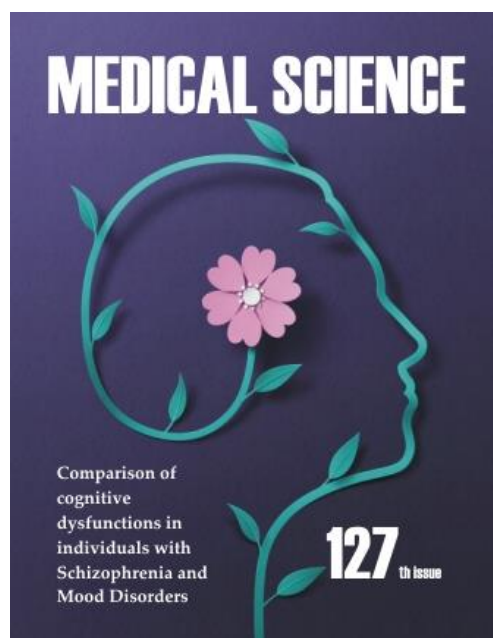


Medical Science

About the Cover



Introduction: Schizophrenia and mood disorders are the chronic debilitating psychiatric disorders having profound personal, social, occupational, and cognitive impairments. Cognitive impairments can hinder treatment seeking behavior leading to chronic and relapsing course of schizophrenia as well as mood disorders. *Aim:* To assess and compare the profiles of cognitive impairment among individuals with schizophrenia and mood disorders. *Material and methods:* Present study was conducted at tertiary care teaching hospital from central rural India over a period of two years as a part of postgraduate dissertation in Psychiatry. Cognitive impairment was assessed by using PGI brain dysfunction battery which consisted of five tests such as Bhatia's short battery of performance intelligence, Verbal adult intelligence test, PGI memory scale, Bender visual-motor gestalt test, and the Nahor-Benson test for perceptual acuity. *Results:* On comparing Group A (schizophrenia) and Group B (mood disorders), we found that Bender Gestalt and Nahor-Benson tests had statistically significant difference between Group A and Group B ($p < 0.05$) and such difference was found to be higher in Group B (mood disorders). While comparing Group A and Group B, we found that total dysfunctional rating score (DRS) had statistically non-significant difference between Group A and Group B ($p < 0.05$). *Conclusion:* Some cognitive domains appear to be more affected than others with diverse presentation among the individuals suffering from schizophrenia and mood disorders. Early diagnosis of and effective coping with the cognitive impairments may reduce the burden of both disorders and prevent further complications such as treatment dropouts or treatment denial. (Ref: Patil SL, Patil PS, Talhan TS, Ghogare AS. Comparison of cognitive dysfunctions in individuals with Schizophrenia and Mood Disorders: A cross-sectional observational study from Central Rural India. Medical Science 2022; 26:ms352e2242).

Biphasic thyroid-like low-grade nasopharyngeal papillary adenocarcinoma: A case report and literature review

Moayad Alqazlan, Mohammad Anas Dababo, Mahmoud Mohammed Bardisi, Abdullah Khaled Almanea

Thyroid-like low-grade nasopharyngeal papillary adenocarcinoma (TL-LGNPPA) is a rare tumor type. This tumor closely resembles conventional papillary thyroid carcinoma and exhibits a solid spindle cell component, which is biphasic in appearance. The distinction of this low-grade tumor from other aggressive malignant neoplasms is important for clinical and therapeutic management. Here we present the case of a 19-year-old female who was diagnosed with a biphasic TL-LGNPPA. We also summarize the clinicopathological features, differential diagnosis, and clinical management of TL-LGNPPA with a spindle cell component.

Medical Science, 2022, 26, ms350e2166

Pseudotumor cerebri presenting with 2nd and 7th nerve palsy

Mathisha Ebby Perin, Suresh Kanna S, Dinesh Babu

Idiopathic intracranial hypertension, alternatively called pseudotumor cerebri is characterized by increased intracranial pressure of unknown pathology with the absence of any structural lesions. This intracranial hypertension most commonly presents with postural headache, nausea, vomiting, transient visual loss with cranial nerve involvement, with most common VI cranial nerve involvement. In the following case report, we present a pseudotumor cerebri presenting with 2nd and 7th nerve palsy.

Medical Science, 2022, 26, ms351e2295

ANALYSIS

Comparison of cognitive dysfunctions in individuals with Schizophrenia and Mood Disorders: A cross-sectional observational study from Central Rural India

Swaroop Lunge Patil, Pradeep Shriram Patil, Tushar Subhash Talhan, Ajinkya Suresh Rao Ghogare

Introduction: Schizophrenia and mood disorders are the chronic debilitating psychiatric disorders having profound personal, social, occupational, and cognitive impairments. Cognitive impairments can hinder treatment seeking behavior leading to chronic and relapsing course of schizophrenia as well as mood disorders. *Aim:* To assess and compare the profiles of cognitive impairment among individuals with schizophrenia and mood disorders. *Material and methods:* Present study was conducted at tertiary care teaching hospital from central rural India over a period of two years as a part of postgraduate dissertation in Psychiatry. Cognitive impairment was assessed by using PGI brain dysfunction battery which consisted of five tests such as Bhatia's short battery of performance intelligence, Verbal adult intelligence test, PGI memory scale, Bender visual-motor gestalt test, and the Nahor-Benson test for perceptual acuity. *Results:* On comparing Group A (schizophrenia) and Group B (mood disorders), we found that Bender Gestalt and Nahor-Benson tests had statistically significant difference between Group A and Group B ($p < 0.05$) and such difference was found to be higher in Group B (mood disorders). While comparing Group A and Group B, we found that total dysfunctional rating score (DRS) had statistically non-significant difference between Group A and Group B ($p < 0.05$). *Conclusion:* Some cognitive domains appear to be more affected than others with diverse presentation among the individuals suffering from schizophrenia and mood disorders. Early diagnosis of and effective coping with the cognitive impairments may reduce the burden of both disorders and prevent further complications such as treatment dropouts or treatment denial.

Medical Science, 2022, 26, ms352e2242

Burnout rate among healthcare workers during COVID19 pandemic in Medina, Saudi Arabia

Hanan Elsayed, Enas Aljohani, Zainab Jeddo, Rama Alraheili, Ghazal Alsisi, Aasha Alkayyal

Background and Aims: Globally, burnout is considered a major problem, disturbing the mental and physical well-being of healthcare workers, and potentially affecting the quality of the care provided. This research was conducted to evaluate the rate of burnout and related risk factors during the coronavirus disease 2019 (COVID-19) pandemic. *Methodology:* A cross-sectional study was conducted between March 2021 and October 2021 to evaluate the rate of burnout among healthcare workers who were in contact with COVID-19 patients at different healthcare facilities in Medina. A semi-structured questionnaire, including the Maslach Burnout Inventory for Medical Personnel, was conducted through social media networks. *Results:* A total of 239 participants met the inclusion criteria. Their mean age was 35.4 years and almost half were female. The health and well-being scores were mean=0.77 and standard deviation=0.33. In addition, the mean emotional exhaustion score point was high (28), and the depersonalization and personal accomplishment were moderate (8.8 and 34.6, respectively). Collectively, the overall score was 71.5, indicating high burnout. Participants with chronic stress as well as younger age groups less than 33 years showed significantly higher scores. Furthermore, participants with impaired quality of sleep had a significantly higher incidence of burnout. Finally, regression analysis showed a significant inverse relationship between burnout and health and well-being. *Conclusion:* High percentage of the participants (82%) experienced high burnout during the COVID-19 pandemic. Being younger, having chronic stresses, and having impaired sleep quality were observed to be connected to high burnout.

