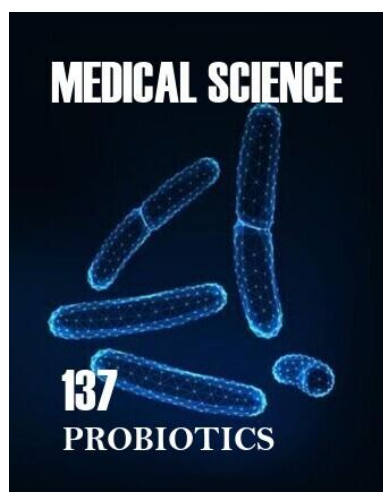# MEDICAL SCIENCE

About the Cover

MEDICAL SCIENCE

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PROBIOTICS

Background: Probiotics are living microorganisms that, when given to a host in sufficient amounts, have a positive impact on their health, currently being considered as viable therapy options because of research. The purpose of this paper was to assess the knowledge, attitude, and practice about probiotic use among health professionals in KSA. *Method:* A cross-sectional study was conducted on 237 health care workers from Saudi Arabia using a self-administered online disseminated questionnaire for data collection. SPSS 23.0 for Windows was used to gather, tabulate, and statistically analyze all the data. Absolute and relative frequencies were used to express qualitative data. Relative and absolute frequencies were used to express the qualitative data. Categorical variables were compared using either the chi-squared or Fisher's exact test. Statistical significance was set at P < 0.05. *Results:* The outputs showed that, 14.3% of participants have good knowledge and 3% have very good knowledge. Knowledge of probiotics was significantly-associated with their residence region, gender, marital status, and professional position (P < 0.05). 48.9% of participants consumed a probiotic product previously. 51.1% recommend the patient/family/close relative to consume probiotics. *Conclusion:* This study offers insightful information about Saudi Arabian healthcare providers' probiotic knowledge and practice. Healthcare professionals from different locations of Saudi Arabia have significantly distinct knowledge gaps and practice patterns with regard to the definition, knowledge, and usage of probiotics. (Ref: Alnefaie GO, Alammari RM, Alzahrani AA, Althobaiti RM, Althomali FA, Alsherbi NA, Khalifa EA. Health professionals' knowledge, attitude and practice regarding probiotics use in Saudi Arabia: A cross-sectional study. Medical Science 2023; 27: e302ms3148).

Cervical cancer screening; awareness, acceptance and barriers to access among sexually active women of Hail region of Saudi Arabia

Jumana Abdullah Al Huwaymil, Noura Ali Alhoty, Nuzhat Parveen

Early diagnosis and management of cervical carcinoma can prevent the morbidity associated with cervical carcinoma and deaths. The study aimed to assess cervical cancer screening awareness, its acceptance and barriers to access among sexually active women of the Hail region of Saudi Arabia. *Methods:* This cross-sectional, community-based survey-study was performed on 18-70 years old women from January to March 2023. *Results:* The mean awareness scores were significantly higher among Non-Saudi than Saudi participants (P = 0.009) with access to social media and higher educational level (secondary school and above (P = 0.014) were significantly more aware of cervical cancer screening. While the area of residence, age, number of children, occupation and family history were not significant factors (P > 0.05). Mean acceptance scores were significantly higher among participants who had access to social media and family history (P=0.040) and (P=0.027) respectively. Similarly, nulliparous women (M=19.8, SD=26.8) and grand multipara were significantly lower than participants with 1-2 and 3-5 children. The participants' area of residence, nationality, education and occupation were not significantly associated with variations in the mean scores of cervical cancer screening acceptance (P > 0.05). Differences between the mean scores of barriers to accessing cervical cancer screening with respect to any demographic characteristics were statistically insignificant. *Conclusion:* Health education about HPV-related infections, cervical cancer screening, vaccination and providing information through health professionals and media can help to reduce the new emerging cases.

Estimation of thoracic aortic dimensions in smokers and non-smokers on Contrast-Enhanced Computed Tomography

Swati Kumari, Jaseemudheen MM

Background: Tobacco use is mainly classified into two forms, smokeless and smoking. In India, smoking is mainly in the form of bidis and cigarettes. Smoking leads to serious health effects like arterial stiffness and aortic aneurysms. *Aim:* The purpose of this study was to determine the relationship between smoking and aortic diameter among smokers and non-smokers. *Methods:* A case-control study was conducted including 34 smokers and 34 non-smokers. Participants who were referred for contrast-enhanced computed tomography (CECT) thorax were included. The diameters of ascending aorta, proximal and distal arch of aorta and descending aorta were measured in the arterial phase using distance measuring tools. *Results:* In smokers, the mean diameter of ascending aorta, proximal and distal arch of the aorta and descending aorta were 30.51 ± 2.96, 25.38 ± 3.20, 22.70 ± 2.33 and 23.28 ± 2.02, respectively. In non-smokers, the mean diameters of ascending aorta, proximal and distal arch of the aorta and descending aorta were 31.32 ± 4.54, 25.42 ± 3.10, 22.77 ± 3.41 and 23.54 ± 3.25 respectively. *Conclusion:* According to the current study, there was no significant difference between smoking and aortic diameter among smokers and non-smokers. The duration of smoking has no effect on ascending aorta, proximal and distal arch of aorta and descending aorta.

