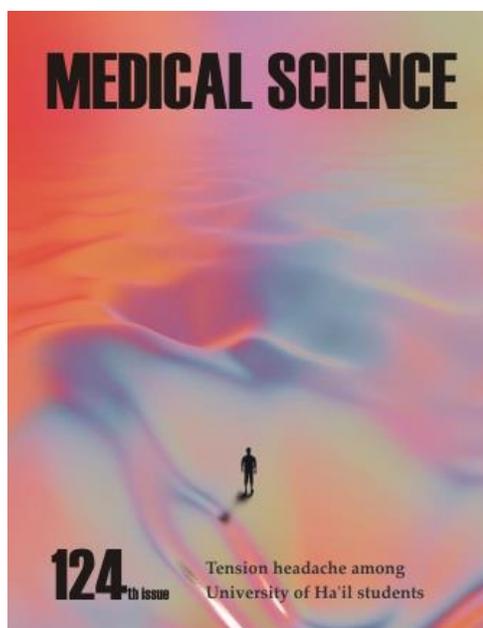


Medical Science

About the Cover



Background: Around the world, headache has become a significant public health concern. The most widespread type of primary headache is tension headache (TTH). It can affect daily activities and academic performance. *Aim:* The purpose of this study was to find out how common tension headache is and how well students at the University of Ha'il are aware of it. *Method:* A cross-sectional study conducted among University of Hail students. A self-administered questionnaire was distributed among university students. *Results:* A total of 1027 students completed the study questionnaire (52.6% female's vs 47.4% males). 37 responders were eliminated due to reporting in the last 12 months 0 days of headache, which leave us 990 suffering from a headache. The severity of the discomfort is alarming; 59.6% of the students have been impacted by it and are unable to continue with their everyday activities. 30.6 percent of the time, the discomfort is slight and bothersome, but the activity can be continued. Severe pain accounts for 09.8% of the total, waking students from their sleep. The most common cause of triggering was a lack of sleep (36.6 percent). The most popular measure performed to treat headaches without medication was to take a rest. *Conclusion:* Overall, we concluded that the majority of students, especially females, suffer from a tension headache at least seven days a year, which interferes with their daily activities. Headaches were caused by two important variables. A lack of sleep and worry while studying for an exam (Ref: Alshurtan K, Alodayli OMO, Alodaili ATA, Alshammari BGA. Tension headache among University of Ha'il students. Medical Science, 2022, 26, ms216e2303); (image: dspncdn.com).

Expression and diagnostic value of non-coding miR-142 in metastatic HCC patients

Ahmed O Babalghith, Alaa Elmetwalli

Objective: the goal of this study was to see if miR-142 alone or with liver scores FIB-5 or AFP might be employed as an early sign in the diagnosis of hepatocellular carcinoma. *Methodology:* In this study, there were 25 patients with chronic hepatitis C (CHC), twenty-five patients with hepatitis C-induced hepatocellular carcinoma (HCC), and 25 healthy controls. A detailed medical history, a thorough physical examination, and laboratory testing such as a complete blood count, liver function tests, and abdominal ultrasound were all performed on all patients. RT-PCR was applied to define the expression pattern of miR-142. *Results:* The fold differences in miR-142 expression levels between the HCC and cirrhotic groups were statistically and significantly enhanced. The difference in AFP between the HCC and cirrhotic groups was not statistically significant. The AUC of the predicted HCC miR-142 was 0.89. Merging AFP with the anticipated miR-142 (AUC of 0.89), however, did not improve AFP. The AUC was 0.81 when the proposed FIB-5 cut-off of 1.40 was used to rule out advanced cirrhosis (P 0.051) combining the proposed HCC miR-142 with FIB-5 enhanced diagnostic effectiveness, with an AUC of 0.88. *Conclusion:* MiR-142, FIB-5, and AFP were found to be promising biomarkers for cirrhosis and HCC respectively.

Medical Science, 2022, 26, ms201e2246

ANALYSIS**Green tea's antioxidant properties protect the pancreas in diabetics: An experimental study**

Ali Hassan A Ali, Faleh Mubarak Aldawsari, Murdhi Yousef M Alanazi, Faisal Hassan Sumaili, Abdullah Mulfi M Alanazi, Ali Awadh Ali Alahmari, Saleh Basheer S Alanazi, Musab Sultan A Alrezehi, Ali Hassan M Alnakhli

Diabetes mellitus is one of the most common and widespread metabolic illnesses worldwide. Hyperglycemia is a symptom of this condition, which is caused by problems with insulin secretion, insulin action, or both. Various medicinal plant species are used as a traditional treatment for diabetes mellitus, such as green tea, which is one of these plants whose extract has been used to treat diabetic patients for many years. The goal of this study was to see if green tea had any antioxidant benefits on the pancreas of alloxan-induced diabetic male albino rats. This experiment involved albino rats weighing between 110 and 120 grams. Three groups of animals were created. Control untreated normal healthy group, Alloxan-induced diabetic group and diabetic group treated with green tea. Tissue samples from diabetic and treated rats were collected and pathologically evaluated to determine the degradation of pancreatic cells in diabetic rats. In diabetic rats, biochemical data revealed a significant decrease in serum insulin, body weight, and total proteins when compared to the control group. Most of these measures improved significantly when diabetes rates were managed daily with green tea. In comparison to the control group, there was a significant improvement in morphological changes in diabetic groups after treatment with green tea in pancreatic tissues. Green tea, it may be concluded, can be used as an anti-diabetic drug to lower blood glucose levels and protect against the harmful consequences of diabetes.

Medical Science, 2022, 26, ms202e2315

Risk factors associated with cleft lip and palate birth defects in Jordan: A retrospective case-controlled study

Amal Albitoosh, Saleh Abu Alhaj, Maryam Abutouq, Forat Almaitah, Lina Al-Shadfan, Youssef Hussein, Ashraf A Zaghloul, Abulmaaty M Elsayed, Mohammad Al-Zubi, Hussein Youssef

Aim: The study investigated the role of different factors could increase the potential risk factors of children with cleft lip and palate defects in the Jordanian population. *Materials and Methods:* Design: A case-control study where questionnaire used to assess different variables including environmental and medical factors. Setting: online questionnaire sent to mothers of children visiting Al-Karak Hospital, AL- Bashir Hospital and some charities delivering services to Children with CL/P. Study Duration: the study started from January 2021 and concluded in January 2022. Participants: questionnaire was answered by 100 mothers of children suffered CL/P (case group), and by 100 mothers of healthy children (control group). *Results:* The results were analysed in relation to the relative risk of each variable in order to estimate the odds ratio with a confidence interval of 95%. The analyses revealed that: family history of CL/P (OR= 4.91), Consanguinity marriage (OR= 3.29), previous illness of the mother (OR= 2.45), and maternal smoking (OR=1.09) are significantly increased risk factors for cleft lip or palate. However, the effect of taking folic acid or multivitamins showed no significant differences (OR= 0.68, p = 0.24). *Conclusion:* Risk factors associated with CL/P in the studied population are almost the same with those described in the previous related studies. Therefore, this study advised all healthcare givers to educate the public about these factors as the same factors related to other congenital problems.

Medical Science, 2022, 26, ms203e2311

Impact of covid-19 pandemic on the consumption of herbal products and its effect on oral and dental health: A cross-sectional study in Saudi Arabia

Khaled Aldalaan, Khalid Alhazmi, Abdulmajeed Alrumi, Sliuman Alnashwan, Tariq AlSwayyed

Objective: The purpose of the study was to investigate, assess and explore the impact of herbal products and their effects on oral and dental health in Saudi Arabia. *Materials and methods:* It is a cross-sectional analytical study conducted in Saudi Arabia. Data were

collected from laypeople in Saudi Arabia using a convenient sampling technique distributed electronically. A total of 20 questions were entered, including demographic variables, the usage of herbal products, and possible effects of oral and dental health. Data were analyzed using the SPSS statistical software version 23, and results with a p-value of equal or less than a level of 0.05 were considered significant. *Results:* 282 females and 103 males have filled the questionnaire in a total of 385. It was observed that about two-thirds of participants 69.9% and 66.8% used lemon and orange. Most of the participants used the herbal immune boosters less than one month 41.8% and 80.5% used these products one time per day. The majority of the participants 94.0% continued dental hygiene practices. *Conclusion:* COVID-19 pandemic made people try to enhance their immunity by consuming herbal immune boosters' products that may have some consequences on their oral health and dental well-being.

Medical Science, 2022, 26, ms204e2270

Prevalence of Knee osteoarthritis with Magnetic resonance imaging in Al Kharj city

Ali Hassan A Ali, Omar O Serhan, Ali Amer Hamdi, Abdulmajeed Mazroua Almazroua, Abdullah Mohammed Alqahtani, Meshari Sanad Almutairi, Abdullah Mubarak Aldawsari, Turki Fahhad Almutiry, Muath Ali Alghamdi, Alaa Alzuwayyid, Ahmad Alrasheedi

Background: Osteoarthritis is a global joint disorder with high morbidities. The current study aimed to investigate the prevalence of knee osteoarthritis in Al Kharj by using magnetic resonance imaging in patients of knee pain. *Methods:* MRI evaluations of from all patients were suffering from pain in the knee and attending King Khalid and University Hospitals. All cases were referred from Rheumatology and Orthopedic departments from October 2021 to March 2022. *Results:* A total of 229 participants were included in our study; 172 (75%) males and 57 (25%) females. After MRI, 91 participants (39%) were diagnosed with knee osteoarthritis. All cases initially diagnosed by X-ray and then confirmed by MRI. Females had a higher prevalence of osteoarthritis than males. *Conclusions:* Knee osteoarthritis is a frequent condition among Al-Kharj population, especially females. Its prevalence rises with age, with the elderly suffering from higher levels of severity.