Medical Science, 2022, 26, ms353e2425

Perceived factors of choosing anesthesiology as a career among medical students in Umm Al-Qura University: A cross-sectional study

Salah Bakry, Suhail Alfaifi, Ibrahim Alibrahim, Suhayb Bakry, Sulten Alzahrani, Ahmed Alsufyani, Rayan Bassas, Abdulaziz Alnemari, Mohammed Alfattany, Muhammad Irfanullah Siddiqui

Background and aims: Medical school graduates must choose a specialty to practice medicine, and choosing a specialty is an important decision that is influenced by several factors. This study aimed to identify the factors that would influence anesthesiology choice as a future career among medical students at Umm Al-Qura University, Saudi Arabia. *Methodology:* This comparative uni-centre cross-sectional study was conducted between March and June 2022, using an electronic survey. The survey was distributed to female and male medical students of different years and levels of experience. It attempted to evaluate the influence of participants on their choice of anesthesiology as a future career. *Result:* This study enrolled 349 medical students from UQU with a mean age of 26.6 (SD=1.30). Students from clinical-based years represented more than students from pre-clinical-related years. The data shows that most students are not interested in choosing anesthesiology as a future career (72.2%). Furthermore, financial income is the most attractive influencer in choosing anesthesiology as a future career (29.23%). On the other hand, having different interests or passions is the most reported deterring factor (44.99%). Moreover, students in the 4th and 6th years don't consider anesthesiology as a future career (P-value, 0.003). *Conclusion:* According to the study's findings, increased exposure to the anesthesia specialty among medical students is advised to encourage more students to consider anesthesiology as a career.

Medical Science, 2022, 26, ms354e2376

Back pain among medical students in Al Madinah Province, KSA

Fahad S Alshehri, Abdullah Ali Alalawi, Yaser Khaled Zaitouni, Abdulmalik Marwan Arabi, Mohammed Ahmed Aljohani, Mohammad Mahmoud Alnakhli, Mohammed Noor Alharbi, Magdy El Barbary

Back pain is the main reason of reduced activity and productivity as well as decreased class attendance among college students. Therefore, it is crucial for medical school faculty to recognize the potentially modifiable back pain risk factors among their students and prepare early supportive and preventive interventional measures, especially when considering that back pain could affect students' mental health, physical health, and overall quality of life. This study aimed to estimate the prevalence of back pain among medical students in Al-Madinah Province in Saudi Arabia and investigate the factors associated with a higher prevalence of back pain. Using a self-reported questionnaire, this cross-sectional study collected data on back pain prevalence and associated risk factors. The survey was distributed through social media platforms. The chi-square test was used to identify risk factors significantly associated with back pain, and multivariate logistic regression was used to determine the risk factors for back pain among medical students. Data analysis from 712 participants showed that the overall prevalence of back pain among medical students in Al-Madinah Province in Saudi Arabia was 58.8%. Female sex was associated with a significantly higher prevalence of back pain (62.1%) than male sex (51.4%). Marital status, socioeconomic status, academic year, occupation, chronic diseases, and medication use were predictive of back pain, whereas neither age nor nationality significantly affected the prevalence of back pain.

Medical Science, 2022, 26, ms355e2434

CASE REPORT

Free Periosteal Graft with Bone Morphogenic Protein 2 and Internal Fixation combination as Treatment of Congenital Pseudoarthrosis of the tibia

Abdulwahab Ahmed Alzahrani

Pediatric orthopedics contains various musculoskeletal deformities. Functional distortion, biological and structural abnormalities are the common denominator among congenital or acquired pediatric deformities. Leg bowing, shortening, and catastrophic fracture representing the predominant characteristics of congenital pseudoarthrosis of the tibia in this case report. Plate and screw internal fixation with bone graft augmentation, and complementary pharmacological therapy by zoledronic acid peri-operation are used in the treatment plan after failure of conservative and rigid external fixation trial. An accepted healing, restoration of the mechanical alignment, and minor shortening were the final results of 4 years follow up.

Medical Science, 2022, 26, ms356e2339

IgG4 related cranial pachymeningitis and extraocular muscle paralysis

Balambighai V, Dhanaraj M

In this case report we discuss a case of IgG4 related cranial pachymeningitis with isolated extraocular muscle paralysis in a middle aged woman. MRI Brain showed thickened and enhancing pachymeninges and superior recti muscles, with raised serum IgG4 levels. A diagnosis of "possible" IgG4 Related pachymeningitis was considered, and was treated with steroids. She responded well over a period of two months. At the end of two months, the clinical response was good and serum IgG4 levels became normal. IgG4 RD may be considered as a possible differential in all cases of idiopathic pachymeningitis in view of excellent therapeutic response to steroids.

Medical Science, 2022, 26, ms357e2349

Impact of pulmonary rehabilitation on improving lung health in a known case of Pseudobulbar Palsy - A case report

Nikita H Seth, Sakshi K Kariya, Moli J Jain, Vishnu Vardhan

Aspiration Pneumonia is a deadly complication of pseudobulbar palsy, which is characterized by abrupt respiratory distress, hypoxia, and temperature spikes. We discuss a four-month-old kid who was taken to a tertiary care hospital with complaints of unrelieved fever and hypoxemia. He was a known instance of pseudobulbar with developmental delay and on nasogastric feed. Based on radiological and clinical results; he was diagnosed with aspiration pneumonia and placed on mechanical ventilation due to inability to maintain saturation on room air. Goal-directed therapy is used in conjunction with medical care. Physiotherapy rehabilitation was begun to treat hypoxemia and help in the elimination of secretions, hence enhancing air admission into the lungs. Initial treatment was also provided for dysphagia and hypertonicity. The Modified Ashworth scale (MAS), Alberta Infant Motor Scale (AIMS), and Peabody developmental motor scale were used as outcome measures. The multidisciplinary technique has been shown to be effective in terms of early ventilator weaning, preserving general lung health, and reducing hospital stay duration.

Medical Science, 2022, 26, ms358e2392

Effect of manual positioning as an adjuvant to intercostal drainage in a 14-year-old child with a known case of SLE and pleural effusion as a subsequent consequence: A case report

Sakshi K Kariya, Nikita H Seth, Moli Jain, Vishnu D Wardhan

SLE (Systemic lupus erythematosus) is an autoimmune condition defined by autoantibody generation, immune complex accumulation, and a diverse set of clinical signs and symptoms. SLE is an immunological condition where the body's immune system mistakenly attacks the body's own tissues, causing widespread inflammation and tissue damage in the affected organs. According to an approx calculation, there are 161,000 people with proven SLE and 322,000 as or suspected SLE. Interfaces between genetics, as well as interactions between environmental and genetic factors, should be evaluated as significant risk stratification drivers. It can affect anyone at any age, although it is about 10 times more common in women than in males, with young women between the ages of 15 and 44 being the most affected. SLE has the potential to harm a patient's overall mental, physical, and social abilities. The constraints that patients with SLE face might have an influence on their quality of life. Exercise is difficult for individuals with SLE due to a variety of real and perceived limitations. We also present a case study of a 14-year-old female with SLE, in which we discovered that basic in-bed mobility exercises, breathing and positioning techniques, and cardiovascular (aerobic) training are beneficial to SLE patients. Physiotherapy was also essential in improving their quality of life and reducing secondary problems.