Beneficial role of Vitamin C on radiation-induced skin cellular injury

Salman Bin Dayel, Ali Hassan A. Ali, Mohammed Saad Alqahtani, Saud S Alanazi, Meshari Mahud Alshammari, Faisal Mubarak Almuqbel, Khaled W. Alsaygh, Saud Mohammed Alzahrani, Nasser Hassan Al-swedan, Abdulelah Eyad Alqudaimi, Hamoud M. Almubki, Fahad A. Alzahrani, Tareq A. Althubiti, Wujud Khalid Alanazi, Alanoud Abdulqader Ahmad

Maintaining the health of your skin is greatly aided by vitamin C. Along with other supplements, vitamin C extract has been added as a dietary supplement because it can lessen the harmful compounds' tendency to oxidize. In this work, the potential protective effects of vitamin C were investigated in relation to the histological and histochemical alterations in the skin of rats following exposure to gamma radiation. 33 mature male albino rats served as the subjects for the current study. There were three equal groups formed from them. The control group received no medical treatment. Animals in the radiotherapy group were given one dose of gamma radiation. Rats in the third group were administered Vitamin C extract daily at a dose of 20 mg/kg - body weight one week prior to and one week following irradiation. Various stains were used to examine the histopathological and histochemical alterations in skin tissue. Gamma radiation-exposed rats' skin underwent a number of histological and histochemical alterations. Administering vitamin C extract helped to improve these changes. The current study demonstrated Vitamin C's curative and preventive effects on albino rats' skin against radiation-induced skin damage.

The effect of prolonged usage of headsets on hearing efficiency among students at Qassim University

Ghaida A Alfanoud, Hailah F Aljurbua, Ghayda S Almazroa, Rahaf S Alenazi, Atheer M Alharbi, Waleed Abdulaziz Alhazmi

The current study aims to determine the effect of prolonged use of headphones on hearing among Qassim University students, to evaluate the relationship between tinnitus and prolonged use of headphones, the different effects of prolonged use of headphones among male and female students and test the hypothesis of the study that there is an increased risk of hearing problems with prolonged use of headphones among students: For this purpose, 368 participants took part in the questionnaire and the highest percentage of the total sample was a user of the headset by 87.2%. Results showed that headphone use negatively affects hearing health. Chi-square results showed a statistically significant association between hearing health and all the following variables: Hearing rates today compared to five years ago, not hearing family or friends well, hearing ringing or whistling sounds in their ears

without a source of sound worse, difficulty hearing someone talking in a whisper, take some medication regularly for tinnitus and tell a specialist they have a hearing loss. Finally, the Spearman correlation found a very strong negative statistical relationship between headphone use and the rate of hearing, the more hours of headphone use per day, the lower the rate of hearing.

Prevalence, clinical aspects and impact of migraine headache on quality of life of population in Jeddah, Saudi Arabia

Fathi El-Gamal, Sultan Qurban, Malk Aljohani, Raffal Algaedy, Waleed Weiyani, Salah Eldeen Dafalla

This study aimed to evaluate prevalence, determinants and associated quality of life impairment due to migraine headache among the population of Jeddah city, Saudi Arabia. A cross sectional study was conducted using the convenient sampling technique via Online-Google form questionnaire. It provided information on: Personal and sociodemographic characteristics, morbid history, clinical aspects of migraine headache and quality of life. Logistic regression and factor analyses were used. Of all the participants, 69% had headache; however, migraine was diagnosed among 38.6% (59/153) of the participants. The subjects with positive family history of migraine were 4.6 times more likely to have migraine compared to those without (OR: 4.564; 95% CI: 1.811, 11.503, $p < 0.001$). The participants with Migraine were 9.1 times more likely to use OCT drugs (particularly NSAIDs) compared to those without (OR: 9.098; 95% CI: 3.107, 26. 636, 503, $p < 0.000$). Factor analysis showed that Migraine was associated with restriction of ability to concentrate on work and home activities (weight = 0.206), with feeling angry because of headache (weight = 0.207) and with feeling tired to do work or home activities (weight = 0.203). Migraine headache, is a common health problem that affects the quality of life of the affected population of Jeddah City Saudi Arabia.

A study of sleep problems and effect of COVID pandemic on sleep patterns in children and adolescents attending a tertiary care centre in Southern India

Shailaja V Mane, Nikhil Taneja

Introduction: Children and teenagers who have difficulty sleeping have considerable mental and physical health issues. The present study aided to assess the prevalence of sleep disorders in children and adolescents. It would help create awareness amongst parents with children and adolescents with sleep problems. The need for health care professionals to study the sleep pattern among Indian children and adolescents would be assessed. *Methods:* This is cross sectional study was carried out amongst 299 children and adolescents between ages 1 and 18 attending the outpatient and inpatient department. Total 24 months were utilized for the study. Children and adolescents with serious and/or terminal illness were excluded. *Results:* The prevalence of sleep problems in this study was found to be 15.1% (45) from the 299 participants. From the total of 45 children with sleep problems, 78% (35) were school going children (5-12 years) and 20% (9) were teenagers (12-18 years). Pre-school children (3-5 years) constituted 2% (1). The sleep pattern was altered by the COVID pandemic in 43% (15) of school age children and 66.7% (6) of teenagers. The pandemic had affected older children (over 5 years of age). *Conclusion:* Two thirds of parents reported being unaware of their children's sleep issues. It was shown that sleep disturbances had a considerable detrimental influence on daytime functioning, including daily tiredness and suboptimal academic performance. The pandemic of COVID-19 disrupted sleep patterns by causing people to sleep more than required primarily school-age children and adolescents.

CASE REPORT

Case of Rhino-orbital-cerebral mucormycosis post COVID-19 infection

Lojain Bassyoni

Mucormycosis used to be a rare fungal infection that could affect the craniofacial area among other regions in the body. However, after COVID19 era it became more common especially in older individuals with systemic co morbidities like diabetes. Rhino-orbital-cerebral mucormycosis is a severe and a serious complication of COVID-19 infection that has a high morbidity and mortality rate despite proper medical and surgical management. Here we report a case of Rhino-orbital-cerebral mucormycosis post covid infection in a 66-year-old female patient who presented with a fungating eye lesion.