Medical Science, 2022, 26, ms205e2268

CASE REPORT

Positive impact of vestibular training along with neurodevelopmental therapy to improve overall quality of life of a cerebral palsy baby: A case report

Sakshi Kirtikumar Kariya, Pranali Sunil Fokmare, Pallavi Lalchand Harjpal, Snehal Subrat Samal

Cerebral palsy is a term used to represent a wide range of non-progressive motor disabilities caused by brain injury at or around birth. A lesion in the juvenile brain causes a disturbance of posture and movement. It is also known as static encephalopathy or little's disease. It is a condition that arises as a result of CNS injury, which can occur before, during, or shortly after the child's birth. The impact will not intensify but will remain continuous. However, if correct care is not provided, the kid's condition may worsen, not because of an increase in brain lesions, but because the damaged brain is unable to cope with the physical demands of the growing body and the rising demands of the environment in which the child lives. The greatest method to ensure a child's optimum quality of life as they transition into adulthood is to actively address the symptoms of cerebral palsy.

Medical Science, 2022, 26, ms206e2220

Cardiac amyloidosis, report of 2 cases with strain echocardiography and cardiovascular magnetic resonance

Tuan Vu Nguyen, Duc Minh Nguyen, The Anh Nguyen

We present 2 cases of cardiac amyloidosis cases with strain echocardiography and cmr. The first case was a 68-year-old female with previous refractory heart failure due to chronic coronary syndrome. The second case was a 51-year-old female patient who was admitted in our center with marked dyspnea for 2 months. Both cases were performed with electrocardiogram, chest X ray, transthoracic echocardiography and cardiovascular magnetic resonance. Both patients was performed serum immunology test which showed elevated free light chains (FLC) kappa and κ/λ ratio. These patients were suggested the diagnosis of AL cardiac amyloidosis and treated with chemotherapy.

Medical Science, 2022, 26, ms207e2307

A rare case of hematometra secondary to cervical stenosis following laparoscopic myomectomy: A case report

Eleti Manila Reddy, Manjusha Agrawal, Deepika Dewani, Nidhi Goyal

Background: Hematometra is a uterine blood collection that is pathological. It's a rare disorder caused by a congenital or acquired structural blockage of the cervical canal. Acquired cervical stenosis may be caused by surgical operations performed on the uterus or cervix. Amenorrhea or dysmenorrhea, as well as pelvic pain or irritation, urinary frequency and retention, all are prevalent signs of this illness in premenopausal women. We present a case of hematometra caused by laparoscopic myomectomy done for cervical and posterior wall fibroid. *Case description:* A 39 years old female with para two, live two with previous two lower segment caesarean section and laparoscopic myomectomy done 3 years back, presented with chief complaints of abdominal pain (on and off) since 3 years which increased since 3-4 days and burning micturition since one week associated with vulval itching since 3-4 days. Investigations like CECT and MRI were done which revealed residual uterus with irregular defect in posterior myometrium,

narrowing of cervico-vaginal canal. Using transvaginal sonography a needle with guide wire was introduced through the cervix into the uterine cavity, about 30cc of hematometra was drained. *Conclusion:* The rare likelihood of hematometra should be examined in any woman who presents with acute abdominal discomfort, especially if the pain is related to uterus and cervix surgical procedures.

Medical Science, 2022, 26, ms208e2291

Effectiveness of facial PNF along with effleurage in idiopathic facial nerve palsy – A case report

Nikita Hitesh Seth, Sakshi Kirtikumar Kariya, Shubhangi Pandurang Patil

The outcome of Facial PNF Techniques, effleurage, and facial muscle exercises using visual feedback are described in this single patient research study. The most prevalent type of facial nerve palsy is idiopathic facial nerve palsy, which affects majority of people. It not only affects facial muscle actions but also affects the quality of life and well-being. As a result, we present a case of a 26-year-old woman who presented with facial nerve palsy symptoms and a 2-day history of ear pain. Various screening tests along with CT scans were performed for ruling out the cause of facial nerve palsy and Physiotherapy session were planned along with the medical management.

Medical Science, 2022, 26, ms209e2250

ANALYSIS

Birth order as a predictor of dental caries: A systematic review and meta-analysis of case-control and prevalence data from the last decade

Munirah Ibrahim Alsaeed, Abdullah Omar Alabdulkarim, Ruba Saud Alkabani

Aim: This systematic review aims to quantitatively assess the association between birth order and dental caries. *Methods:* In this systematic review, we identified the studies that were published in the last ten years in four electronic databases that are PubMed, Web of Science through Clarivate, MEDLINE through Clarivate, and EBSCO. We used the “Rayyan – Intelligent systematic reviews” website for duplicate removal and study screening. Review Manager 5.4 was used for quantitative data synthesis to estimate pooled odds ratios (OR). Higgin’s I^2 test was used for detecting inter-study heterogeneity, and visual inspection of funnel plots was used to detect publication bias. *Results:* Our study included 83286 children from 7 studies. Our results indicated a considerable risk for being born second or younger (OR = 1.13 95% CI [1.09, 1.17], $P < 0.001$, $I^2 = 96\%$), the third or younger (OR = 1.61 95% CI [1.53, 1.70], $P < 0.001$, $I^2 = 95\%$), the fourth or younger (OR = 2.46 95% CI [2.25, 2.70], $P < 0.001$, $I^2 = 94\%$), and being among each study’s youngest group (OR = 2.41 95% CI [2.16, 2.69], $P < 0.001$, $I^2 = 96\%$). *Conclusion:* The risk of caries was shown to be directly connected to a child’s ordinal rank in the household. We discovered a significant risk that grows as the birth order rises. Because our data in all pooled studies were varied, caution should be exercised in interpreting the results.

Medical Science, 2022, 26, ms210e2171

The impact of physical activity and meditation to reduce stress and anxiety during covid-19 pandemic: Knowledge and awareness assessment

Ali S Mubarak, Asayel M Alzahrani, Rayan D Alamri, Amal A Asiri, Shahad A Alzahrani, Fawziah Y Alwadai, Awatif A Saeedi, Khames T Alzahrani

Background: COVID-19 is a disease that is caused by the coronavirus and until today, there has been no-effective treatment for this virus. In this study, our aim is to estimate the mediating effect of health behavior engagement on the associations between mental health and COVID-19-related worry, stress. Moreover, how Physical activity affect psychological health through the COVID19 pandemic in Saudi adult population. *Methodology:* This study was a cross-sectional survey conducted in Saudi Arabia from October 2021 to April 2022. The least possible sample size to achieve an accuracy of 5% marginal error with 95% confidence level is 384. The sample was made up of adults (male & female) who are residents of Saudi Arabia. SPSS 26 used for data entry and data analysis. *Results:* The study included 1698 participants, Seventy percent of them were females and 30% were males. 51.1% of participants aged between 20- 30 years old. 6.5% always and 17% usually feel nervous or anxious. 5% always and 12.9% usually feel inability to control anxiety. 65.1% of participants practiced meditation before the pandemic but only 38.3% practice it currently after the pandemic. Of the participants who used to meditate before the pandemic. *Conclusion:* The study concluded that increased exercise and meditation were linked with better-quality mental health and decreased the level of anxiety through the pandemic. The findings emphasize the importance of maintaining self-management health behaviors like physical activity and meditation to maintain one’s mental health throughout pandemic of COVID-19.

Medical Science, 2022, 26, ms211e2325

A questionnaire-based survey to assess knowledge and attitude regarding food allergy among public and food allergic patients in Makkah region, Saudi Arabia: A comparison study

Rawan Alosaimy, Murouj Almaghrabi, Ahaad Basahal, Amjad Alharthi, Bashaer Khawandanah, Ghofran Zamil, Ruba Alansari, Amna Alotiby

Background: This study compares knowledge and attitude regarding food allergy (FA)—a growing global problem—among the general population and FA patients. *Methods:* This was a cross-sectional study including the public in the Makkah region, Saudi Arabia. Participants were contacted via social media to participate in a 22-item self-administrated questionnaire survey about FA between April and June 2021. Data were collected in Excel documents and analyzed using SPSS. *Results:* The study included 487 participants: 397 from the general population; 90 FA patients. FA patients (65.6%) possessed better FA knowledge compared to the general population (49.9%) with reported statistical significance ($P=0.007$). Knowledge was most vital regarding symptoms and severity among both study groups. Females and younger participants possessed better FA knowledge ($P<0.001$). Both FA patients (81.1%) and the general population (72.0%) revealed a positive attitude. Female gender and high school/diploma education level were significantly associated with a positive attitude: $P=0.014$, 0.018 , respectively. *Conclusions:* Both groups exhibited insufficient FA knowledge, but a positive attitude. Therefore, FA awareness programs are crucial to mitigate FA risks and complications.