Medical Science, 2022, 26, ms359e2393

RESEARCH

The Effect of Long-Term Exercise Training with Omega-3 Fatty Acid Supplement on Serum Iris and Some Blood Parameters

Mehdi Aslan, Mucahit Sarikaya

This research; the effects of omega-3 fatty acids and exercise on irisin, leptin and ghrelin hormone total cholesterol, HDL, LDL and triglyceride levels when applied separately or in combination were investigated. Method; A total of 28 male Wistar albino rats, 8 weeks old, were randomly divided into 4 groups of seven each as control, exercise, omega (400 mg/kg) and exercise + omega-3. After starting the omega-3 fatty acid diet, rats were subjected to a 20-minute jog test 5 days a week for 10 weeks. Results; It was determined that exercise and omega-3 supplementation decreased the total cholesterol level in the groups in which they were applied separately, and increased the total cholesterol level when they were applied together. When we examined the triglyceride levels, it was determined that while there was an increase in the exercise group, there was a decrease in the omega group, and when the exercise and omega-3 supplementation were combined, it decreased similarly to the omega group. In addition, when we examined HDL and LDL cholesterol levels, it was found that exercise and omega-3 fatty acids increased HDL levels separately and in combination, LDL levels decreased in omega-3 and exercise groups, but there was no change in cholesterol levels. Conclusion; positive effects of exercise on lipid profile and iris, moderate positive correlation between irisin and leptin; It can be said that irisin and ghrelin show a highly positive relationship and omega-3 fatty acids have positive effects on the lipid profile.

Medical Science, 2022, 26, ms360e2401

ANALYSIS

Sciatica pain in Saudi population: Knowledge and awareness assessment

Zainah Alqahtani, Banan Alghamdi, Turki Alharthi, Osama Alzriri, Ehda Azab, Aljohrah Al-Hunaif, Khames T Alzahrani

Background: Sciatica defined as a pain that radiates, the sciatic nerve travels from the lower back to the back of the thigh and down to the leg. Sciatica most commonly caused by compression or irritation of lumbosacral nerve root. *Aim:* To evaluate Saudi citizens' knowledge and awareness regarding sciatica. *Methods:* A questionnaire (online survey), a research project was carried among the Saudi population. The study was involved both male and female with age of 18 and older. The questionnaire was used to assess public knowledge and awareness of sciatica symptoms, causes, risk factors, complications and treatment. Data will be collected

through medical students. Data was analyzed using the Statistical Package of Social Science Software (SPSS). *Results:* Among 2269 respondents, 62.7% was female and 37.3% being male. Regarding sciatica pain, 66.9% of participants defined it as discomfort in the lower-back that extends to the leg and foot, whereas just 5.7% had a history of sciatica. A family history of sciatica affects 25.8% of the population. Sciatica was known to 83.7% of the respondents and 36% were aware that the majority of cases of sciatica are caused by a herniated disc in one of the spine's vertebrae. *Conclusion:* Saudi populations have moderate knowledge of sciatica, its causes and the nature of pain. Patient education is crucial to treating sciatica. Sciatica can have a variety of reasons. Most instances of sciatica are treated most effectively with conservative measures unless there is an immediate compression of the spinal nerves.

Medical Science, 2022, 26, ms361e2433

Diabetic patients' knowledge and awareness about importance of daily activity for their health

Khalid Alghamdi, Inas S Bagabas, Norah A Alkodari, Abeer Y Alalwani, Khames T Alzahrani

Background: It's been proved that daily activity increases insulin sensitivity, general health, and risk profiles of cardiovascular disease. Therefore; physical activities help to reduce the effects of diabetes on the human body. Unfortunately, the physical level is low among diabetic patients and this might be due to a lack of understanding about the value of exercise. The object of this paper is to assess knowledge and awareness of daily activity importance among diabetic patients in KSA. *Methods:* The observational study was done in KSA. A total of 380 diabetic patients are included in the study, all of whom live in Saudi Arabia. All the patients were answering a questionnaire that assesses their knowledge about the importance of physical activities. Eventually, data was analyzed by SPSS to identify their knowledge level. *Results:* There were 380 participants in the investigation, with 60.5% of them being female. The participants' ages varied from 18 to 76 years old, making up 43.7% of the sample. There was a 62.2% average knowledge score. The knowledge of physical activity was significantly associated with the type of diabetes, family history of diabetes, having dyslipidaemia, and having kidney disease. *Conclusion:* In this investigation, we discovered that the sampled people with diabetes had rather low levels of knowledge about physical exercise. More people with T1DM, those with favourable disease history, and people without dyslipidaemia or renal disease were shown to have better knowledge.

Medical Science, 2022, 26, ms362e2444

Population awareness of CVD risk factors and lifestyle modifications according to their knowledge

Abdulmohsin Ahmadjee, Abdulmohsen Alghamdi, Ahmed Alsharif, Ghaidaa Hasrat, Asail Alghamdi, Faisal Mahzari, Khames T Alzahrani

Background: In the world, cardio-vascular disease accounts for the majority of mortality. It accounts for 50% of all reported deaths worldwide and is expected to increase significantly. Cardiovascular disease is also a major cause of death in Saudi Arabia. The objective of this paper was to assess population awareness on cardiovascular diseases risk factors and to determine the lifestyle modifications according to their knowledge among a random representative sample of Jeddah population, Saudi Arabia. *Methods:* This is a cross-sectional study that used self-administered questionnaires conducted in population (age of 18 years to 60 years) who lives in Jeddah city excluding the medical staff. Data was analyzed via the Statistical Package of Social Science Software (SPSS). *Results:* There were 825 respondents in this study, and women made up the majority (74.1%). Age and knowledge score were significantly correlated, with younger groups having better knowledge than other groups. Additionally, marital status was related to CVD knowledge, with singles outperforming other individuals. Saudis scored better on knowledge than non-Saudis. Finally, people who were not employed performed considerably worse than participants who were students. *Conclusion:* Our conclusion in this study, we found sub-optimal levels of knowledge about cardiovascular disease and warning signs of CVD occurrences in a population in Jeddah, Saudi Arabia. Being Saudi, younger, unmarried, and a student all contributed to having moderate-to-good comprehension. Community education on CVDs, concentrating on those with low socioeconomic status, may be useful in the combined efforts to achieve CVD reductions.