Synovial sarcoma of the inferior nasal turbinate: A rare case report in Sudanese patient

Mujtaba A Ali, Sharfi Ahmed

Background: Synovial sarcoma is a known soft tissue malignancy that affects mainly the extremities while it is rare in the head and neck region and rarest in the inferior nasal turbinate, to our knowledge, no cases particularly in the inferior nasal turbinate have been reported to date. *Case Reports:* We managed a patient with synovial sarcoma who presented with epistaxis, right nasal obstruction and right inferior nasal turbinate mass. Endoscopic nasal biopsy and immunohistochemistry markers confirmed synovial sarcoma. As an early stage of inferior nasal turbinate synovial sarcoma, our patient was managed by endoscopic nasal surgery only. He was observed with close follow-up for 11 months and he had no signs of recurrence after his operation. *Conclusion:* Sino nasal sarcomas are rare aggressive and carry a poor prognosis. For the early stage, surgical resection is the best treatment modality. Close follow-up is warranted for the optimal outcome.

Awareness of Diabetic Ketoacidosis among senior year medical students in Al-Qassim Universities KSA: A cross-sectional study

Tarek A Elghamrawy, Raghad Ibrahim Alhumaidan, Farah Abdullah Alassaf, Abdulmajeed Abdulaziz Alfouzan, Hind Naif Alanazi, Ebtisam Fahad Alotaibi, Ibrahim Ahmad Almohaimeed

Background: The management of Diabetes Mellitus and its important complication Diabetic Ketoacidosis is very important for students soon to be physicians. We in this study will investigate their awareness and knowledge through a cross-sectional pre-validated Questionnaire in senior students at Qassim Universities. *Methods:* This study is cross-sectional; online questionnaire-based observational study conducted at Qassim Universities to measure their knowledge regarding diabetic ketoacidosis. The respondents were senior final-year MBBS students at that college, and the data were collected and analyzed statistically. *Results:* Among the 292 senior medical students from Al-Qassim Universities, who participated in the study, 45.2% were male and majority of participants were in their fifth year (50.7%). Moreover, 81.5% of the 292 senior medical students from Al-Qassim Universities who participated in the study had sufficient knowledge of diabetic ketoacidosis. There is a weak association between gender and inadequate knowledge (OR=1.59, 95% CI (0.89, 2.83), P=0.137). Unaizah College of Medicine had the highest proportion of students with enough knowledge (86.4%), whereas Sulaiman Al-Rajhi University had the lowest proportion of students with inadequate knowledge (35.6 percent). There were no gender or academic year variations in knowledge (p=0.091 and p=0.055, respectively). *Conclusion:* It could be concluded from the current study that most of the students had basic knowledge regarding the definition and diagnosis of diabetes mellitus, DKA, and their management. In addition, our study recommends preparing of some interventions to increase the level of awareness among senior medical students as preparing workshops.

Knowledge, Attitudes, and Practices (KAP) of inpatient nursing staff regarding bowel preparation before colonoscopy: A cross-sectional study

Razan Almuhyawi, Waad Almaramihi, Abdulmuti Seleem, Renad Kamfar, Shahad Almuhyawi, Hani Jawa, Waleed Alghamdi

Background: Instructions for bowel preparation are primarily provided to admitted patients by inpatient nurses. We conducted a cross-sectional study aimed to determine the extent of knowledge and practice of inpatient nursing staff on colonoscopy preparation at King Abdulaziz University Hospital (KAUH). *Method:* A total of 171 nurses were involved in the study, and 136 of them responded to the questionnaire. *Result:* (80.9%) of participants identified the color of the stool that reflects a patient suitable for a colonoscopy. 64.7% of respondents, agreed that the scheduled timing of colonoscopy has an impact on how they provide bowel preparation instructions. Moreover, 13.2% of respondents considered that patients should be instructed to follow low fibers and clear liquids before having a colonoscopy. The majority of nurses (85.3%) agreed the ideal time to give inpatients their first dose of split bowel preparation is one day before a colonoscopy. *Conclusion:* According to the current study's findings, the participating nurses had a fair level of knowledge and practice regarding bowel preparation before colonoscopy.

Assessment and determining factors of the awareness and knowledge of healthcare providers about Cardiogenic Oscillations and its effect on mechanically ventilated patients: A multivariate logistic modeling

Nagla Abdalghani, Mozdalifah Elnaeem, Ahmed Alsaab, Yazeed Almahdi, Mohammed Nasser, Ahmed Rajih, Ahmed Zaylaee, Isameldin Elamin M Medani, Siddig Ibrahim Abdelwahab

Cardiogenic oscillations (COs) are small waves produced by heartbeats with significant clinical implications. Therefore, the current study was designed to determine the magnitude of COs' knowledge and awareness gaps and their associated determining factors. An observational, cross-sectional study was conducted electronically from December 2022 to February 2023, during which data was collected from the targeted population of healthcare providers in Saudi Arabia. The data were statistically analysed using SPSS software. A total of 407 participants were studied, with 58% being male (n = 237), 79.4% (n = 323) having Saudi citizenship, 68.5% (n = 279) being under 40 years old, and 31.4% (n = 128) being over 40 years old. Males had more general knowledge about COs than females, but the difference is not statistically significant, but it is higher among those over 50. Furthermore, it is observed to be considerably greater among physicians, anaesthesiologists, and respiratory therapists, respectively. The findings of the logistic regression model demonstrated that knowledge was significantly correlated with educational attainment (crude OR = 1.526) and clinical experience (crude OR = 0.653, *P<0.05*). A significant correlation was found between age (OR = 2.057), educational attainment (crude OR = 1.384), and clinical experience (crude OR = 0.549) in the logistic regression model for awareness. The amount of knowledge and awareness was unaffected by gender or nationality. Our study found that awareness and knowledge of COs are low among healthcare providers but significantly higher among those with higher levels of education and longer clinical experience. Finally, this lack of knowledge necessitates the development of training programs.