Medical Science, 2022, 26, ms212e2235

CASE REPORT

Effect of pre-surgical physiotherapy rehabilitation of a traumatic D-11 vertebral compression fracture: A case study

Nikita Kachhwani, Rebecca Timothy

Vertebral compression fractures are usually the fractures of thoraco-lumbar region in which the vertebrae collapse into it and becomes squashed into a wedge shape. The most common cause of this is the presence of osteoporosis or high velocity trauma. These fractures occur as a result of flexion type of injuries. These fractures cause substantial pain and impairment, limiting everyday activities and lowering quality of life. When evaluated, these patients have no aberrant findings, but they do have kyphosis and discomfort in the spinal region. Movements involving flexion of the spine exacerbate the pain. Management includes conservative management and surgical management. Surgically, fractures are managed by vertebroplasty and kyphoplasty. Physiotherapy is suggested to help with the symptoms occurring due to the condition as well as due to the surgery. Rehabilitation starts post operatively and includes pain management, strengthening exercise program, flexibility exercises and return to daily activities. The therapist also incorporates the use of brace to prevent flexion of the spinal column which exacerbates the condition. This has proven to have successful results; however, early initiation of the process can help the patient overall in terms of pain, strength, disability, kinesiophobia and reduced length of hospital stay after a spinal surgery. In case of vertebral fracture with cord compression, physiotherapy intervention pre-op and post-op has been proven to be quite useful in early recovery of the patient along with reduced hospital stay.

Medical Science, 2022, 26, ms213e2230

A case of multiple mal united fractures with knee infection managed with customized long femur to tibia intramedullary nailing

Abhiram Awasthi, Shivshankar Jadhav, Kiran Saoji, Ankur Salwan, Vivek Jadawala

Background: Infection of the knee joint after fractures associated with the joint is a serious problem. The patient presents in intense pain and is likely to undergo sepsis. Sometimes if the preferable surgery could not be performed salvage procedures are to be considered. These are done to preserve the functionality of the involved lower limb and to make the patient capable of doing his daily activities without pain. *Presentation of case:* Presenting a case of a 27 year old male with 1 year old malunited fracture mid shaft femur left side with non-union fracture mid shaft tibia left side with mal united fracture proximal tibia left side with intra operative finding of infected pus in the knee joint. The patient was managed with arthrodesis of the knee joint and fracture reduction using a customised 75cm long femur to tibia intra medullary nail. Knee arthrodesis using long intra medullary nail can be an alternative to above knee amputation in complex knee infections. This can allow the patient to perform his daily activities without having pain. Fractures involving femur and tibia of the same side with knee arthrodesis can be managed with customized long femur to tibia nail effectively.

Medical Science, 2022, 26, ms214e2237

ANALYSIS

Tension headache among University of Ha'il students

Kareemah Alshurtan, Othman Mohammed Othman Alodayli, Ali Turki A Alodaili, Badar Gazza A Alshammari

Background: Around the world, headache has become a significant public health concern. The most widespread type of primary headache is tension headache (TTH). It can affect daily activities and academic performance. *Aim:* The purpose of this study was to find out how common tension headache is and how well students at the University of Ha'il are aware of it. *Method:* A cross-sectional study conducted among University of Hail students. A self-administered questionnaire was distributed among university students. *Results:* A total of 1027 students completed the study questionnaire (52.6% female's vs 47.4% males). 37 responders were eliminated due to reporting in the last 12 months 0 days of headache, which leave us 990 suffering from a headache. The severity of the discomfort is alarming; 59.6% of the students have been impacted by it and are unable to continue with their everyday activities. 30.6

percent of the time, the discomfort is slight and bothersome, but the activity can be continued. Severe pain accounts for 09.8% of the total, waking students from their sleep. The most common cause of triggering was a lack of sleep (36.6 percent). The most popular measure performed to treat headaches without medication was to take a rest. *Conclusion:* Overall, we concluded that the majority of students, especially females, suffer from a tension headache at least seven days a year, which interferes with their daily activities. Headaches were caused by two important variables. A lack of sleep and worry while studying for an exam.

Medical Science, 2022, 26, ms216e2303

RESEARCH

Plasma antioxidant status in patients undergoing long-term opioid treatment

Ogurčáková Daniela, Kočan Ladislav, Šimonová Jana, Martuliak Igor, Sabol František, Vašková Janka

Background: Opioid treatment is now an integral part of pharmacotherapy for severe chronic malignant and non-malignant pain. Currently, there is a sufficient selection of opioids to allow individualized pain treatment. Several experimental studies have confirmed the effect of opioids on oxidative stress. The aim of this work is to determine the presence of redox changes occurring as a result of long-term opioid use in patients with chronic pain. *Results:* Six months of opioid use for severe pain was evaluated in 37 patients. Patients formed three groups depending opioid treatment (oxycodone, fentanyl and tapentadol) and were compared with 42 healthy probands. Compared to control, activities of superoxide dismutase were decreased, while those of glutathione peroxidase and glutathione reductase were significantly increased in all groups. Together with lowered levels of reduced glutathione, this indicated conditions of oxidative stress. There were no differences between treatment groups. *Conclusion:* It is necessary to know the risks of side effects and provide patients with possible solutions. At this stage and with this number of subjects, we can conclude that neither the form of administration nor the type of opioid has any effect on reducing oxidative stress from opioid metabolism in the treatment of severe pain.

Medical Science, 2022, 26, ms217e2319

ANALYSIS

CT derived pulmonary vascular indices and severity of pneumonia in Covid-19 patients: A retrospective study

Avinash P Dhok, Suruchi Dhawan, Rajcee M Chajjed, Kajal Mitra

Context: The currently on-going COVID-19 pandemic resulted in the abnormal lung parenchymal changes which can also alter pulmonary vascular hemodynamics. *Aims:* This study was aimed to assess CT derived pulmonary vascular indices in COVID 19 patients in different groups based on the extent of pneumonia using CT severity score. *Settings and design:* Retrospective study at COVID-19 care centre in central India. *Methods and material:* This study included 78 institutionalized patients who were confirmed COVID-19 positive status. All patients were assessed based on demographic data, CT severity score; CT derived pulmonary vascular indices such as main pulmonary artery diameter and the pulmonary artery to aorta ratio (PA/AO). Changes in these pulmonary vascular indices were determined in each mild, moderate and severe group of pneumonia. *Results:* Out of 78 patients, 25.6% patients belonged to mild group, 28.2% belonged to moderate group and 21.8% belonged to severe group. 70.5% of all patients were males and 29.5% were females. 11% males and 17.4% females showed increased pulmonary artery above normal limits. 4 males and 4 females with increased pulmonary artery diameter belonged to severe group of COVID 19 pneumonia while 8 out of 10 patients with increased PA/AO belonged to severe group of pneumonia extent. *Conclusions:* In this study, patients with pulmonary artery enlargement and increased PA/AO (PA/AO) were predominantly found to belong to severe group of COVID-19 pneumonia, a finding requiring further investigation which will help to predict pulmonary hypertension in COVID 19 patients which has an unfavourable outcome.

Medical Science, 2022, 26, ms218e2079

Role of High Resolution Computed Tomography (HRCT) in predicting critical disease in corona virus disease

Avinash Dhok, Prashant Onkar, Dhananjay Patrikar, Aditya Rakhunde, Pooja Ladke, Aisha Lakhani

Introduction: In the present study, we correlate the oxygen requirement of adult patients infected with COVID-19 virus with 25 CT severity score and estimate clinical outcome in the COVID-19 infected patients. *Materials and methods:* An observational case control study of 123 symptomatic COVID-19 positive patients presented to our hospital was collected for 3 months (August 2020 to Oct 2020). All patients underwent plain HRCT scan on TOSHIBA Activion 16 slice CT. The study was approved by Institutional Ethics Research review board and informed consents were obtained from all COVID-19 infected patients. *Results:* In our study, the Mean age of the patients ranged from 51-60 years (69.9% males, 30.1% females). CT severity score was correlated positively with the oxygen requirements as well as with other parameters i.e. age and sex. CT score of more than or equal to 18 was associated with an increased mortality risk and found to be predictive of death both in univariate (HR, 8.33; 95% CI, 3.19–21.73; $p < 0.0001$) and multivariate analysis (HR, 3.74; 95% CI, 1.10–12.77; $p = 0.0348$). *Conclusion:* The COVID-19 clinical severity is highly correlated with the 25-point CT severity score. Our findings imply that a chest CT grading system can help predict COVID-19 disease fate and has a strong relationship with oxygen demand and intubation.

CASE REPORT

Impact of cervical mobilization, proprioceptive neuromuscular facilitation and active release technique on neck function, disability and quality of life in a hemithyroidectomy patient: A case report

Purva Mundada, Shubhangi Patil, Gayatri Kaple, Nikita Kaple

Colloid Nodular Goitre is the most common form of goitre seen globally and it is also one of the most common endocrine problems, especially in nations where iodine shortage is widespread, like India. A 40-year-old female presented to ENT department of this hospital with large thyroid swelling on the left side and after investigations diagnosed with multinodular colloid goiter which was surgically treated by right hemithyroidectomy under general anesthesia. Post-surgery, neck pain, shoulder tightness, limitation of the cervical and shoulder movements and difficulty in ADLS were the main concerns of the patient. The patient was referred to the physiotherapy department with these problems. Physiotherapy rehabilitation resulted in reduction in neck discomfort, improvement in cervical and shoulder movements and muscle strength and overall quality of life as well as ease in performing ADLS. The current case demonstrated that physiotherapy rehabilitation post-surgery can improve patient outcomes and make him/her independent in activities of daily living.

