urinary albumin excretion rate and GFR in patients with type 2 DM

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Objective: The objective of this study was to find the differences in urinary albumin excretion rate and glomerular filtration rate (eGFR) between non-smoking, currently smoking and formerly smoking type 2 diabetic patients. *Methods:* A cross-sectional study was conducted at King Saud University Medical City, Riyadh - Saudi Arabia on 111 diabetic patients attending Family Medicine Clinics and primary care clinics. The data was collected from a self-administered questionnaire, in addition to laboratory data from the EsiHI system. *Results:* Results showed Mild to moderate decreased eGFR among 1.6% of non-smokers, 6.2% of current smokers, and 3.1% of former smokers. Multivariate logistic regression analysis revealed that current smokers were at higher risk of low eGFR and Albuminuria compared to former smokers. In addition, it was found that there was a significant risk of Albuminuria among current smokers who started smoking at age of ≤ 25 years (OR: 3.51, CI: 2.07-6.19, $p<0.05$), former smokers who smoked for more than 10 years (OR: 3.14, CI: 1.84-4.68, $p<0.05$), current smokers who smoked for 5 to 10 years (OR: 2.68, CI: 1.56-3.41, $p<0.05$), current smokers who smoked for more than 10 years (OR: 3.61, CI: 1.89-6.84, $p<0.05$), current smokers who smoke one type (OR: 2.84, CI: 2.21-6.06, $p<0.05$), and current smokers who smoked more than one type (OR: 3.51, CI: 2.07-8.14, $p<0.05$). *Conclusion:* The present study concluded that age of starting smoking, duration of smoking and types of smoked products are significant predictors of low eGFR and Albuminuria among diabetics who are current smokers.

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RESEARCH

Protective effect of some food supplement against the toxicity of cyclophosphamide on the brain

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The nervous system had been found to be affected by oxidative stress. Natural dietary supplements had been proved that they have antioxidants properties that may protect our bodies against the effects of free radicals. Aphanizomenon flos-aquae (AFA) are a dietary supplement with scientifically demonstrated health-improving effects especially on the nervous system. Cyclophosphamide (CP) is a widely used medication in chemotherapy and can cause oxidative stress. This study was conducted to investigate the role of AFA in preventing cyclophosphamide-induced adverse effects on the brain tissue of CP-treated rats. It is an experimental study carried out in the period from November 2020 to June 2021. It was performed on 30 albino rats with body weights of 280-320 g. The animals were divided into the following three groups. Group 1 (control group), Group 2 (CP group, received a single dose of CP at 100 mg/kg-1 BW intraperitoneally), and Group 3 (CP+ AFA, received orally extract of AFA for 30 days after CP injection). The morphological and histological structures of the brain were compared in the different groups of rats. Paraffin sections were prepared for histological, histochemical, immune-histochemical and morphometric studies. The data were statistically analyzed. Examined sections showed significant cellular injury in group 2 in comparison to the control groups. Group 3 showed marked improvements in the changes that occurred compared to the second group. These results provide evidence that AFA has a protective effect as they reduced the pathological cellular injuries in the cerebral cortex cells induced by cyclophosphamide.

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ANALYSIS

Compliance with the international code of marketing of breast milk substitutes: Can physicians protect the code?