Knowledge, attitude, and practices amongst pediatric dentists in Pune towards Local Anaesthetic allergy and test dose in dental operatory: A questionnaire study

Tripti Lath, Nilesh Rathi, Madhura Pawar, Vikas Bendgude, Surabhi Sinnarkar, Vini Mehta, Toufiq Noor

Aim: The aim of the survey is evaluate the current knowledge, attitude and practices of paediatric dentist towards local anaesthesia allergy and test dose administration in the dental operatory. *Material and Methods:* A 25-question questionnaire was framed in accordance with local anesthesia guidelines amongst 103 pediatric dentists residing in Pune. Data collection was done by sending the questionnaire to the participants through google forms via e-mails/WhatsApp. The responses to questionnaires were summarized and this was accomplished by converting the online recorded information into representative numbers (codes). The data was entered into the Statistical Package for Social Sciences (SPSS) and analyzed. *Results:* Most of them, about 62.83% were not well aware of protocols for LA allergy testing. Maximum of participants, 30% did not know if the dose of epinephrine (1:1000) can be given in a child less than 30 kgs. Epinephrine was the drug chosen by 88% to be their first choice in management of anaphylaxis. 70% preferred Intramuscular as initial route for epinephrine injection. 60% said they have never seen a patient with local adverse reaction after use of local anesthesia. *Conclusion:* The lack of information among dental practitioners about maximum doses and dose estimates for local anesthetics for children was alarming; mainly as LA systemic toxicity was dose dependent. Our study suggested conducting additional educational courses to keep both general dental practitioners and specialists up-to-date on proper application of these vital components of dentistry.

Knowledge of CT scan indication for traumatic brain injury among emergency medical professionals

Ali Hassan A Ali, Omar O Serhan, Mohammed Saad Alqahtani, Ziyad Alghofaili, Ibrahim Mohammed Alobaidi, Bandar Suliman S Alsultan, Talal A Alharbi, Ali Ababtain, Bader M Alotaibi, Ammar H Alenazi, Fahd M Alanazi, Tareq A Althubiti, Yousef Fudhayl F Alanazi

One of the most frequent reasons for trauma hospitalizations is a minor head injury, but how best to handle them is still up for debate. Although clinically severe traumatic brain injury is uncommon in this group, it could be fatal if a clinically important condition is overlooked. This study aims to assess emergency physicians' knowledge of and adherence to these head CT guidelines. We questioned our participants about their knowledge of the regulations and how they applied to their professional lives. A survey was issued at random to EPs from King Khaled Hospital in Al-Kharj. Among the 74 emergency room doctors who replied, the utilization rates and awareness of clinical decision rules were respectively 55.5% and 43.3%. The working atmosphere and higher likelihood of lawsuits, which were 54.6% and 59.6% respectively, were the hurdles to using such policies. 89.9% of those doctors said they would like direction on how to put these standards into effect on a daily basis. Despite the large incidence of head traumas, there is confusion over what constitutes a minor head injury that led to requests for more CT scans. The healthcare system will be burdened, and there will be an increase in radiation exposure. A better use of our resources and a decrease in radiation risks will come from more education about head CT regulations.

Prevalence of depression in post-bariatric surgery among Saudi females in Riyadh

Khaldoun Ibrahim Marwa, Abdulrahman Bashir Ahmad Hussamuldin, Shujon Mohammed Alazzam, Sarah Saad Alamer, Jana Sameer Sendy, Qamar Alsayed Altriny, Lujain Saad Alamer, Lama Suliman Aleid

Background: Obesity is one of the major health problems that can lead to numerous comorbidities such as cardiovascular disease, metabolic syndrome and increased mortality and risk of psychological distress, depression, anxiety, impaired health-related quality of life (HRQoL) and increased risk of depression suicidal ideation, especially women. Higher rate of depression has been observed among patients with obesity-related comorbidities. Bariatric surgery has been shown to improve several psychological symptoms. Our objective is to determine the prevalence of depression among Saudi adult females in post-bariatric surgery in Riyadh. *Methods:* A retrospective study. Targeted Saudi adult females who had bariatric surgery in Riyadh city, Saudi Arabia, the data were collected in April and May 2023, using PHQ-9 questionnaire that was published in social media in general. The data was analyzed through (SPSS). *Result:* The participants were 172 females with post bariatric surgery. The mean age of the participants 43% was from 28-38 years old, 53.5% were married, 62.8% with university educational level. The study revealed most of them 30.8% had minimal to mild severity of depression. Most of them 15.7% diagnosed with Polycystic Ovary Syndrome (PCOS), although 37.2% reveled no complications after surgery. 75.6% did the surgery within the past year and 25.6% most of them got none-minimal depression. *Conclusion:* The majority was diagnosed with PCOS who have had the surgery within the past year and got minimal depression with no complications. There was significant statistical relation between the age and depression.

Impact of brain hemisphericity on cognitive performances and attention in young healthy individuals: Cross-sectional observational study

Sonali Kumari, Akanksha Saxena

Background: Understanding the style of cognition according to the brain dominance of students is necessary to keep them active and attentive. The study aims to check the cognitive performance and attention of young healthy individuals with right and left brain hemisphericity. *Methods:* This cross-sectional observational study was conducted at a physiotherapy institute from September 2022 to January 2023. 240 healthy young adults were recruited and informed consent was taken. Brain dominance of individuals was classified by Cognitive Style Brain Dominance questionnaire, Montreal Cognitive Assessment scale and sustained attention by Trail Making Test A, and selective attention by Trail Making Test B. *Result:* Out of the total recruited number of participants; 50.4% were male (n=121) and 49.6% were female (n=119). The varied brain dominance was seen as Right, Left, and Middle brain dominant to be

29.1%, 33.3%, and 37% respectively. The Spearman correlation was done for outcome measures which showed that medium positive relationship ($\varrho=0.46$) between left-brain dominant and sustained attention whereas a very strong negative correlation ($\varrho=-0.90$) between selective attention and left-brain dominant. Chi-square examines the study parameters and Mean comparison done by Friedman test which was statistically significant. *Conclusion:* There was significant relationship between left-brain dominance and sustained attention whereas a negative strong relationship between selective attention and left-brain dominance. Hence cognition does not depend upon varied brain dominance.