Medical Science, 2022, 26, ms220e2264

Assorted ways for gait rehabilitation for a patient with amyotrophic lateral sclerosis

Tasneem Mustafa Lakkadsha, Rebecca Timothy, Sakina Shoeb Hussain Saiffee, Shivani Satish Lalwani

Amyotrophic lateral sclerosis (ALS) is a progressive neurodegenerative disease and the commonest type of motor neuron disease (MND). It demonstrates symptoms of both the upper motor neuron (UMN) lesion and the lower motor neuron (LMN) lesion. In this case report, we present a case of a patient with ALS who had slight increased muscle tone, weakness in bilateral lower extremity muscles, and most predominantly a disturbed gait pattern. The patient's expectations from physiotherapy were to gain back a near-normal gait pattern, hence, an appropriate management protocol was made for him while using conventional treatment such as strengthening, PNF, rood's technique etc. as well as advanced techniques such as functional electrical stimulation (FES) with treadmill training, aquatic gait training and vestibular sensory training to attain the patient and therapist's goals. Outcome measures used were Berg balance scale, dynamic gait index and functional independence measure at the beginning and end of the 7 weeks of rehabilitation. To conclude, we are positive that both conventional and advanced physiotherapy techniques have contributed in improving the gait pattern and parameters of a patient suffering from ALS.

Medical Science, 2022, 26, ms221e2269

An unusual case of severe electric burn of the skull: A rare incident

Tejaswee Lohakare, Mayur Wanjari

Deep burns on the scalps and skull are causing due to high-voltage electrical injuries. Illegal handling of the line while working electrocution can occur. We report 42 years male with severe scalp and skull burn injury caused by the high-tension electric current. He was working in the industry as an electrician, and due to some error, the wire broke and fell on his head, causing a fourth-degree burn inpatient. Emergency management of the burn was given to the patient, and duraplasty and transportation of the scalp flap procedure were done.

Medical Science, 2022, 26, ms222e2143

REPORT

Incidence of congenital anomalies of kidney using computed tomography: A retrospective hospital-based study

Amal Albtosh, Mahmoud Khasawneh, Youssef Hussein, Ashraf A Zaghoul, Abulmaaty M Elsayed, Hussein Youssef

Background: Inherited abnormalities of the kidney are considered frequent anomalies in children. Kidney congenital disease often passes without a diagnosis. The majority of these abnormalities are detected at later stages in patients. Renal failure might occur as a result of a delayed diagnosis. The study's goal was to determine the prevalence of these anomalies in Al-Karak, Jordan. The medical records of patients who attended the radiology department of AL Karak governmental hospital were examined. *Methods:* The study examined and analyzed 950 medical records of patients with kidney abnormalities, with an age group extending from 2 years to 30 years old. The study started in October 2020 and completed in January 2022. *Results:* The outcomes of the study showed that the peak incidence in males was seen in foetal lobulation anomaly (14.03 per 1000), followed by polycystic kidney (5.3 per 1000); whereas, in females the highest incidence was identified for polycystic kidney anomaly (23.7 per 1000) followed by foetal lobulation (13.2 per 1000). *Conclusions:* We propose that all parents get their children ultrasonography scanned on a regular basis. Early detection and treatment of any disease is preferable than late detection and therapy.

Medical Science, 2022, 26, ms223e2336

Awareness of chronic kidney disease (CKD) among CKD patients

Abdullah H Alghamdi, Abdulrahman S Alshehri, Ahmed Z Alaseri, Khalid S Alqarni, Salman K Almutairi, Abdullah A Alaryni, Omar A Alshammari, Hanadi H Alenazi, Nshmia S Alenazi, Rayan Qutub, Yousef Alammari, Khalid Al-Harbi, Osamah A Hakami, Abdullah Bukhari

Background: CKD is a public health issue that could burden the health care system of KSA. Patients' awareness about their condition proves better adherence and reduction of complication. *Aims:* to evaluate the awareness of CKD patient about their condition. *Methods:* a cross-sectional study using a validated questionnaire conducted in King Fahad Medical City in Riyadh. CKD diagnosed patient from 18 years old and above were selected. *Result:* a total of 114 CKD patient participated in the study. Mostly were males (62.3%), age groups of 51-70 (38.6%) and 31-50 (31.6%) years old, married (60.2%), high school educational background (27.2%), unemployed (43.9%), <5000 SAR income, >12-month CKD duration (73.7%), DM (53.5%) HTN (83.3%) and no CVD (60.5%). CKD patients' awareness mean score is 28.94, awareness was highest on how to collect urine correctly (2.74) and lowest on what activities are organized regularly in clinics (0.29). *Conclusion:* poor awareness was observed among CKD patients regarding their medical condition, which warrants more efforts to enhance their knowledge.

Medical Science, 2022, 26, ms224e2323

Awareness & attitude toward sunscreen use and sun protection in Al-Jouf region, Saudi Arabia

Ziad Mansour Alshaalan, Amany A Ghazy, Afrah Mohaimed Altaymani, Amal Jazim Alruwaili

Background: Skin protection is an important issue that is neglected by a large sector of the community. Using sunscreens protects skin from harmful sun rays and subsequent burns. It is important to determine the level of community's awareness about sunscreen role in skin protection to be design the appropriate health education program. This study aimed to assess the level of awareness of residents in Al-Jouf region, Saudi Arabia toward sunscreens and define the factors that have an impact on adoption of sun protection practices. *Methodology:* This is a questionnaire-based cross-sectional study. An online questionnaire was distributed among residents in Al-Jouf provinces. *Results:* About half of the studied population use sunscreen, particularly the females, before exposing to the sun. More than half of participants use sunscreen to prevent sunburn (62.8%) and to avoid dark skin spots (71.6%). However, many participants did not use sunscreens because of their high cost and inconvenience. One-third of sunscreen users applied it when exposed to the sun only (34.1%), and during summer (96.9%). Moreover, 53.6% of our study population use less than a quarter of a teaspoon and apply it to their face and hand only (47.5%). Regarding their opinion on the reapplication of sunscreen, 28.4% of participants reapply for sunscreens after taking a shower while 55.9% do not reapply it. *Conclusion:* Participants' attitudes toward sunscreen use were variable. Improper use of sunscreen was recognized and this will need awareness programs on the effective use of sunscreen.

Medical Science, 2022, 26, ms225e2324

Cancer knowledge related to nutrition among medical students

Mostafa Ahmed Arafa, Karim Hamda Farhat, Nahla Khamis Ibrahim, Noha S Mostafa, Doaa Ali Mohamed, Raghdah Hashem Ateeq

Objectives: To assess the knowledge level of medical students about nutritional, lifestyle, and hormonal factors related to cancer among students from King Saud University (KSU), Riyadh, and King Abdulaziz University (KAU), Jeddah. *Materials and methods:* It was a cross-sectional study conducted amid medical students from both universities during the period from October 2021 and January 2022. A valid and reliable self-administered and/or Google form questionnaire was used to survey the participants. It inquired about personal data, practicing physical activities 18 questions (answered on 3 points Likert scale) related to nutrition was used. *Results:* A total of 616 medical students were recruited. The mean nutrition correct knowledge scores were 24.8±5.8 (68.9%) and 26.5±5.4 (73.6%) for students from Riyadh and Jeddah Universities, respectively (Student's t-test = 3.76 & P < 0.01). Both groups had a high percentage of right answers regarding the increased cancer risks associated with the consumption of alcohol, processed meat, and salty foods. Only 16% of the medical students from Riyadh and 30.7% from Jeddah reported that they have lectures or discussions about that association of nutrition with cancer with their staff. *Conclusion:* Students from both universities had a reasonable level of knowledge about risk factors of cancer, in favor of Jeddah students. There is a requirement for more intercessions in the medical students' curricula with further curriculum reform regarding the value of nutritional and lifestyle education and how related to cancer risks or prevention for improving future physician practices.

Medical Science, 2022, 26, ms226e2253

CASE REPORT

Primary B-cell lymphoma: A case report of an isolated two masses occurring in the external auditory canal and middle ear cleft of the same ear simultaneously

Khalid Aldhafeeri, Lina Telmsani, Laila Telmesani

We report a 52-year-old woman with primary aggressive B-cell lymphoma occurring as two isolated masses in the external auditory canal and middle ear cleft of the left ear, simultaneously. The patient presented with left ear pain, blockage, decreased hearing, and a mass in the external ear canal. Histopathological examination confirmed the diagnosis, and patient was treated with surgery, chemo & radiotherapy. Primary lymphoma is extremely rare in the ear. As per our knowledge, it's the first case reporting two isolated masses occurring simultaneously in the same ear.