Medical Science, 2022, 26, ms363e2445

Measuring the extent of pain by using over-the-counter medications and its consequences towards pharmacy students: A cross-sectional survey

Atheer Alzahrani, Lamya Almatrafi, Refal Fagieha, Wejdan Alharbi, Deena M. Bukhary, Safaa Alsanosi, Alaa Falemban, Yosra Al-Hindi

Pain management is important for many individuals who suffer from constant or periodic pain, especially for students. However, Self-medication and Over-the-counter medication due to its accessibility to most of the patients have become the first choice of many students around the world to manage their pain during their study period. However, lack of knowledge among the students may result in unpleasant consequences which may affect the student's performance. Worldwide many investigations occurred to assess the students' approach to deal with the pain using several available strategies. This study research was done to examine the extent of pain by using over-the-counter medication (OTC) among College of Pharmacy students at Umm Al-Qura University. To investigate the student pain management strategies, a cross-sectional questionnaire has been constructed and distributed to students. The results showed 97% of female students tend to use OTC to deal with the pain. Among these students, 19% were suffering from chronic pain and they have been using NSAIDs and acetaminophen to control their pain. Furthermore, pain management is vital for the student to improve their performance and retain their education outcomes with the best results.

Prevalence and association between irritable bowel syndrome and stress among medical students in Al Qunfudah

Omar Y. Alfaqih, Yahya M. Alnashri, Mohammed M. Alharbi, Omar Babateen, Mohamed A Elhefny, Abdullah A Saati, Anas Abdulaziz Sarhan, Mohamed AM Iesa

The most prevalent type of functional gastrointestinal disorder is irritable bowel syndrome (IBS). This illness has a complex etiology and may be caused by several factors. Medical students were discovered to be at an increased risk of having IBS. The purpose of this study was to determine the prevalence of IBS and its association with stress among medical students at Al Qunfudah medical college. This study was a cross-sectional study; data were gathered using a pre-structured self-administered questionnaire that included demographic information, Rome IV criteria, and the Perceived Stress Scale. This study enrolled 290 students, giving a response rate of 78.9%. IBS was prevalent at a rate of 14.8% (40 of 290). Males were more likely to suffer from IBS than females (17.8% vs. 12.1%). Between IBS and stress, a statistically significant association was established ($P=0.022$). A considerable percentage of IBS was discovered among Al Qunfudah medical college students. IBS and stress were significantly associated, whereas other variables were not associated with IBS.

Medical Science, 2022, 26, ms365e2378

CASE REPORT

Cosmetic surgery of external auditory canal nevus

Rajasekar MK, Meenakshi, Jayapreetha, Mary Lily

Epidermal nevus is a noncancerous growth that causes severe deformities by causing epidermal and adnexal tissue development. Germline mutations in the FGFR3 gene are thought to cause epidermal nevus. Dermatologists are often consulted for treatment in the identification of the lesion based on its clinical appearance. Based on the patient's situation the doctor must select any one of the best treatment options. This case involves the surgical removal of epidermal nevi in the EAC by an ENT professional. Patients with ILVEN seek medical therapy for both pain alleviation and aesthetic concerns because of the disease's severe and unrelenting symptomatology. Topical medicines, dermabrasion, cryotherapy, laser treatment, and partial-thickness excision have all been investigated. Unfortunately, no one therapy has consistently been found to be effective. Medical therapy is usually unsatisfactory since results are often transient. Surgical therapies have been demonstrated to be more beneficial in terms of symptom reduction, but they come with a significant risk of scarring and recurrence.

Medical Science, 2022, 26, ms366e2343

ANALYSIS

Family satisfaction with quality of care in the intensive care unit at Wardha in central India: A cross sectional study

Aman Agrawal, Anshool Kumbhare, Sanket Bakshi, Anamika Giri, Divit Shah, Twinkle Pawar, Dhruv Talwar, Sunil Kumar, Sourya Acharya

Background: Family member's views are crucial in assessing the quality of intensive care unit (ICU) care. This study had been planned to assess satisfaction of family members with the quality of healthcare provided in ICU, to look into potential follow-up needs of the patients' relatives and to evaluate contribution of each domain in the care providing facilities of ICU. *Method* - A validated template of questions (Hindi version of questionnaires which were used in the studies published previously) was distributed amongst the family members of patients who are admitted to hospital in the Medicine ICU of a tertiary care hospital at Jawaharlal Nehru Medical College, Wardha. The results were then analyzed statistically. *Results:* Out of 300 family members enrolled 67.7% were male. 27.7% responders were having literacy up to secondary education. 88% of the responders were overall satisfied with the empathetic behavior of the nurses on duty. 80.7% were satisfied that doctors duly cleared the doubts regarding the prognosis of the patient and were timely addressed on the progress in the treatment of the patient. The concluded results were found significantly associated $p = 0.001$. *Conclusion:* This study highlights about key role in assessing the satisfaction and the level of knowledge, attitude and practices of families of the patients in context of the degree of the health care provided within the Medicine ICU.

Medical Science, 2022, 26, ms367e2170

Patient knowledge and adherence to anti-hypertensive medications in Saudi Arabia

Ahmed M Aljameeli, Malak Nawaf Shayim Alanazi, Samia Suliman S Alanazi, Marwan Mohammed I Alsaab, Mona Hussain S Alanazi, Sarah Mohammed H Alanazi, Tahani Aqeel Alshammari, Tamam Mohammed Hassan Al Ruwaili, Sitah Mohayaa Jawan Alharbi, Abdalla Mohamed Bakr Ali

Background: Adherence to anti-hypertensive medication is essential as it has been associated with better health outcomes. *Aim:* This study aims to assess the adherence of hypertensive patients to anti-hypertensive medications, and to correlate adherence with hypertension knowledge. *Methods:* This cross-sectional study, we used the Morisky Medication Adherence Scale (MMAS-8) questionnaire to assess adherence, and the Hypertension Fact Questionnaire (HFQ) to assess hypertension knowledge. We used the

Kruskal-Wallis and Mann-Whitney tests for inferential statistics, and Pearson correlation to investigate the correlation between the adherence and knowledge. *Results:* The study included 508 participants, of whom 55.5% were females. Age ranged from 18 to 90 years with an average of 56.9 ± 13.7 . Half of participants (50.2%) were married and 51.4% had a university degree or higher. Average MMAS-8 and HFQ scores among respondents with hypertension were 4.5 ± 2.2 , and 9.5 ± 2.5 , respectively. Our results showed significant association between adherence and educational level ($p=0.032$), and residency area ($p=0.000$). Hypertension knowledge was also associated with the type of residency of participants ($p=0.001$), marital status ($p=0.001$), source of HTN knowledge ($p=0.046$), nationality ($p=0.001$), and number of anti-hypertensive drugs used ($p=0.046$). *Conclusion:* Our study concludes that adherence to anti-hypertensive medication and hypertension knowledge were proportionally correlated. There is higher adherence among respondents with higher levels of education, residents of urban areas. Hypertension knowledge was better among Saudi nationals, residents of urban areas, singles, those receiving hypertension knowledge from social media, and those taking one or two anti-hypertensive medication.

Medical Science, 2022, 26, ms368e2322

Effectiveness of the insulin pump on type 1 diabetes in controlling HbA1C in Riyadh, Saudi Arabia

Nora Ayman Brazanji, Amal Al-Nafisi

Background: Type 1 diabetes is one of the most common spreading diseases in Saudi Arabia. In addition, HbA1C is the gold standard measure for diabetes glycemic control, so the aim is to reduce the HbA1C to minimize the microvascular and macrovascular complications of diabetes. *Aim:* To measure the use of therapeutic insulin pumps for type 1 diabetic patients and assess the HbA1C level before and after the insulin pump insertion. *Methods:* A cross-sectional study was done to type 1 diabetic (T1D) on a Medtronic insulin pump with a sensor (basal vs. IQ) in KSH and a virtual clinic. *Conclusion:* Insulin pump therapy considers an ideal solution for the reduction in HbA1C, increased patients' treatment satisfaction, and maintaining glycemic control compared to injectable insulin.