CASE REPORT

An 82-year-old patient with a tibial plateau fracture and the impacts of comprehensive rehabilitation: A case report

Ruchika Zade, Pratik Phansopkar

Tibial plateau fractures, which are a rare injury to the proximal tibia, range in severity from minimal displaced stable fractures to high energy complicated fractures with severe articular and metaphyseal comminution and injury to soft tissues. The consequences concerning tibial plateau fractures include stability and function with regard to knee, a crucial weight-bearing joint. In addition to management-related issues including High-energy, discus articularis, injuries of tibial plateau may lead to later sequelae that is different collapse, implant failure, and arthritis of the knee joint. Wound Destruction and critical comminution lead to malalignment. An 82-year-old man who had previously suffered injuries from an automobile accident to his right leg was brought to the hospital's emergency room. After admission, an X-ray was taken, and it showed a compound grade 3A fracture on the right side of the distal 1/3 of the tibia and fibula. After that, he underwent surgery (debridement and extra-cutaneous plate fixation), and directed toward physiotherapy. There are difficulties for the operating physician because each fracture necessitates a unique surgical strategy. Anatomical reduction and restoration of the joint line are required for firm fixation and prompt joint mobilization following a tibial plateau fracture. This drastic complex injury and successfully treated tibial shaft fracture, the knee joint function recovered satisfactorily. The exercises and training improved the patient's standard of living in bed mobility. The client improved his postural stability, lower limb strength, and muscle strength due to functional re-education, which also improved the muscle's strength and endurance.

ANALYSIS

Evaluation and orientation of isotretinoin side effects among a sample of Saudi population

Fawwaz Freih Alshammrie, Bassam Fahad Algharbi, Omar Saad Alshammari, Wael Saleh Alanazi

Introduction: Acne vulgaris is a common dermatological disorder in Saudi Arabia (KSA). Severe acne can be treated more affordably with isotretinoin, but there are a number of adverse effects to be cautious of. This study aims to identify the most prevalent isotretinoin side effects among Saudi citizens and assess how well-informed Saudis are about the drug. *Methods:* A longitudinal cohort study will be conducted using a pre-validated and translated electronic questionnaire and direct questions will be asked to the patient by meeting them in person, contacting them via mobile or social media. *Results:* This study found that 26% of 3953 people used isotretinoin, with most prescriptions being done by doctors (91%). 61.2% of participants were suffering from dryness of the body, with 61.1% suffering from dry eyes and 72.4% suffering from dry lips. 37% were aware that isotretinoin can cause birth abnormalities, while 88% of respondents used contraceptive pills, intrauterine devices (IUDs) where used by 18% from the participant while in 32% participant both contraceptive pills and isolation. In 88% of respondents, isotretinoin may help prevent pregnancy, with 50% using contraceptive pills, 18% using intrauterine devices (IUDs), and 32% using both pills and isolation. *Conclusions:* The study found that while isotretinoin adverse effects are common throughout the world, Saudi Arabians may not be fully aware of all of the medication's possible drawbacks. An orientation programme is needed to inform the community on the potential negative effects.

Assessment of knowledge and attitude regarding self-care among patients undergoing hemodialysis

Abedulla Khan Kayamkani, Ghaida Faisal Alawi, Mai Mohamed Ghaith, Lamees Raed Kiki, Rana Hatim Nakiti, Butchi Raju Akondi

Background: Chronic kidney disease is characterized by kidney impairment and a glomerular filtration rate lower than sixty milliliters per minute for more than three months. Furthermore, hemodialysis patients are at significant risk for a range of problems, which might result from kidney disorders or the hemodialysis operations themselves. The purpose of this study is to assess hemodialysis patients' knowledge and attitudes toward personalized care. *Methods:* A four-month cross-sectional study was conducted. The non-probability convenient method of sampling was used, and the sample size was 250 participants (dialysis patients). After removing individuals who did not respond to the survey), our final number of participants was 170 hemodialyses (HD) individuals, and the information was obtained utilizing an online/offline survey with a questionnaire. *Results:* This study included an overall sample of 170 people ranging in age from 18 to 85 years, with 62 (36.5%) females and 108 (63.5%) males. Diabetes mellitus was found to be the disease with the greatest incidence among the group of individuals (67.41%), followed by

hypertension 50 (29.4%), cardiovascular disease 25 (14.7%), hepatic disease 10 (5.88%), and most commonly used treatment in our study was antidiabetic medications. *Conclusion:* When it came to renal diet, drugs, and modifications to their lifestyles, the individuals in this study exhibited low Knowledge, Attitude, and Self-Care. Our research showed that male individuals knew more about the side effects of hemodialysis than female subjects. The maintenance hemodialysis patients' comprehension and practice were enhanced by receiving guidance on diet, medication, and lifestyle adjustments.

The prevalence of the use of electronic smoking devices among medical students in Madinah

Fahd Yaslam Musawnaq**,** Ahmed Kamal Zoghby, Asseel Abdulrahman Al saqqaf, Nayef Abdulrhman Alblwiy, Faisal Fahad Alhejaili, Abdullah Ahmad AlQurayyan, Tammam Abdulsalam AlMaghamsi

Background: The E-cigarette is a ground-breaking development in the tobacco industry. It was developed in a previous decade when such battery-operated gadgets were created to burn tobacco and satisfy a smoker's addiction. *Objective:* The purpose of this study is to determine the prevalence of e-cigarette use among Madinah Al-Munawara medical students. It will also examine how e-cigarettes help people quit traditional smoking and whether they are potentially addictive. *Method:* Cross-sectional study design and convenient sampling technique used in this study. The medical students of Taibah Medical College and Al-Rayan Medical College taken as the population of the study. *Result:* A total of 295 out of 1250 students completed an online questionnaire, 24.1% of the surveyed students used E-cigarettes, younger age, male, higher college class, those who have ≥ 1 close friend who smokes, show a significantly higher percentage of E-cigarettes use. Higher percentage of using e-cigarettes was faculty of pharmacy (37.7%) followed by laboratory (32.6%) then dentistry (19.0%) and lastly faculty of medicine (18.2%). Finally, the most common symptoms as related to e-cigarettes are cough at 67.6%, followed by headaches at 7%, dry mouth and throat at 4.2% and 21.1%, respectively. *Conclusion:* The results of this study suggest that e-cigarette use is more prevalent in the faculties of pharmacy and laboratory than in the faculties of medicine and dentistry. Participants in this study believed that e-cigarettes were less harmful and addictive than traditional cigarettes, and that they could help people quit smoking.