Medical Science, 2022, 26, ms227e1674

A unique case report of microcephaly and malnutrition in a child with spastic quadriplegic cerebral palsy

Naman Mishra, Ashish Varma, Anuj Varma, Jayant Vagha, Keta Vagha, Shubhangi Ganvir

The study of disease transmission of cerebral palsy (CP) expects to depict the recurrence of the condition in a populace and to screen its progressions over the long run. An 13-years-old male child presenting with recurrent Generalise Tonic Clonic Seizures (GTCS) lasting for about 30-60 minutes with normal spells ranging from few weeks to months and associated with up rolling of eyeball and developmental delay in all aspect since 2nd day of birth. Child was prescribed with Sodium Valproate and Levetiracetam and Midazolam spray SOS, along with the training of both parents regarding cerebral palsy on clinical, social, behavioural, and therapeutic aspects. The strict compliance of drug and physiotherapy regime was implied and improvement has been observed in the patient with decrease in frequency of seizures.

Medical Science, 2022, 26, ms228e2151

Individualized conservative treatment for medial tibial stress syndrome: A case study

Nikita Deshmukh, Pratik Phansopkar

Recreational runners, military trainers, dancers, and individuals who jump or move quickly are the main cause of shin splints. It is most commonly known as overuse injury. The most commonly impacted areas of the tibia are the anterior and posterior. In this condition medial side is most commonly affected, or antero- lateral side and sometime both of the side is painful which was difficult to diagnose. Overuse of the foot flexors, as well as leg discomfort and stiffness. If not addressed, it might lead to major complications like nerve entrapment, compartment syndrome, soleus syndrome. X-ray investigation aids in the identification of the damaged portion, MRI finding which help to confirmed soft tissue involvement and CT scan for sensitive structure. While physiotherapeutic rehabilitation aids in the improvement of the condition and speedy recovery. Early conservative treatment helps to decreases the progression of the symptoms. The goal of this case study is to inform readers about the conservative treatment options available for shin splints. Make recommendations to enhance the treatment and functioning results of the patient.

Medical Science, 2022, 26, ms229e2257

Cauda Equina syndrome rehabilitation strategies post decompression- Discectomy – A case report

Pranali Sunil Fokmare, Medhavi Vivek Joshi, Pratik Arun Phansopkar

Cauda equina syndrome (CES) is a unique clinical entity which leads to various neurological dysfunctions due to entrapment of lumbosacral nerve roots. It mainly occurs after a significant herniation, prolapse, or sequestration of the lower lumbar disc. In the case of spinal stenosis, small prolapses may cause CES. In this case report we present a case of 60 years male patient having complaint of mild low back pain since 1 year back which progressively got severe 1.5 month back. The pain was radiating bilaterally in both the lower limbs along with weakness and tingling sensation Loss of urination and bowel sensation. With this complaints patient came to AVBRH were investigations like X-ray and MRI was done and diagnosed with cauda equina syndrome with neurodeficit with bowel and bladder involvement. Next day patient got operated for decompression and discectomy at L4-L5 level. Post-operative physiotherapy treatment was started and it shows significant improvement and used to prevent secondary complications.

Medical Science, 2022, 26, ms230e2261

ANALYSIS

Parent's awareness of antibiotic use for upper respiratory tract infection in children, in Ha'il region, Saudi Arabia

Reem Alshammari, Abdulilah Aldhmadi, Ahmed Alreshidi, Saleh Alsanea, Alreem Almarshadi, Abdulaziz Alshammari, Rinad Alrashidi, Abdulrahman Alkhateeb, Sulaiman Alghaslan

Background: Upper respiratory tract infections are the commonest cause of self-limiting respiratory disease. This study aims to assess the knowledge, awareness and practices regarding the use of antibiotics among parents in Ha'il region. *Materials and methods:* A randomized cross-sectional study conducted using a pre-validated pre-translated electronic questionnaire distributed through social media platforms. This study includes parents who are Ha'il region residents. *Results:* A total of 386 respondents were included and most respondents (82.9%) identified doctors as the main source of information about the use of antibiotics, followed by social media (30%), and friends and relatives (30%). *Conclusion:* Respondents were lacking in terms of knowledge and practices regarding the use of antibiotics and their consequences.

Medical Science, 2022, 26, ms231e2255

Assessment of knowledge and attitude of gestational diabetes mellitus among Saudi Women in Al Ahsa

Hussain A Al Ghadeer, Abdullah I Albeladi, Kholoud H Aljurini, Mohammed Albarqi, Nihad A Al kishi, Hassan H Alhamoud, Murtadah M Albusaeed, Hawra J Al Abbad, Hussain R Alshaban, Abdulwahab M Al Ferdan, Mohammed A Al Salman, Feras A Alamir, Manaf M Almomen, Hawra I Alajwad, Ahmed Y Algafle

Background: Gestational diabetes mellitus (GDM) defined as a temporarily type of diabetes induced by insulin resistance and pancreatic β -cell dysfunction during pregnancy, GDM can cause major complications, but it can also be avoided and treated. *Methods:* A cross-sectional study was done in Alahsa, Saudi Arabia during the period from March 5 to March 18, 2021, using a validated questionnaire with 17 items concerning GDM awareness and understanding. Participants were categorised into low knowledge (10/17) and fair/good knowledge (11/17) based on their replies. *Results:* The study included 464 adult females aged 24.9-41.6 years from the Alahsa region. According to our survey, nearly one in every five females (22.8 percent) had strong understanding of GDM, which is considered as low percentage. Also our findings shows that more than three-quarters of the study females are aware of the risks of untreated GDM, and two-thirds (69%) are aware that GDM. Furthermore, females' awareness of GDM complication was reasonably good. *Conclusion:* Our study declares that there is a significant frequency of low awareness, knowledge, and awareness about GDM on Alahsa region.

Medical Science, 2022, 26, ms232e2297

CASE REPORT

A rare case of tracheal papilloma mimicking foreign body obstruction

Rajasekar MK, Mohan Kumar J

Tracheal papillomavirus (TP) due to human papillomavirus (HPV) infection is a noncancerous disorder characterized by papillomatous growths in the epithelium of the respiratory tract, including the trachea. A 12-year-old female was hospitalized at our hospital after presenting with a 6-month history of dry cough and intermittent dyspnea when talking and swallowing. The physical examination was routine. Under general anesthesia, this patient got cold therapy and a non-selective type of debridement, and postoperative pathology was revealed within the tracheal villoma.

Medical Science, 2022, 26, ms233e2193

Effectiveness of cognitive behavior therapy and goal-oriented physiotherapy intervention to improve cognitive and motor function in a patient with a sub-acute stroke – A case report

Aditi Joshi, Rakesh Krishna Kovala, Mohammed Irshad Qureshi, Vikrant Salphale, Pallavi Harjpal

A stroke is defined as the sudden loss of neurological function caused by the reduction of flow of blood to the brain. This is a leading cause of long-term disabilities. There are two classifications of stroke i.e., ischemic and hemorrhagic strokes. Ischemic stroke is common. A wide range of abnormalities occurs, including alterations in consciousness, sensory, motor, cognitive, and language problems. Physical therapy plays a vital role in treatment. It majorly works on sensory and motor components. Here, is a case of a 40-year-old male, who is a lawyer by profession, who suffered with a stroke. Underwent durotomy and craniotomy and further was referred for physiotherapy rehabilitation. The patient had a loss of power on the right side and unclear speech. Physiotherapy was initiated with training the bed mobility exercises, followed by sitting training, then standing progressing to gait training.

Medical Science, 2022, 26, ms234e2182

Case report: Circumscribed Juvenile Pityriasis Rubra Pilaris

Tahani S Maghlah, Mazin M Aljabri, Malak A Aldahasi, Ahmed N Alharbi

We report juvenile Circumscribed Pytriasis Rubra Pilaris in 13 year Saudi Boy, came to dermatology clinic with well circumscribed scaly plaques over elbows, knees and ankles, not improving on topical steroids. Histopathology was in consistent to Pytriasis rubra Pilaris. There are six types of Pytriasis rubra pilaris, one of them is Juvenile circumscribed type which is uncommon to be seen.

Medical Science, 2022, 26, ms235e2329

ANALYSIS

Volumetric appraisal of the superior temporal gyrus in normally functioning human brain, using magnetic resonance imaging

Abdalla Ahmed Eldaw Elamin, Mohammed Issa Mohammed Eltahir, Elghazaly A Elghazaly, Saadeldin Ahmed Idris, Abubaker El Elhaj, Elriah Mohamed Makki Elmasalmi, Mohammed Ibrahim Elhassan Omer

Background: The volume and morphology of the superior temporal gyrus (STG) of the human brain can be affected by age. Its quantitative assessment might be aiding the clinicians. *Objective:* To estimate the STG volume in MRI using DICOM viewer in adults deprived of structural brain abnormality, to correlate the volume with age, and to determine its variations between/and within the sexes. *Material and Methods:* A retrospective study was performed in Al-Amal Hospital, Sudan (April 2021 and March 2022). STG volume was delineated along the entire STG borders. Using SPSS version 25.0 data were processed. *Results:* It included a MRI brain of 50 adult patients (equal genders); their mean age was 33.12 ± 8.29 years (range, 20 to 49 years). STG volume was

adversely interrelated with age ($r = -0.318$ and $P = 0.024$), significantly differed bilaterally within sexes ($P = 0.000$), and was greater on the left in both genders. A significant gender difference was observed regarding STG volume, $p = 0.000$. *Conclusion:* DICOM can be used to assess the STG morphometrically to detect any pathological variations, based on volume changes.