Medical Science, 2022, 26, ms369e2441

Uncontrolled hypertension and associated factors among hypertensive patients in primary health care centers in Jazan Region, Saudi Arabia: A cross-sectional study

Nada M. Hakami, Mona H. Elmahdy, Salwa M Majrashi

Background: Hypertension is a serious public health problem that affects people of all ages. Hypertensive patients are at risk for several complications, including stroke and heart disease. Around one billion individuals are living with uncontrolled hypertension globally. In recent years, there has been increasing interest in the control of hypertension. This study determined the uncontrolled hypertension prevalence and associated factors among patients with hypertension in primary health care centers in Jazan Region, Saudi Arabia. *Methods:* We carried out an analytical cross-sectional study with a multistage sampling technique from January–March 2022. Data were collected using an interviewer-administered semi-structured questionnaire. Data was entered into and cleaned by IBM SPSS version 25. The Chi-square test was used to test for the presence of any statistically significant variation of the study variables. Multivariate analysis was performed for associated factors for uncontrolled hypertension. *Results:* We enrolled 354 participants and found that patients who were older, female, and obese, had lower physical activity, had stress and had lower levels of education were at higher risk of uncontrolled hypertension. *Conclusion:* These findings suggest that interventions to improve hypertension control should focus on these groups of patients and increase the effort of preventive services by establishing more preventive clinics in primary health care centers.

Medical Science, 2022, 26, ms370e2447

Screening for cytological changes associated with inhaled polluted materials in Khartoum industrial area

Samah Batran, Eltahir Mohammed Bashir, Albandri Bin Ammar, Hussain Gadelkarim Ahmed

Background: Environmental air pollution is the main risk factor for lung cancer. The objective of the present study was to assess cytomorphological changes in sputum specimens of individuals working in the car-maintenance industrial area. *Methodology:* A total of 75 sputum specimens were obtained and demonstrated adopting the standard Pap method. *Results:* The results showed abnormal cytological changes in a form of atypical cellular changes ($n=6$, 8%), metaplastic cellular changes ($n=12$, 16%), in addition to inflammatory changes ($n=19$, 25.4%). *Conclusion:* Occupational exposure to air polluted with vehicle emissions is a risk factor for developing precancerous changes in lung epithelial cells. People who work in these heavily industrialized areas should be subject to ongoing sputum cytological examination.

Medical Science, 2022, 26, ms371e2396

The prevalence of hand pain and its risk factors among dental students in Riyadh, Saudi Arabia

Ali Asiri, Dana Albassri, Tariq Alswayyed

Assessment of the prevalence of hand pain and its most common risk factors in dental students in Riyadh was the study aim. A questionnaire was sent to dental students through their emails. The questionnaire measured the prevalence, comfortability, interference, and frequency of pain in six different areas of their hands. The results indicated that 74.2% of the students had experienced hand pain, which was considered significant. 53.7% of them had pain in the right hand, 8.4% in the left hand, and

12.1% in both hands. In the left hand, the most area experienced pain was area D (28.1%), while in the right hand, it was area E (28.5%). The results also revealed that prevalence of hand pain was higher among female students. It also showed that ergonomics and stress had an impact on hand pain development. In conclusion, further studies are required on the effects of ergonomics and stress on development of pain in the hands and its management.

Medical Science, 2022, 26, ms372e2451

The relation between depression and its impact on dry eye syndrome among health related students in Umm Al-Qura University - A cross-sectional study

Yaser Mohamed Elhams, Salah Bakry, Hammad Alharbi, Omar Alhothali, Abdullah Alsaeedi, Abdulrahman Fareed Kabli, Alhanouf M Alsharif, Amr Almousa, Ziyad Alzahrani

Background: Dry eye disease encompasses a vital problem among medical students due to their daily computer use. This study aimed to explore the connection between DED and depression amongst medical students of Umm Al-Qura University. *Methods:* An online cross-sectional investigation was distributed among health-related colleges at Umm Al-Qura University. A PHQ-9 and DEQ-5 questionnaires were used to screen for depression and dry eye syndrome. The final data were subjected to an appropriate statistical analysis program. *Results:* 522 completed the survey. Male students were predominant. The total prevalence of depression was 44.06%, while about 30.08% suffered from dry eye syndrome. A significant difference was found among senior students, in which they correspond significantly with minimal depression (P-value, 0.000) and positive dry eye syndrome (P-value, 0.005). *Conclusion:* Among medical students, DED symptoms were seen relatively commonly. DES students should have an annual depression screening in primary care and ophthalmology clinics as a preventative step to enhance life quality and preserve psychological wellbeing.

Medical Science, 2022, 26, ms373e2377

Evaluation of the normal ratio of fetal brain choroidal plexus size to fetal head size at 11 to 13 weeks of gestation to obtain useful sonographic markers in spina bifida rule out

Tahereh Ghasemi, Ayda Roostaei, Zeinab Safarpour Lima, Ladan Younesi Asl

Background: Early detection of open spina bifida (OSB) with ultrasound at 11 to 13 weeks of gestation is considered useful, but no information has been provided on the size and shape of the choroid plexus. Therefore, the aim of this study was to determine the normal ratio of the size of the choroid plexus of the fetal brain to the size of the fetal head at 11 to 13 weeks of gestation to rule out spina bifida. *Material and Methods:* Aimed to measure cervical transparency (NT: nuchal transparency) during the first trimester of pregnancy and at 11 to 13 weeks of gestation, the pregnant women who has only one fetus were screened and then were checked using E8 or E10 ultrasound machine. Our study was performed during April 2020 to December 2021. *Results:* The results of our study on 203 embryos are consisting of normal values of crown-rump length (CRL), biparietal diameter (BPD), the length of Choroid plexus (CPL), head area (HA), head circumference (HC), and choroid plexus area (CP-A). Evaluating the ratio of these indicators shows a significant positive correlation between CPA and other indexes include CRL, BPD, HC and HA ($p < 0.001$). Additionally, significant positive correlations between CPL and others include BPD and HC, ($p < 0.001$) and negative correlations between CRL and CPL/OFD and between CRL and CP-A/HA ($p < 0.05$) was seen. *Conclusion:* With respect to these result it seems that these indicators can be used to distinguish healthy infants.

Medical Science, 2022, 26, ms374e2351

REPORT

Behavioural risk factors and attitudes to preventive measures: changes during the COVID-19 pandemic

Lyubov Vlasysk, Natalia Ryngach, Leonid Vlasysk, Anastasiya Sukholotyuk, Oleksandra Kotenko, Tetiana Kolodnitska

Background: Prevalence of behavioural Risk Factors (RF) of Non-Communicable Diseases (NCD) has changed during the COVID-19 pandemic. The impact on compliance with preventive measures required additional study. *The aim:* To analyse changes in people's lifestyle during the COVID-19 pandemic and specify the determinants associated with the attitude to the vaccination program. *Materials and methods:* The study was conducted in 2021 through an online survey of the population. A sample for comparison was formed from the economically active population participated in the 2017/2018 study. Sociological and statistical methods were used. *Results:* An increase in sweet consumption was discovered. There was a decrease in physical activity (56%), a higher prevalence of smoking among women (29%). With a positive attitude to the COVID-19 vaccination, 91% of respondents received at least one dose of the vaccine and with a negative or neutral – 16%. *Conclusions:* The identified lifestyle changes give reason to expect an increase in the incidence of NCD. A positive attitude to vaccination could confirm a fairly high level of patient activation.