Health professionals' knowledge, attitude and practice regarding probiotics use in Saudi Arabia: A cross-sectional study

Ghaliah Obaid Alnefaie, Renad Mirzam Alammari, Aseel Ahmad Alzahrani, Rana Mohammed Althobaiti, Faten Abdullah Althomali, Nada Abdullah Alsherbi, Eman Ali Khalifa

Background: Probiotics are living microorganisms that, when given to a host in sufficient amounts, have a positive impact on their health, currently being considered as viable therapy options because of research. The purpose of this-paper was to assess the knowledge, attitude, and practice about probiotic use among health professionals in KSA. *Method:* A cross-sectional study was conducted on 237 health care workers from Saudi Arabia using a self-administered online disseminated questionnaire for data collection. SPSS 23.0 for Windows was used to gather, tabulate, and statistically analyze all the data. Absolute and relative frequencies were used to express qualitative data. Relative and absolute frequencies were used to express the qualitative data. Categorical variables were compared using either the chi-squared or Fisher's exact test. Statistical significance was set at $P < 0.05$. *Results:* The outputs showed that, 14.3% of participants have good knowledge and 3% have very good knowledge. Knowledge of probiotics was significantly-associated with their residence region, gender, marital status, and professional position ($P < 0.05$). 48.9% of participants consumed a probiotic product previously. 51.1% recommend the patient/family/close relative to consume probiotics. *Conclusion:* This study offers insightful information about Saudi Arabian healthcare providers' probiotic knowledge and practice. Healthcare professionals from different locations of Saudi Arabia have significantly distinct knowledge gaps and practice patterns with regard to the definition, knowledge, and usage of probiotics.

Knowledge and awareness level assessment of PCOS among females in Saudi Arabia

Ashraf Radwan, Reham Alharbi, Faris Albeladi, Amal Alzahrani, Joudi Alnfaiei, Maya Abualhamael, Reem Hazem, Wasan Aldalbhi, Osama Sadeak Bajouh, Abdelmageed Ali Abdou, Hussein Sabban, Khames Alzahrani

Background: Polycystic ovary syndrome is one of the most common endocrine diseases worldwide. The ovaries produce a large number of tiny fluid-filled sacs known as follicles and may stop consistently releasing eggs, menstruation cycle abnormalities and frequently elevated levels of the male hormone androgen are the commonest features of the polycystic ovarian syndrome.   This study aims to assess the knowledge and awareness level of the polycystic ovarian syndrome among females in Saudi Arabia. *Methodology:* This cross-sectional study was conducted from January 2022 to May 2023 in Saudi Arabia. Our population consisted of Saudi females aged 16-60. Our sample size is minimally 384 females. Our sampling method was simple random sampling. Data collected through the questionnaire will be entered, stored, and coded using Microsoft Office Excel (2019). And all the statistical analysis will be carried out using the Statistical Package of Social Science Software (SPSS), version 26 for windows. *Results:* This paper comprised 1368 individuals, with a 43.1 percent age range of 20 to 30 years, a 22.2% age range of 31 to 40 years, and a 20.8% age range of 41 to 50 years. 82.2% of individuals had prior knowledge of PCOS. Only 2.07% of our respondents cited television, while 23.02% cited families, 23.02% the internet, 18.3% health care providers, and 17.1% friends as their primary sources of knowledge. *Conclusion:* In summary, Saudi women's knowledge regarding PCOS is inadequate. Knowledge ratings were strongly correlated with age and level of education, marital-status and employment.

Knowledge, practice, and negligence of Breast Cancer screening among women in Jeddah

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Background: Breast cancer is the most common cause of mortality among women in the world, and in Saudi Arabia. Screening of breast cancer is important for treatment, and reducing mortality among breast cancer patients. This study aimed to assess the level of knowledge, practice, and identify the reasons behind negligence of breast cancer screening among women. *Methodology:* A cross-sectional study was conducted on women living in Jeddah. The tool for collecting data was an online questionnaire distributed among women through social media. Specific sections in the questionnaire tested the participants' knowledge, and frequency of practice breast cancer methods. In the final section participants expressed why they neglect to screen for breast cancer. *Results:* The research recruited 842 individuals, 93.5 percent of whom were Saudi. 65 percent of participants were between the ages of 20 and 30. Breast self-examination was mentioned by 87.3 percent of women. 58.4% taught about breast self-examination. 23.9% of participants had low knowledge score of breast cancer screening, 41.9% had moderate knowledge score, and 34.2% had high knowledge scores. 90.7% of participants had bad practice towards breast cancer screening, 6.4% had fair practice, and only 2.9% had good practice. Participants' knowledge score was significantly correlated to their age, a nation and jobs. *Conclusion:* The conclusion, Saudi women had a poor level of knowledge about breast-cancer screening. Nevertheless, screening best practices were observed. Breast cancer awareness programs on the warning signs, symptoms, screening, and prevention should be started, especially at the local level.