Medical Science, 2022, 26, ms236e2347

Perspectives toward covid-19 pandemic and conspiracy theories among adults attending primary healthcare centers in Jeddah city, Saudi Arabia

Ahmad Y Alzahrani, Najlaa A Mandoura

Background: COVID-19 is one of the recent emerging infectious diseases that were progressively declared a pandemic affecting the whole globe. Such a disease encompassed several misconceptions and conspiracy theories. This study aimed to determine the prevalence and pattern of conspiracy theories and determine associated factors and compliance with preventive measures. *Methods:* We conducted an analytical cross-sectional study utilizing a self-administered questionnaire on conspiracy theories and ideas. We did data analysis with the IBM SPSS version 21 was used. A p-value of <0.05 was considered for statistical significance. Descriptive statistics were performed, and we analyzed the association between variables using the Chi-square test or Kruskal-Wallis test. *Results:* The current study got 399 responses. We found a 35.8% prevalence of conspiracy beliefs about COVID-19 among participants. The top 4 conspiracy theory beliefs were: COVID 19 was exaggerated to make significant changes in the world's social order, COVID-19 was a secret biological weapon, big pharmaceutical companies have known about COVID-19 for a while and COVID-19 was made up to keep people's attention so that special agencies could change the world economy. Believing in conspiracy theories was significantly associated with low acceptance and compliance with preventive measures and less COVID-19 vaccine adoption. There was no difference between conspiracy believers and non-believers in regard to sociodemographic factors. *Conclusion:* This study finding suggest that there is still a need for continuing efforts to raise awareness and education programs to educate people, burst myths and conspiracies, and incite vaccination adoption.

Medical Science, 2022, 26, ms237e2348

Dermatosis related to the use of face masks during Covid-19 pandemic

Fawwaz F Alshammrie, Abeer Elhaj, Maryam Alzahrani, Alanud Altamimi, Ghadah Alswaidani, Saadeldin Ahmed Idris

Background: A global pandemic has been brought about by the SARS-CoV-2 virus that causes the new corona virus disease. Face masks should be worn as the virus can spread via respiratory droplets and aerosols. *Aim:* To determine the prevalence of face-mask dermatosis in Ha'il City population and the related risk factors. *Methodology:* A community based cross sectional study (1st December 2021 to 1st May 2022) was conducted. Using online Google form, the retrieved data included patient's occupation, daily mask-wearing duration, pre-existing skin disorders, recently noticed mask-related skin reaction, and types of masks. Then after, data were analyzed using SPSS version 22.0. *Result:* The study included 679 participants from different age groups. Face mask wearing was responsible for about 55.2% of dermatosis among the participants, with contact dermatitis being the most common disorder. There was positive correlation between suffering from previous skin conditions and aggravating the skin disease due to wearing a mask with 0.288 correlation coefficient ($P = 0.001$). *Conclusion:* A high rate of facial dermatosis is accompanying to utilization of the face masks. Using a face mask causes skin eruptions, and this may help characterize their appropriate usage.

Medical Science, 2022, 26, ms238e2340

CASE REPORT

Mature teratoma of bilateral ovary: A case report

Naina Saluja, Jayant S Makrande, Kishore Hiwale, Sunita Vagha

Women's ovarian tumors are a prevalent type of neoplasm. The most prevalent kind is mature cystic teratoma, which has an 8–15 % bilateral frequency. However, only a few cases of bilateral and multiple sclerosis have been described. A 42-year-old female patient with stomach pain for one day arrived with an unusual case of bilateral multiple dermoid cysts. Her medical history had been relatively normal. The patient had clots passing in the menses. Multiple bilateral ovarian cystic tumors were discovered on ultrasonography. Laparotomy was performed on the patient. The lumps were removed while the remaining ovarian tissue was preserved. In histology, the myometrium is unremarkable. In histology, a cervix segment revealed chronic cervicitis with a Nabothian Cyst. A section of the right ovary revealed characteristics that pointed to a benign cystic teratoma of the right ovary (Dermoid cyst). Histopathology of the left fallopian tube revealed endometriosis. Histopathology confirmed multiple mature cystic teratomas with no signs of malignant cells.

Medical Science, 2022, 26, ms239e2266

Physiotherapy rehabilitation, a key element in the success of a patient undergone hemi-mandibulectomy: A case report

Shivani Satish Lalwani, Shubhangi Pandhurang Patil, Rupali Thorat, Sakina Shoeb Hussain Saifee, Tasneem Mustafa Lakkadsha

India has one of the highest rates of mouth cancer in the world among which gingivobuccal cancer (GBC) is the most prevalent. A 45-year-old man was reported to the hospital on November 23rd, 2021, with symptoms of difficulties eating and swallowing meals and pain when executing facial movements for 6 months. Six months ago, the patient was diagnosed with well-differentiated

squamous cell carcinoma of the upper right gingivobuccal sulcus after a series of tests, and he has now finished three cycles of neoadjuvant treatment. On December 1, 2021, a right hemi-mandibulectomy with ipsilateral modified radical neck dissection and pectoralis major myocutaneous flap repair was done. Key indicators include pulmonary function, appropriate mouth opening, discomfort alleviation, and wellbeing. The Oral Rehabilitation Program is beneficial, as evidenced by statistically significant improvements in exercise capacity and well-being. This case study represents a comprehensive rehab strategy for people who have had oral surgery.

Medical Science, 2022, 26, ms240e2189

Case Report on the role of physiotherapy in improving the quality of life of a patient with Amyotrophic lateral sclerosis

Tejal Babar, Ragini Dadgal, Rakesh Kovala, Moh'd Irshad Qureshi

The commonest type of motor neuron disease is ALS. Amyotrophic lateral sclerosis (ALS), which is also known as Lou Gehrig's disease, is a degenerative disease that affects the neurons and includes features of gradually increasing motor neurons degeneration that controls voluntary muscles functions. Early signs of ALS include gradual onset of stiffness of muscles, muscular spasms, progressive weakness, and muscle wasting. C9orf72 (chromosome 9 open reading frame 72) is the commonest gene that undergoes mutation in ALS, promoting the loss of motor neurons in multiple ways. This case is of a 47 years old male patient who presented with complaints of asthenia in the lower limb for 2 years, asthenia in the upper limbs for 1½ years, dyspnea for the last 5 months, and dysphasia, dysphagia, sialorrhea for the last 3 months. He underwent various interventions like MRI, CT scans, EMG (Electromyography), and NCV (Nerve Conduction Velocity). He was then diagnosed with Motor neuron disease after ruling out another probable diagnosis like upper and lower motor neuron disease, Syringomyelia. The disease-specific outcome measures for ALS are ALSFRS and ALSAQ-5. Physiotherapy treatment that is modulated according to the patient's need plays a vital role in improving the quality of life and helps in delaying the worsening of symptoms henceforth helping in increasing the life span of the patients diagnosed with Amyotrophic Lateral Sclerosis.

Medical Science, 2022, 26, ms241e2160

Effectiveness of early physiotherapy management in acute stage of traumatic spinal cord injury patient- A case report

Akanksha Hege, Ragini Dadgal, Moh'd Irshad Qureshi

Spinal cord injury (SCI) is rare and has a profound impact on an individual's life. Traumatic SCI are cause due to Road Traffic Accident (RTA), gunshot, falls etc. It alters the motor, sensory and autonomic functions. The SCI can be categorized in tetraplegia and paraplegia. Presented case is a 26 year old male came in casualty with the complain of loss of power over bilateral lower limb, with history of trauma due to which he had T11- L3 for L1 vertebrae fracture and was operated for the fixation of the same. He was diagnosed as traumatic SCI based on symptoms, physical examination, outcome measures, MRI. Early physiotherapy management was initiated and after 15 days, the functional status of patient was improved. We conclude that the early physiotherapy management is effective in acute stage of traumatic SCI patient.

Medical Science, 2022, 26, ms242e2163

Goal-oriented physiotherapy program in a young patient with traumatic spinal cord injury: A case study

Sampada Meghe, Rakesh Krishna Kovala, Mohammad Irshad Qureshi, Pallavi Harjpal, Neha Chitale

SCI (Spinal cord injury) is a strong injury that typically causes paralytic muscles below the level of the lesion, resulting in limited, altered mobility and dependence on others. Injury sustained can be a total or partial injury. Here we present a case report of a 20-year-old male, who came to physiotherapy OPD in October 2021 for physiotherapy, is a case of TSCI (Traumatic Spinal cord injury) and was under rehabilitation since February 2021. He came with complaints of inability to stand unsupported, inability to walk without assistance, and lack of bladder and bowel control. MRI and X-RAY investigations were done. The patient is diagnosed with SCI at D12-L1 Level – Paraplegia. The patient was managed surgically with D12-L1 laminectomy and D11-L3 pedicle screw fixation. This case shows how a TSCI patient with paraplegia shows significant improvement in balancing and functional activities and is still undergoing rehabilitation.