Medical Science, 2022, 26, ms375e2400

CASE REPORT

An impact of comprehensive pulmonary physiotherapy on ABG level and early functional independence in the patient with acute COPD exacerbation with CO₂ narcosis

Sakina Shoeb Hussain Saifee, Vaishnavi Dilip Yadav, Moli Jai Jain, Vishnu Diwakar Vardhan, Tasneem Mustafa Lakkadsha, Shivani Satish Lalwani

Chronic obstructive pulmonary disease (COPD) is a chronic illness characterized by an acute exacerbation of respiratory symptoms. Recurrent episodes of acute exacerbation result in acute hypercapnia and acute carbon dioxide narcosis, which are often accompanied by an altered level of consciousness. Acute exacerbations in the elderly have a worse outcome, as evidenced by an increase in comorbid illnesses, length of stay, re-hospitalization rate, and death rate. This article describes the case of an elderly female patient who presented to the emergency unit with complaints of altered conscious state, dyspnea, cough with expectoration, fever, loss of appetite, and abdominal pain. Her ABG tests also revealed a low pH and an abnormal level of blood gases with acute hypercapnia. The patient was admitted to the medical ICU with ventilator assistance as well as medications, but to restore the patient's respiratory capacity and improve the patient's quality of life, a complete physiotherapy management plan was implemented for four weeks. The treatment primarily aimed at stabilizing ABG levels using integrated physiotherapy approaches and thereby improving the patient's medical state. The patient's improvement was measured in the outcomes of ABG levels, COPD assessment test score, Peak expiratory flow rate, FIM scores, dyspnea levels, and walking distance over four weeks, demonstrating the effectiveness of the treatment.

Medical Science, 2022, 26, ms376e2402

Leiomyosarcoma of uterus - A rare case presentation

Pragyamita Datta, Hiwale KM, Sunita Vagha

A leiomyoma or uterine fibroid can develop into leiomyosarcoma, a malignant change. Two to five percent of all uterine tumors are caused by this uncommon tumor, which grows from the smooth muscle of the uterus. Rarely have cases in the past been described. Genital bleeding, a common sign of uterine sarcoma, had never happened to our patient (US). We offer a unique case study of a rare tumor that sprang from the uterus and manifested unusually. A 55-year-old woman with stomach pain that started out mildly and worsened was sent to the hospital. The discomfort was non-radiating, dull and agonizing, and it came and went. The patient also discovered a lump in his abdomen that appeared out of nowhere and grew larger. Using CECT, a mass that was protruding from the pelvic was found. The results of the histology study supported the diagnosis of uterine leiomyosarcoma. Due to their scarcity, the US is not acceptable for screening. The sole available form of treatment is surgery, and the diagnosis is made by histopathologic testing. The prognosis for women with uterine sarcoma is mostly influenced by the severity of the disease at the time of diagnosis and the mitotic index.

Medical Science, 2022, 26, ms377e2301

Nitrogen pneumonitis - A case of chemical pneumonitis with complications caused by inhalation of nitrogen gas

Ashwin Kailash, Ghanshyam Verma, Raja Amarnath, Sushma Kalmodia, Mahitha Reddy, Aiswarya Ravichandran

Nitrogen oxides are low water soluble and can reach till distal airways and cause toxic effects when exposed to high concentration. It stimulates free radical generation, results in protein oxidation, lipid peroxidation and epithelial damage; and it reduces resistance to infection by altering macrophage and defence mechanism. Farmers who exposed to silos, fire fighters, and coal miners after firing of explosives, air conditioning workers are more prone to develop inhalation injury. Here we report a case of 17 year old male diagnosed as nitrogen gas related chemical pneumonitis presented with moderate ARDS and progressive hemorrhagic effusion. Oxygen therapy, Intercostal drainage and steroids were administered resulting remission of symptoms and radiological improvement. Patient was discharged and followed up.

Medical Science, 2022, 26, ms378e2345

ANALYSIS

Breast cancer knowledge and awareness among adolescent girls in secondary schools in Kota Bharu, Malaysia

Bachok Norsa'adah, Che Jaafar Siti-Faza-Ayunnie, Wan Halim Wan-Noor-Syafawati

Background: Breast cancer is the most common cause of cancer death among women of all ethnicities in Malaysia. The adolescent period is a time when educational opportunities are provided to shape healthy behavior in a woman's life. Exposing teens to breast cancer and its screening test will create breast awareness and encourage positive behavior towards preventions later in adulthood. *Aim:* This study aimed to determine the level of knowledge and awareness of breast cancer and associated factors among secondary school adolescent girls. *Subjects and Methods:* A cross-sectional study was conducted among 16-year girls in five secondary schools in Kota Bharu. A structured, validated, and self-administered questionnaire was distributed to 359 female students who were selected using multi-stage cluster sampling. The content of the questionnaires included risk factors, symptoms, and screening tests for breast cancer. Data were analyzed by using multiple logistic regressions. *Results:* Most respondents have heard of breast cancer. The percentages of respondents who scored $\geq 60\%$ in knowledge of risk factors, symptoms, and cancer screening were 32.9%, 52.6% and 69.6%, respectively. Maternal education was significantly associated with knowledge of risk factors, symptoms, and screening of breast cancer. The school was significantly associated with risk factors and family history of breast cancer was significantly associated with symptoms. *Conclusions:* This study found that there are areas for improvement in knowledge and awareness of

breast cancer and mothers' education was the significantly associated factor for all types of knowledge. Breast cancer awareness campaigns and education are highly recommended at school.

Medical Science, 2022, 26, ms379e2360

Application of infection control guidelines among nurses working in surgical units: A cross-sectional study in Sudan

Ahmed Abdalla Jarelnape

Background: Infections are a permanent risk to patients in surgical units after surgical intervention. *Aim:* The current the survey aimed to determine how preventing infection guidelines are implemented in surgical units. *Methods:* It was a descriptive cross-sectional study. The study population includes eighty-one nurses working in surgical departments, they were assigned to the study as total coverage style, the data was gathered using a self-administered questionnaire and an observational checklist, the frequency, mean were generated and analyzed using SPSS version 23. Statistical significance was defined as a P-value of 0.05 or less. *Results:* Eighty nurses participated in the study, the study participants had given their responses according to the self-administered questionnaire and checklist, the result indicates that their presence of a difference that is statistical significance at 0.05 (0.01) and (75%) of respondents had good knowledge and practice about guidelines for infection control. *Conclusion:* The results of the present research conclude the nurses had good knowledge and practice about infection control guidelines.