Knowledge and awareness of drugs' overdose in emergency departments: Cross sectional study among health care workers and medical students in Hail city, Saudi Arabia

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Introduction: According to WHO, there are about 275 million people (or 5.5% of the global population aged 15-64 years) used drugs at least once in 2019. About 36.3 million people suffered from drug use disorders in 2019. Drug over does is one of risk factor which leads to poor health and death. *Aim:* This cross-sectional study was carried out to assess of awareness of drug over does in ED among health care workers and medical students in Hail city in KSA. *Methods:* 205 of health care workers and medical students in Hail city in KSA were the subjects of the present study. The study was conducted in Hail, KSA from May till November 2022. Data entry and analysis were done by using SPSS version 25. *Results:* Saudi were the most participants173 (84.4%), almost half of them were 118 (57.6%) females. The middle age was the most addict age group 40 (19.5%). Opioid, Amphetamine and acetaminophen represented the highest percentage of drug overdose. *Conclusions:* The study concluded that the most common drug overdose was opioid. Some of the participants showed insufficient knowledge about naloxone. Thus, we recommended implementing method to raise the awareness to contribute in reducing burden of this problem.

The effects of self-perceived stress on smoking status and dependence among primary healthcare visitors in Makkah city, 2023

Haneen Ahmed Bukhari, Jehad Helal Alqurashi

Background: Tobacco use results in more than eight million fatalities annually. By 2030, if global smoking patterns remain unchanged, more people will perish annually from diseases linked to tobacco use. *Objectives:* To measure the effect of self-perceived stress on the status and dependence of smoking among the general population of Makkah, Saudi Arabia. *Methods:* The present study was done in Makkah city over a six-month period, using a stratified random sampling method to select participants. All individuals aged 18 years and above were eligible to participate in the study with the exception of those who enrolled in a smoking cessation program. Information was obtained through interviews using a questionnaire, with nicotine dependence being evaluated using the Fagerström Test. *Results:* Our study involved 190 participants, with over half of them being male. Of those surveyed, 28.4% reported smoking. The nicotine dependence average score was calculated to be 4.1±2.48. According to the Perceived Stress Scale, the average stress score was 16.4±6.7, and most of the respondents demonstrated moderate levels of stress (57.9%). A significant association was observed between nicotine dependence and level of stress (P = 0.033). Individuals who had multiple relapses after quitting smoking trials showed significantly higher levels of stress (P = 0.010). *Conclusion:* The study found that people of the city of Makkah, experienced moderate levels of self-perceived stress, and a significant proportion of them were smokers with a high prevalence of smoking. The study emphasizes the necessity of taking actions to decrease smoking rates and encourage healthier lifestyles.

A cross-sectional study of community knowledge of the effects of active cigarette smoking on respiratory disease and its risk factors in Hail, KSA

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Background: Smoking is a recognized risk factor for respiratory disease. *Objective:* The study objective is to evaluate their familiarity with the consequences of smoking on the respiratory system and the risk of respiratory disease. *Methodology:* A self-administered cross-sectional online survey was conducted in 2023 to determine the prevalence and risk factors of smoking-related disease in the Hail region. The data were entered and processed using version 23 of the statistical package for social sciences (SPSS).

Results: In the present study, 503 individuals from both sexes (females: 60%; males: 40%) participated. When the effects of smoking and the possibility of developing respiratory disease were analyzed, it became clear that non-smokers (both sexes, male 83.2%, and female 88.4%) are more aware of the harmful effects of smoking than cigarettes smokers (male 73.2%, and female 50%). Also, these findings revealed that smokers who do not want to quit smoking have an adverse mindset towards quitting (16%), compared to smokers who do want to quit (84%), and the same group got the fewest programs about the dangers of smoking (25%), compared to smokers who do want to quit (81%). *Conclusion:* The present study revealed that understanding of the negative effects of smoking is lower in smokers than in non-smokers of both sexes.

Sleep patterns and problems among adults in Saudi Arabia: A cross-sectional survey-based study

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Background: Sleep quality is crucial for maintaining physical and mental health, but cultural, social, and economic factors can affect it. Research on sleep quality in Saudi Arabia has yielded mixed results and focused on specific populations. *Methods:* This cross-sectional survey-based study aimed to investigate sleep patterns and problems among adults in Saudi Arabia, recruiting 2,262 participants online. *Results:* Most participants were young adults aged 18-29 years (56.4%), with 37.5% reporting sleep problems. Participants' sleep patterns differed significantly between workdays and rest days. On workdays, 57.2% of participants went to bed between 10 PM and midnight, whereas on rest days, 53% went to bed after 1 AM. The average sleep duration was 7.1 hours on workdays and 8.9 hours on rest days. Rotating shift workers were 1.5 times more likely to experience sleep problems than those working traditional hours (P = 0.03). Participants with a monthly income exceeding 14,000 SAR demonstrated a 0.7 times lower likelihood of experiencing sleep problems compared to those with an income below 4,000 SAR (P = 0.01). *Conclusion:* This study provides insights into the prevalence and factors associated with sleep problems in the Saudi Arabian population. The results suggest a high prevalence of sleep problems and a low use of professional help or medication to manage them. The findings of this study emphasize the influence of socioeconomic status and work schedules on sleep patterns. Specifically, rotating shift work and lower income levels were found to be correlated with a higher prevalence of sleep problems.

Knowledge, attitude, practice of the population toward diabetic foot in Jeddah, Saudi Arabia

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This study aimed at assessing the knowledge, attitude and practice (KAP) towards Diabetic foot and its determinants among the population of Jeddah, Saudi Arabia. A cross sectional study was conducted on 507 subjects via Online-Google form questionnaire. It provided information on personal and socio-demographic characteristics, morbid history, and KAP on diabetic foot. Type 2 diabetes mellitus (T2DM) was present among 10.3% of the enrolled subjects. It was significantly associated with male gender, lower educational level and high monthly income. Knowledge of the subjects about management of DM, and health of their feet was good. However, their knowledge about care for their feet and use of the appropriate feet-ware was low. Attitude of the subjects regarding avoiding risks for DM, and towards the health of their feet was good. However, the attitude and practice towards the use of their feet-ware was low. This was similar in both patients with and without DM. It is recommended that health education programs about how to care for the feet, and proper use of feet-ware should be implemented by health care professionals.