Medical Science, 2022, 26, ms243e2238

RESEARCH

Strengthening the preoperative Nursing Care: Stress and coping abilities of clients undergoing surgical procedure in Tabuk

Mathar Mohideen Nagoor Thangam, Murad Al Khalailah

Background: Patients who are undergoing for any kind of surgical intervention faces anxiety and stress. They need to adapt positive coping strategies to control their stress. If the stress level exceeds than coping, it will affect the recovery and surgical outcome. *Purpose:* To assess the level of stress and coping abilities of a clients who are planned to undergo for surgery in Tabuk. *Methods:* This descriptive Cross-sectional survey was conducted in the surgical units of the hospitals under Ministry of Health in Tabuk with the sample sizes of 250 clients. Perceived Stress Scale (PSS) was used to measure the stress level and Coping with Surgical Stress Scale (COSS) was used to measure the strategies used to cope with surgical stress. *Results:* The mean scores stress on PSS was 24.38, SD=8.244. Most of the clients had moderate and perceived level of stress on PSS. Most of the clients used information seeking and

turning to religious coping than other strategies. Half of the participants had used favorable coping strategies and 47.6% of the participants used moderate coping strategies. Overall coping scores showed with \bar{x} =71.2, SD=19.26. Average positive linear correlation was observed between the stress level and coping. Significant difference was observed between the male and female participants on PSS and COSS. *Conclusion:* This study reveals that the clients who are in the preoperative period faces considerable stress and develops coping strategies accordingly. Providing adequate information and facilitating the coping strategies would be beneficial in reducing the preoperative stress.

Medical Science, 2022, 26, ms244e2259

ANALYSIS

Knowledge and attitude of non-healthcare providers towards cardiopulmonary resuscitation in the eastern province of Saudi Arabia

Nasser Almulhim, Fahad Al-Mulhim, Hussain Al Hassan, Omar Aldamigh, Razan Al Hussain, Ali Alkhalifah, Zainab Alarab, Ali Al Nasser

Early cardiopulmonary resuscitation (CPR) in sudden cardiac arrest by bystanders prior to the arrival of emergency medical services can profoundly improve victim's chances of survival if done correctly. Our study sought to evaluate the knowledge around cardiopulmonary resuscitation seen in non-healthcare providers in the Eastern Region, Saudi Arabia. This is a cross-sectional, online-questioner based study conducted between Aug and Sept 2021. The questions explored overall BLS knowledge and previous experiences with cardiac arrests. Our study included 487 participants, 51.3% of the participants had received BLS training, but only 43.1% had adequate BLS knowledge. Regarding the attitude, 11.9% of participants previously witnessed a sudden death, 15% of them performed CPR, and 39.7% told someone to get help. The most common concern preventing percipients from performing CPR was fear of making mistakes (74.7%). Our participants had a better overall BLS knowledge than people in other regions. Notably, 40.9% of our participants incorrectly thought that the compression-to-rescue breath ratio was 5:2, which underlines the need to implement mandatory BLS courses for the general population to maximize survival in out-of-hospital cardiac arrest.

Medical Science, 2022, 26, ms245e2328

Study the effect of electro acupuncture on liver– spleen and kidney function of experimental animals

Pham Hong Van, Nguyen Duc Minh, Nguyen The Anh, Tran Phuong Dong

Studying the effects of electroacupuncture the acupoints LI4, PC6, Jiaji C7 in experimental inflamed rabbits show that, Electroacupuncture acupoints LI4, PC6, and Jiaji C7 have a protective effect, limiting the degree of degenerative and congestive damage in liver and kidney parenchyma in experimentally inflamed rabbits; stabilizing indicators evaluating the function of these organs (enzyme activity AST, ALT, urea, creatinine). Electroacupuncture acupoints LI4, PC6, and Jiaji C7 has prevented congestion in the parenchyma of the spleen, and in turn cause hyperplasia of lymphoid follicles of the spleen, increasing the number and percentage of lymphocytes in peripheral blood.

Medical Science, 2022, 26, ms247e2335

CASE REPORT

Road to recovery from multiple fractures and subdural, sub arachnoid bleed along with low back pain- A case report

Neha Chitale, Pratik Phansopkar

We present a case of multiple fractures with subdural, subarachnoid bleed and open wound. Fracture is a loss in the continuity of bone while open wound is loss in the continuity of skin and managing the both is important. Secondary complications like low back pain develop due to prolong supine position. Managing the condition and preventing the secondary complications is one of the major roles of a physiotherapist. Platelet rich plasma is a therapy used to boost the healing of the wounds, in which the blood of the patient is centrifuged and platelets and plasma are separated and inserted at the site of injury. Managing multiple levels of injury requires a multidisciplinary approach. In this case report we conclude that early management reduces the risk of secondary complication and further involvement of neurological system post subdural and subarachnoid bleed.

Medical Science, 2022, 26, ms248e2198

Impact of physiotherapy rehabilitation in subject with Monteggia fracture with compartment syndrome- A case report

Aditi Joshi, Om Wadhokar, Pratik Phansopkar

The Fracture of proximal ulna linked with radial head dislocation is called Monteggia fracture. The cause of injury is traumatic and leads to complications if nerves are damaged with fracture at the forearm. Compartment syndrome is a common cause of trauma that destroys the soft tissues. The compression is due to fracture leads to nerve paralysis, specifically the ulnar and radial nerve. Such complications limit the functional activities as well as slow the healing process. We document a case of 55-year-old farmer, admitted to hospital, with history of twisting injury at forearm due to rotator machine of the tractor, admitted in emergency unit with bleeding wound, pain plus swelling over forearm. On investigations, it was diagnosed as Compound grade I Monteggia

fracture and radial head dislocation with Radial plus Ulnar nerve Palsy with Compartment Syndrome. It was managed by open reduction internal fixation and Physiotherapy was started for further rehabilitation.

Medical Science, 2022, 26, ms249e2140

Outcome analysis of accelerated physiotherapy rehabilitation following arthroscopic repair of bankart lesion and soft tissue reconstruction: A case report

Samiksha V Sonone, Anam Sasun, Pratiksha Lanke, Pratik Phansopkar

Introduction: Arthroscopic repairs of shoulder injuries are widely performed acceptable and safest procedures for anterior shoulder instabilities. Such injuries are common in athletes. Bankart lesion surgeries followed by a proper and customized physiotherapy regime have been found highly effective in declining further surgery-related complications and future chances of dislocations. Rotator cuff muscles act as stabilizers to the shoulder joint, providing stability and mobility to the joint. Tear of these muscles causes impingement in the shoulder, loss of motion, and pain in the joints. As per our knowledge, our case report is the first which has used the DeLorme protocol for physiotherapy rehabilitation post-Arthroscopic repair of bankart lesion and rotator cuff tear. *Case Presentation:* A 22-year-old male visited AVBRH with complaints of weakness and sudden hanging of the left shoulder which occurred due to a household activity on 10.09.2021. After which the patient was diagnosed with Bankart's lesion and partial thickness tear of the supraspinatus muscle of the left side. Therefore the patient was managed with Arthroscopic Repair surgery of Bankart's lesion and soft tissue reconstruction surgery of supraspinatus which was done under general anesthesia on 15.09.2021. *Conclusion:* A customized and organized physical therapy program has shown tremendous enhancements in the patient's quality of life and general health. This case report will describe the importance of physiotherapy and its integral role in rehabilitating patients, and how it contributed to ROM progression, Regaining the strength of muscles of the back, and achieving ADLs back.

Medical Science, 2022, 26, ms250e2252

ANALYSIS

Diffuse tomography of human organ samples to establish the postmortem interval in alcohol and carbon monoxide poisoning

Ihor Ivaskevych, Oleg Vanchuliak

Establishing of time interval that has elapsed since the death of a person has been and continues to be one of the most important issues to be addressed by a forensic expert during the autopsy. The main issue is to investigate and substantiate the information capabilities of the objective method of diffuse tomography of fluctuations of circular birefringence of histological sections of biological tissues (BT) in the diagnosis of post-mortem interval (PMI) in alcohol and carbon monoxide poisoning and also the possibility of their differentiation. The object of the study was histological sections of the brain, liver, adrenal glands, myocardium and polycrystalline blood films, selected from 150 corpses of both sexes, aged 20 to 68 years, with previously known time since death (TSD), ranging from 1 to 70 hours. The task of developing objective digital criteria for forensic diagnostics of PMI in alcohol and CO poisoning is based on the fluctuation of circular birefringence (FCB) of the polycrystalline component of humans BT. According to the results, a statistically significant possibility of differentiation of cases of alcohol and CO poisoning and TSD determination in the range of 20 to 48 hours (up to 0.5 hours) for the method of FCB of polycrystalline component of histological sections of adrenal glands.

Medical Science, 2022, 26, ms251e2341

Effect of buspirone hydrochloride on kidneys of the pregnant and their fetuses an experimental study

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A member of the anxiolytics pharmacological class, buspirone is an anti-anxiety medication. Buspirone is a sedative medication that is frequently used to relieve tension. The goal of this study was to see how buspirone hydrochloride affected the kidneys of pregnant rats and their offspring. Thirty-three pregnant female rats were divided into three groups. Pregnant rats in the first group received distilled water orally as a control. The second category of pregnant rats received an oral dose of buspirone hydrochloride at a daily dose of 0.27 mg/100 g for fifteen days. From the sixth to the twentieth day of pregnancy, pregnant rats of last group were given buspirone hydrochloride at a dose of 0.41 mg/100 gm for fifteen days. For the histological and histochemical examinations, kidney tissues were collected from pregnant rats and selected from their fetuses of all groups killed on the 20th day of gestation. Both treated groups' maternal and foetal kidney tissues showed various alterations after treatment with buspirone, which were particularly noticeable at the high concentration dose. The current investigation discovered that using the drug Buspirone caused many histological and histochemical changes in the kidney tissues.