Medical Science, 2022, 26, ms380e2412

Assessment of antenatal care knowledge and awareness among women living in Saudi Arabia

Abdulaziz Al-Fadhly, Miad Alosaimi, Waad Alqurashi, Abdulmalik Aldawsari, Meshari Alhawiti, Amjad Alharthi, Khames T. Alzahrani

Background: A pregnant woman can access a variety of services through antenatal care, which should start as early as possible in the pregnancy. The study conducted to assess the knowledge and awareness about antenatal care among women in Saudi Arabia. *Methods:* A cross-sectional study was done on 948 Saudi females and a pre-designed questionnaire was used. Data about participants' demographics, importance of antenatal care visit, time of the start antenatal care visits and various obstacles to using prenatal care services were gathered. Information about pregnancy in all trimesters, importance of follow-up, and from whom the pregnant lady can get the help and advice all were assessed. *Results:* Only 9.3 percent agreed that pregnant women can take medications without consultation, drink a lot of caffeine (22.6%), to raise cats during pregnancy (37.5%), to so violent sports during pregnancy (15.1%). About 66% stressed the importance of scheduling a prenatal appointment before the third month of pregnancy. The majority of participants definitely agreed that antenatal follow-up is beneficial to track the health of the mother and fetus. Lack of transportation, trouble making appointments, depending on family and friends for information, and missing an appointment were the most frequent obstacles to prenatal care. *Conclusion:* There is a need to increase Saudi women's awareness of prenatal care services and the hurdles that prevent them from using them.

Medical Science, 2022, 26, ms381e2443

Assessment of the severity of COVID-19 symptoms after vaccination among the Saudi population suffering from chronic conditions

Azharuddin Sajid Syed Khaja, Mubashir Zafar, Mazen Almansour, Hamod Alsohail, Ibrahim Almansour, Mohd Saleem

Since the emergence of COVID-19 disease, more than 600 million people have been affected. However, the severity and the risk of mortality of the disease were shown to depend on whether the infected individual was suffering from any other comorbidities. The present study is designed to determine a group of people with comorbidities who are more susceptible to developing severe symptoms after infection with COVID-19. We also aim to compare the side effects of different COVID-19 vaccines in the Saudi population. Here we report a statistically significant difference between the chronic medical condition of the participants and their COVID-19 status ($p = 0.03$). We also observed a statistically significant difference between vaccine status and COVID-19 infection, as more than 70% of the participants ($n=195$) were unvaccinated when they tested positive for COVID-19. In our study, most of the participants ($n=856$, 77.5%) took the Pfizer-BioNTech vaccine, while 14.7% ($n=162$) and 4.5% ($n=50$) of the participants took Oxford-Astra Zeneca and Moderna Vaccines, respectively. There were also statistically significant differences in the severity of side effects between different vaccines ($p=0.001$). In conclusion, severe side effects were reported after the Oxford-AstraZeneca vaccine. In addition, the side effects, including fever, tiredness, headache, nausea, chills, pain, swelling at the injection site, body pain, and muscle pains, were reported more frequently after the vaccine's first dose, and participants with either one or more comorbidities.

Medical Science, 2022, 26, ms382e2459

Severity of COVID 19 and emergency intervention need in diabetic patients

Faheem Mohammed Alanazi, Hisham Fahad Alyahya, Abdulrahman Sulaiman Yamani, Ahmed Abdullah Alsaleh, Samah Hamoud Alshammari, Ahad Mohammed ALqubaidie, Yazeed Abdulaziz Alrashed, Shoug Abdullah Alshiky, Bayan Saleh Alghamdi, Hassan Munthir Abdulmohsen Alabbad, Hussam Mohammed Alzahrani, Abdullah Mashan Alanazi, Ali Hassan Almasskin, Saleh Hazzaa Alharbi

According to many studies, coronavirus disease is a major problem globally because it adds a health burden to governments and health authorities, as well as diabetes mellitus, which was suggested to be a predictor of COVID severity and ICU admission needs.

In this study, we aimed to evaluate the severity of COVID in admitted diabetic patients if compared to non-diabetics. This retrospective study was conducted in KSMC, Riyadh, KSA in the period from 1 May to 1 July 2021. Our results found that diabetes in COVID patients is associated with a high percentage of severe disease. Vital signs on admission were also shown to be an indicator of disease severity.

Medical Science, 2022, 26, ms383e2462

The awareness, attitude and practice of parents toward Human Papilloma Virus vaccination against HPV infections as a risk factor of cervical cancers in Taif city, Saudi Arabia

Manal Ahmed Elnashar, Haneen Saad Althobaiti, Lama Abdullah Alhamdh, Hadeel S Alghamdi, Majidah S Almuwallad, Nehal M Al-qurashi

Background: HPV infection is closely associated with Cancer Cervix in females. It's the 4th most common cancer after breast, colorectal, and lung cancers in women worldwide. Wherefore (HPV) vaccinations are recommended for routine vaccination at the age of 11 - 12 years for girls as a preventive measure against cervical cancer. **Objective:** Our objective was to evaluate parents' knowledge, attitudes, and practices about the HPV vaccine as a preventative measure against cervical cancer in Taif City, Saudi Arabia. We aimed to reduce the prevalence of cervical cancer among Saudi Arabians. **Methodology:** a Cross-sectional study of convenience sample was done Comprised around 350 parents' male or female participants, from Taif city, Saudi Arabia was conducted between November 2021 and to end of January 2022 by using a web-based questionnaire. It was prepared under the supervision of the supervisor and included the demographic data, awareness of HPV infection and cervical cancer as a risk factor, attitude towards the HPV vaccine against HPV infection and practices the HPV vaccine against HPV infection. **Results:** Our result displayed that only 33.8% of the participants had heard about HPV infection, 26.5 % had heard about the vaccine, and 85% heard about cancer cervix. **Conclusion:** There is a low level of knowledge amongst our participants regarding HPV and the vaccine. Therefore, we need to apply awareness programs among the population about the HPV infection and the importance of taking the vaccine to decrease the prevalence of cancer cervix in our community.

Medical Science, 2022, 26, ms384e2467

CASE REPORT

Neurogenic pulmonary edema as a complication of epidural hemorrhage: A case report and review of the literature

Djilali Rezai, Fahd Al Aradi, Badr Hafiz, Sara Murshid, Mohammed Alamri

Pulmonary edema is accumulation of fluid in the lung interstitium and alveoli. Neurogenic pulmonary edema (NPE), a complication noted in some cases of head trauma such as subarachnoid hemorrhage (SAH) and intracerebral hemorrhage (ICH), is a life-threatening condition that requires urgent management in a timely fashion. Unfortunately, clear management protocols are currently unavailable. We present a case of a healthy young individual who presented with epidural hematoma after he had sustained a head injury. The patient then developed NPE which led to prolonged intubation and post-operative intensive care unit stay.