Do statins protect against Respiratory Tract Infection: A systematic review and meta-analysis

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Multiple studies have found no significant effect of the lipid-lowering drugs (statins) in reducing the risk of infections in general. However, there is a paucity of similar data on the comparative efficacy of statins on the risk of respiratory tract infections (RTIs). *Methods:* Publications of head-to-head randomized controlled trials (RCTs) of statins were retrieved from MEDLINE, EMBASE, Web of Science and Cochrane (from January 2000–December 2022). We included RCTs with at least 100 participants and with a minimum follow-up of one year. We selected the included trials, evaluated the risk of bias, and retrieved the data on RTIs. Meta-analyses were performed to summarise the pooled risk ratios (RRs) of RTIs between treatment arms. *Results:* The initial literature search identified 568 records. After duplicates were excluded, there were 318 records. Twenty-five RCTs were excluded after a full-text review of the 29 eligible studies. In the end, four RCTs with a total of 7,912 participants were included in our meta-analysis. The point estimate for the effect of statins was less than 1, however, it did not reach statistical significance in the total analysis (the pooled RR in the fixed effect model was 0.99 (95% CI: 0.94, 1.04; I2=59%; χ2 p=0.66)). *Conclusion:* Our findings showed that statins do not reduce the risk of infections (including RTIs). Additional studies are needed to gain a better knowledge about the potential effect of statins.

CASE REPORT

Impact of physiotherapy rehabilitation in functional recovery of the patient following hemiplegic stroke: A case report

Saivikas M, Harshal Ramteke

A stroke is commonly defined as a neurological dysfunction due to abrupt vascular damage to the central nervous system (CNS). Ischemic stroke develops because of a thrombotic or embolic episode that lowers blood flow to the brain. To avoid harming the brain and worsening the outcome, intervene as soon as possible. The main aim of this case study is to explain the rehabilitation process following the episode of a stroke in order to gain early recovery and functional independence for the patient. Here a 75-year-old man complained of weakness in his right upper and lower extremities, as well as a deviation of his mouth angle and slurred speech since 8 days. He was diagnosed with right hemiplegic stroke after further investigations including Computed Tomography (CT scan) and Magnetic Resonance Imaging (MRI) and was managed conservatively. He was then referred to the neuro-physiotherapy department for further management. He was started with physiotherapy rehabilitation which was planned for 12 weeks which aimed for functional recovery of the patient following stroke and to gain functional independence. During this rehabilitation program patient gained affected upper limb control, upper and lower limb strength, basic functional mobility, improvement in gait, dynamic and static standing balance following episode of stroke.

Early antenatal sonographic assessment of Type III Congenital Pulmonary Airway Malformation
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Prenatal monitoring has led to an increased diagnosis of lung problems during pregnancy. In the past decade, advances in prenatal imaging have transformed the way congenital cystic lung anomalies are identified, evaluated, and treated. Previously, these anomalies were believed to be solely under the jurisdiction of the surgeon, who was authorized to perform surgery on any cystic lung anomalies, regardless of their size or clinical symptoms, in order to decrease the risk of cancer and promote lung expansion, even in newborns that showed no symptoms. However, given that many of these lesions may improve spontaneously over months to years and potentially resolve without intervention, clinicians are now reconsidering this approach and contemplating a more conservative approach for many infants who exhibit minimal or no symptoms in the early months. We present the case of a 28-year-old woman who underwent a TIFFA scan. Antenatal ultrasound detected a single intrauterine live pregnancy at an average gestational age of 22.4 weeks, and the fetus was diagnosed with CCAM.

ANALYSIS

Computed Tomography grading of fatty liver disease in alcoholic and non-alcoholic patients
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Background: Last three decades, the universality of non-alcoholic Steatohepatitis has been continuously on the rise. Fatty liver diagnostic assessment could also do using cross-sectional non–contrast CT imaging. Our study aimed to evaluate the Computed Tomography grading of fatty liver disease in alcoholic and non-alcoholic patients. *Methodology:* A case-control study has conducted on 62 patients divided into two groups, alcoholic and non-alcoholic, with 31 patients in each group. NCCT was performed and HU values were obtained from the right and left lobes of the liver and spleen for comparison. *Results:* The grading has been provided with the help of median liver attenuation values. The four-point grading system is given. Grade I was considered with a range of 35 to 39. The variation was between 30.75 to 35 HU in grade II patients. In grade III patients, the median, ranging from 22.25 to 30.75 HU. In grade IV patients, the median value is 14.37HU. *Conclusion:* NCCT can detect the presence of fatty liver changes in alcoholic and non-alcoholic patients, and grading of the fatty liver could do by assessing the liver attenuation.

The prevalence of myalgia and arthralgia and their associated risk factors among female Saudi medical and paramedical students in Al-Rayan Medical Colleges in Al-Madinah Al-Munawara
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Acute or persistent pain that affects the bones, muscles, ligaments, tendons, and nerves is referred to as musculoskeletal pain. It is a widespread medical and socioeconomic issue worldwide. This study was planned to find the prevalence of MSP in female students from the health science department of Al-Rayyan College, Al-Madinah Munawara. It included students from human medicine, pharmacy, anaesthesia, and nursing majors. A survey questionnaire was distributed among participants. A total of 356 students took part in the study; statistical analysis of responses showed that 271 (76%) of students had complaints of MSP. The most prevalent pain was back pain (64.9%), then neck pain (64.6%), Shoulder pain (63.5%), leg pain (33.9%), wrist pain (26.6%) and elbow pain (12.2%). As per the marital status, 77% of students were unmarried and other 23% were either married or divorced, average married students have 3 kids. A positive and significant association had been found between marital status, the number of children, sleeping hours and muscular pain. Only 17% of the students reported having disabling pain per the Orebro pain questionnaire criteria. Further studies should be conducted to study other risk factors that can cause muscular pain in students.