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Background: The International code of marketing of mother's milk substitutes was adopted following the reports on the general decline in the prevalence of breastfeeding worldwide. This topic gains the attention of the Saudi authority that implementing the Saudi regulations code of marketing mother's milk substitutes. *Research aims:* To determine the prevalence of exposure to mother's milk substitute products marketing among family medicine and pediatric physicians through key channels such as health facilities, media, and direct contact with companies. *Methods:* A cross-sectional study, survey-based, with a sample of family medicine physicians and pediatricians working at King Saud University Medical city from February 2021 to May 2021. The researchers adopted the health facilities module of the monitoring tool established by The World Health Organization to monitor adherence to the code. *Results:* Out of 131 participants, 31.3% (n=41) reported that the personnel from companies had contacted them. The direct visit was the most prevalent means (67.2%, n=88). Promotional, Informational, or educational materials and Samples of formula milk/other baby food products were prevalent. The company representatives popularly offered to sponsor events/workshops for health facilities/ staff, 43.5% (n=57). There is a significant lack of knowledge and training among the participants regarding the national and the international code of marketing mother's milk substitutes. *Conclusion:* There is a significant degree of non-compliance to the code of Marketing of mother's milk Substitutes among breast-milk substitute products manufacturers. The study recommends training the physicians about implementing the code of marketing mother's milk substitutes.

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Prevalence and impact of primary headache on quality of life in the general population of Arar, Northern Saudi Arabia

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Background: Headache is a common health problem; it could leads to negating influences on the quality of life. *Objective:* The study aimed to investigate the prevalence and influence of primary headache on the quality of life of the general population of Arar, Northern Saudi Arabia. *Methods:* A descriptive cross-sectional study was conducted during the period from April 1st to July 31st 2021. Data was collected from all adult male and female attendees of 5 randomly selected primary health care centers (PHC) in Arar city. Pre-designed standardized questionnaire was used for data collection. The impact of headache on HRQL was assessed by using headache impact test (HIT-6). Collected data was analyzed using SPSS software program, Ver. 24. *Results:* Most (86.9%) of participants had a headache in the preceding year, 51.3% of them had headache monthly, 36.2% don't use any medications and in 30.3% of participants headache usually persists for hours in spite of medication. The impact of headache on participant's HRQL was little or no impact in 23.4% of them, moderate impact in 21.7%, substantial impact in 13.6% and severe impact in 41.2%. *Conclusion:* In the current study, the prevalence rate of primary headaches was 86.9% during the preceding year, which is higher than the estimated results of other studies. We discovered that headaches have a thoughtful effect on the participant's HRQL in 41.2% of the participants. Here is a substantial association on the impact of headaches in HRQL and two socio-demographic characteristics, sex and average monthly income of the participants' family.

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Development of nano-formulating dexamethasone for anterior uveitis treatment: A randomized clinical trial study

Mostafa Fegghi, Behzad Sharif Makhmalzadeh, Fereydoun Farrahi, Alinejat Sharafi, Ali Kasiri

Objective: To evaluate the efficiency of nano-formulating dexamethasone in the treatment of anterior uveitis. *Methods:* The present study is a randomized clinical trial study conducted on 20 patients with anterior uveitis referred to the Ophthalmology Department of Imam Khomeini Hospital, Ahvaz University of Medical Science from June 2019 to March 2020. Patients were divided into two groups randomly with 10 subjects in each group. One group of patients received micellar nanoparticle containing 0.1% dexamethasone (DEX) (the nanoparticle group) and another group received 0.1% DEX solution (the control group). In the 1st, 3rd, 7th, 14th, and 28th day of the treatment and second month after treatment, the patients were followed-up clinically. The number of visible cells in the anterior chamber are counted and graded on a scale of 0 to 4 based on the Standardization of Uveitis Nomenclature Working Group. Visual acuity, posterior adhesion, cell count of anterior chamber, flare, hypopyon, and intraocular pressure was compared between the two groups. Besides, the correlation between hypopyon and vision, the cell count in the anterior chamber and visual acuity, visual acuity and flare, visual acuity and posterior adhesion. *Results:* There was a difference in visual acuity, removal of posterior adhesion, cell count of anterior chamber, flare, improving hypopyon, intraocular pressure significantly between the nano DEX group and the control group ($P<0.05$). *Conclusions:* The use of 0.1% DEX nanoparticles can be quite effective in anterior uveitis treatment. Therefore, more controlled studies are needed to understand and recognize the effects of DEX nanoparticles in the treatment of uveitis.

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