Medical Science, 2022, 26, ms252e2354

Correlation of CT severity grade with laboratory findings in COVID-19 patients

Avinash Dhok, Kajal Mitra, Rujuta Daptardar, Yash Jakhotia

Introduction: CT chest is strongly recommended for evaluation in COVID-19 cases as it involves the respiratory system. In the current study, we correlate the CT chest with the most commonly encountered laboratory abnormalities in COVID-19 patients based on their CT severity grade. *Materials and methods:* This was a retrospective study, conducted in a designated COVID center in 123 hospitalized patients who were confirmed COVID-19 positive. The research was conducted over three months (August 2020 to October 2020). Patient demographics, chest CT findings with CT severity scores of the affected lung parenchyma, and laboratory values like serum D-dimer, CRP, ferritin, and lymphocyte count were reported. The association between the severity of a chest CT scan and the levels of laboratory parameters was investigated. Before the study, the local ethics committee granted its approval. *Results:* There were total of 123 cases, out of which 86 (30.1%) study subjects were males and 37 (69.9%) were females. There was no discernible link between gender and severity score. A positive correlation was seen between the CT imaging findings and serum D-dimer, CRP, and ferritin levels; however, a negative correlation was seen with lymphocyte count. *Conclusion:* A significant correlation is seen between the CT severity score with laboratory values and the disease severity. Chest CT score is an important signal of the amount of systemic inflammation and can help speed up the diagnostic procedure in symptomatic patients.

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Assessment of the level of knowledge, attitudes, and practices regarding cancer in Saudi population

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Background: Cancer is the leading threat to global health care with the fastest occurrence rate. As per the global estimate in 2020, about 10.0 million people died due to cancer and 19.3 million new cases were reported. Particularly in Saudi Arabia, 24,485 newly diagnosed cancer patients and 10,518 deaths due to cancer were reported in 2018. *Objective:* This study aim to examine the self-reported knowledge, attitudes and preventive practices on cancer among the people of Saudi Arabia and to find the association between knowledge, attitude and practices on cancer with demographic variables. *Design:* Cross sectional study. *Setting:* Sample size was derived to be 381 individuals. *Methods:* The Statistical Package. For Social Sciences (SPSS) 22.0 version for windows was used for data analysis. *Study duration:* February to December 2021. *Main Outcome Measures:* The findings indicate that among all included participants 64.3% have good knowledge, 61.4% have a positive attitude, and 53.8% follow good practices on cancer.

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Acceptance and myths regarding covid vaccination among general population

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Introduction: COVID pandemic has led to shut down of societies, cities and even biggest countries of the world. To combat this pandemic, different scientists of many countries have started developing vaccines and they have succeeded in developing vaccines against SARS-CoV2. There are many myths regarding covid vaccination among general population. *Objectives:* to find out acceptance of covid vaccination and myths associated with it in general population. *Methodology:* an online web based cross sectional survey was conducted by using Google forms among 216 adult participants. Statistical analysis was done by using EPI INFO7 statistical software. *Results:* 216 participants were included in the study. 4.63% population was not willing to take covid vaccination. 4% believe that there is no need to get vaccinated if they got the disease previously. For information about the virus or the disease most people either turned to health professionals or social media. Many myths were present in the population regarding side effects and effectiveness of vaccination. *Conclusion:* There is a need to increase awareness regarding covid vaccination among general population. Active efforts should be made at all levels to remove myths regarding vaccination.

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CASE REPORT

A case report: Venous malformation of right wrist

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Venous malformation is the most familiar type of congenital vascular malformation. The incidence and prevalence of venous malformation are low. They are asymptomatic and usually present at birth. Venous malformation cannot be easily diagnosed and are often misinterpreted with hemangioma in radiological image. An appropriate clinical history and Magnetic resonance imaging are useful in diagnosis and management. This case report will show the various methods to diagnose with imaging and surgical management of venous malformation of wrist.

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Physical therapy rehabilitation in patient with post ACL reconstruction

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Background: There are four major ligaments around the articulation of the knee. The ligaments of the knee help to keep the knee stable. Each ligament has a specific purpose in maintaining appropriate knee stability. The anterior cruciate ligament (ACL) runs from the femur to the tibia and is made up of dense connective tissue. The Anterior cruciate ligament is indeed a critical feature of the knee complex since this resist's patellofemoral translation and rotational pressures. The PCL is the human knee's strongest and largest intra-articular ligament, and it functions as the knee's principal posterior stabilizer. The anterior cruciate ligament (ACL) and

the posterior cruciate ligament (PCL) are twin structures seen in the knee. (PCL) multi ligamentous injuries are infrequent but devastating injuries. They usually result in functional impairments and additional procedures. The treatment of ACL and PCL tear can require either surgical or conservative treatment. Following is the case of 22-year-old male who was diagnosed Right knee ACL tear, PCL tear and MCL injury after an RTA The patient undergone a series of investigations after which he was intervened with an arthroscopic reconstruction surgery of ACL, MCL and PCL. Physical therapy rehabilitation was started on post-operative day one. A specific protocol for exercise treatment was established which was divided in weeks. *Conclusion:* The case report is suggestive of the improvement of the functional goals after physiotherapy rehabilitation.

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Positive effects of neuro-rehabilitation in a patient of cervical myelopathy with lower limb weakness: A case report

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Introduction: Cervical myelopathy is a disease that causes the compression of the spinal cord. Cervical myelopathy occurs basically because of force applied to the anterior spinal cord with ischemia as a result of the distortion of the cord by anterior herniated discs, spondylotic spurs, and an ossified posterior longitudinal ligament, or spinal stenosis. *Case presentation:* A 55-year-old male who came with a chief complaint of weakness in both the lower limbs for approximately since 1 year. He was diagnosed previously with C5-C6-C7 cervical myelopathy and was surgically operated on with cervical discectomy in June 2010. In September 2021 he again started experiencing the bilateral lower limb weakness and in March 2022 he visited the tertiary rural hospital where he was diagnosed with C7-D1 myelopathy. He underwent various interventions like MRI and EMG (Electromyography), and NCV (Nerve Conduction Velocity). He was then diagnosed with mid-left median motor axonal. The disease-specific outcome measures for cervical myelopathy are the Nurick grading scale and JOACMEQ. *Conclusion:* The physiotherapeutic intervention that was modulated was according to the condition of the patient which improved his quality of life and independence. Therefore, it helps in gaining patients' confidence in their prognosis in the patient diagnosed with cervical myelopathy.

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ANALYSIS

To assess autism spectrum disorder parental quality of life during covid 19 in Taif, KSA

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Background: Considering the fact that family members necessarily spend more time together during the pandemic, this study aims to assess autism spectrum disorder parental quality of life during covid 19. *Method:* Descriptive community base study was conducted at the city of Al-Taif using semi-structured questionnaire during Feb. 2022. A total of 76 parents living in Al-Taif participated in the study. *Results:* The study found that the most frequent effect of the emerging corona virus (Covid 19) on isolating the lives of children with autism was to some extent, the percentage 31, and the most frequent effect of the emerging corona virus (Covid 19) on health condition of children with autism was disagree, the percentage 32.8, the most frequency. *Conclusion:* The Corona epidemic has compounded the suffering of children with special needs, as the quarantine period and restrictions on their ability to go to school and move have been incomprehensible to them, and it has been difficult for them to comprehend the risks, and their health has deteriorated as a result of their failure to attend treatment and follow-up sessions in the Autism House and clinics for months. Children in this category are unable to articulate how they feel about the ongoing trends of people wearing masks and social isolation, which has been imposed in varied degrees for weeks, months, or even a short amount of time.

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The relationship between Anti-Mullerian Hormone and ovarian response and fertility outcome in infertile women undergoing assisted reproductive techniques (ART)

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Background and Aim: Anti-Mullerian Hormone (AMH) is an indicator of the number and quality of eggs produced during the menstrual cycle, which is related to the number of antral follicles, and the outcome of assisted reproductive techniques. The aim of this study was to evaluate the relationship between anti-mullerian hormone levels and ovarian response and pregnancy outcomes in infertile women undergoing assisted reproductive techniques (ART). *Materials and Methods:* This cross-sectional study was performed on 186 infertile women who underwent assisted reproductive techniques (ART) referred to Besat Hospital Infertility Center, from 2016 to 2020. Demographic information, FSH level, AMH level, number of gonadotropin injections, number of antral follicles and number of fetuses were evaluated. Also, pregnancy outcomes including abortion, fetal death, fetal malformation and birth were determined and recorded in a questionnaire. *Results:* The mean of anti-mullerian hormone level was 3.9 (0.1 to 12 ng / ml) and the mean of FSH level was 6.1 (0.6 to 12.7 IUI / L). A considerable association was observed between anti-mullerian hormone level with the number of ovarian follicles, number of injected HMG, number of eggs, number of total embryos (P <0.05). There was no significant relationship between anti-mullerian hormone levels with abortion, fetal death, live birth and neonatal malformations (P >0.05). *Conclusion:* Determination of AMH levels can help for administration of gonadotropins, prediction of the antral follicle numbers, the number of eggs and the quantity of embryos obtained.

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