Medical Science, 2022, 26, ms385e2478

ANALYSIS

Level of antihypertensive medication adherence and knowledge about the disease in Saudi Arabia

Mohammad Rediny Alshammri, Abdulmalk Almadhi, Abdullah Bin Shulhub, Renad Alsahli, Almaha Alhumaidan

Introduction: The adherence level to antihypertensive medication is a neglected topic in academic research in Saudi Arabia; however, there are a number of international studies that shed light on the level of patient adherence to medication. **Aim:** This study aimed to determine patients' knowledge and medication adherence among hypertensive patients. **Patients and methods:** This is a cross-sectional study conducted among hypertensive patients in Saudi Arabia. An Arabic translation for a self-administered questionnaire was distributed among patients with hypertension (HTN). **Results:** 698 hypertensive patients took part in the study (59.2% females, 40.8% males). The incidence of patients with hypertensive complications was 39.4%. The mean knowledge score was 47.9% (SD 21.4) while the overall mean adherence score was 75.4 (SD 16.5). Factors associated with increased score of knowledge and adherence were age group >45 years, female gender, being unemployed, earning more than 10,000 SAR monthly, being a non-smoker, diagnosed with HTN for 5 years or more, and regular doctor visits. **Conclusion:** The patient's compliance with HTN medication is good, but the understanding of their own disease is poor.

Medical Science, 2022, 26, ms386e2442

Adherence to chronic medications among type 2 diabetic patients in primary health care centres: A cross-sectional study

Safaa Alsanosi, Nahla Hariri, Asim Alshanberi, Ibrahim Alanazi, Mariam Al Eissa, Yosra Alhindi

Introduction: Type 2 diabetes mellitus (T2DM) is one of the fastest-growing health issues worldwide, and its complications contribute significantly to healthcare costs in Saudi Arabia and worldwide. Adherence to medications is a key element in managing

T2DM. Therefore, the aim of this research study is to explicate chronic medications adherence among patients with T2DM in primary health care centres in the Makkah Region, Saudi Arabia. *Method:* A questionnaire-based cross-sectional study was conducted among patients with T2DM in PHC centres in the Makkah Region, Saudi Arabia from March 2021 to February 2022. Descriptive statistics were used to describe the participants' characteristics, and a chi-square test was used to test the relationships between variables. *Results:* Overall, 234 T2DM patients joined the study, of which 224 completed the study. For all chronic medications being used, (38%) patients were at risk of polypharmacy as they received five or more chronic medications. The chi-square test showed a dependent relationship ($P < 0.001$) between management approach and number of all medications (both antidiabetic and chronic medications) used by T2DM patients. Overall, almost half of the patients (52%) showed a low level of medication adherence, (37%) showed medium medication adherence, and only (11%) showed high medication adherence. *Conclusion:* Patient education is essential to improve awareness regarding medication adherence in managing T2DM. Additional research is needed to monitor medication adherence and identify the factors contributing to this problem.

Medical Science, 2022, 26, ms387e2458

Prevalence of self-medication among students of Umm Al-Qura and Al-Baha Universities in Saudi Arabia

Mahdi H. Alsugoor, Naif Alsuhaymi, Yousef Alshahrani, Yahya H. Alsagoor, Atheer M. Alghamdi, Samer M. Alalawi, Shadi B. Alalawi, Fahad A. Alothayqi, Mohammed M. Alamri, Ashraf A. Ewis

Background: Self-medication is defined as the self-administration of medication based on self-diagnosis without visiting a physician or having a prescription and is a public health concern with potentially harmful consequences. Our study aimed to explore patterns of self-medication among medical and non-medical students at Umm Al-Qura and Al-Baha Universities in southwestern Saudi Arabia. *Materials and Methods:* An online, self-administered, questionnaire-based, cross-sectional survey was conducted via Google Forms for 3 weeks among students at Umm Al-Qura and Al-Baha Universities. *Results:* Out of the 418 students who responded to the questionnaire, 74.2% were practicing self-medication. The use of painkillers was significantly different among both the medical (40.4%) and non-medical students (61.5%). As for reasons to practice self-medication, time savings (40.3%) mild symptoms (20.0%), previous experience (14.8%), and financial reasons (14.5%) were the most common, with the flu symptoms (23.9%) and headache (23.5%) being the most reported symptoms treated by self-medication. *Conclusions:* Self-medication is a widespread practice among medical and non-medical students at Umm Al-Qura and Al-Baha Universities which needs to be mitigated by health education and effective preventive and interventional policies.

Medical Science, 2022, 26, ms388e2461

Assessment of knowledge and awareness of Saudi general population in Taif regarding Irritable Bowel Syndrome and its causes, symptoms, and risk factors

Ayman Ragab Baiuomy, Abdulaziz Obaidallah F Alsuwat, Abdullah Obaid Alotaibi, Fahad Sami Mesfer Althobaiti, Khalid Saad Alosaimi, Khaled Nasser Almutawa, Faisal Abdullah A Algarni, Abdulrahman Awadh E Alharthi, Majed Adel N Alosaimi, Khalid Awwadh S Alharthi

Background: IBS is a serious condition that affects many young adults and is linked to increased psychological stress. Therefore, raising awareness about it is crucial. The objective is to find out how well the general Saudi community in Taif is aware about IBS, including its causes, symptoms, and risk factors. *Methods:* It was decided to use a cross-sectional study design. The study was carried out during a period of two months from October 1st 2021 to December 31st, 2021. A pre-designed online disseminated questionnaire was designed to fulfill the study objective was used for data collection. *Results:* The majority of participants (79.3%) were aware that they had IBS; 30.9% had it in the past or currently; 84.9% said that abdominal pain, cramps, or bloating related defecation were symptoms; 68.9% said that a change in the frequency of urination was a symptom; and 87.2% said that bloating or increased gas was a symptom. The majority (89.3%) stated that stress and psychological issues are the main causes of IBS, although 45.4% believed that bacterial or viral infections were too responsible. Most of the participants (86.0%) consider that IBS increases the probability of developing mood disorders and impairs the standard of life, 84.4% think that IBS has treatment, 89% said that IBS necessitates attending the hospital to obtain diagnosis and treatment. *Conclusion:* The majority of the general populations of Taif, KSA were aware of irritable bowel syndrome, its causes, risk factors and treatment.

Medical Science, 2022, 26, ms389e2463

Asymptomatic women prevalence and risk factors of proteinuria

Suheir AM. Sayed

Introduction: Proteinuria is an established predictor of developing renal disease. *Aim:* To assess the risk factors and prevalence of proteinuria in asymptomatic women. *Method:* Descriptive cross-sectional community-based study was conducted in the Taif city. Four centers were chosen at random, and samples were taken from each of them, all women over the age of 18 years. Between February and March 2022, the study was carried out. The information was gathered using an interview-based questionnaire and a urine dipstick to check for proteinuria. *Result:* Interviews with 400 female participants in total took place. The average age was 1.15250, and 42.8% of them were between the ages of 20 and 30. A college degree or other higher education was held by almost 41% of the participants. A prevalence of 0.4 was found among the 160 study participants, had proteinuria. Obesity (18%), a poor diet (33.5%), high blood pressure (26.8%), and a lack of exercise (60.5%) were the top four risk factors for proteinuria. Only 23.8% of the

samples (76.2%) have a family history of chronic disease, and the distribution of chronic disease was 10.5%. More than two thirds of the samples (76.2%) do not have any chronic diseases. Inadequate renal function (12%), high cholesterol (5.8%), diabetes (18%), and hypertension (18%) were all present. *Conclusions:* Proteinuria was highly prevalent. It has been established that lack of exercise, a diet, family history, BMI, hypertension, and diabetes are statistically significant risk factors for proteinuria.

Medical Science, 2022, 26, ms390e2466