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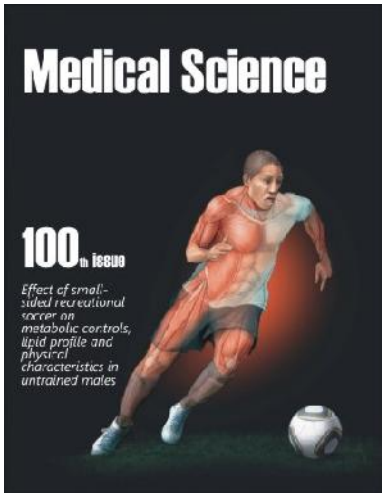
Medical Science

About the Cover



We compared effects of small-sided recreational soccer on metabolic controls, lipid profile and physical characteristics in untrained males. Thirty-five participants with mean age 19.08 years were randomized into three different groups namely; six a side group (n = 12), four a side group (n=8) and control group (n = 15). Participants in six a side and four a side group played supervised recreational football on artificial outdoor pitches for sixteen weeks. Duration of each session was 30 minutes with two halves of 15-15 minutes. Testing for lipid profile and metabolic controls was done at designated laboratory as per standard protocols. Polar heart rate monitors were used to measure intensity of football sessions. To compare effects, one-way anova was used. We observed significant differences among three groups in HbA1C ($F_{2, 29}$ = 12.82, p = .000), fasting sugar ($F_{2, 29}$ = 10.81, p = .000), total cholesterol ($F_{2, 29}$ = 7.51, p = 0.002), triglycerides ($F_{2, 29}$ = 10.11, p = .000), low-density lipoprotein ($F_{2, 29}$ = 9.39, p = .001) and very low-density lipoprotein ($F_{2, 29}$ = 6.27, p = .005). We also observed significant differences among three groups in systolic blood pressure ($F_{2, 29}$ = 13.77, p = .000), diastolic blood pressure ($F2_{, 29}$ = 8.97, p = 0.001) and resting heart rate ($F_{2, 29}$ = 13.81, p = .000). However, no significant change was reported in high-density lipoprotein among three groups ($F_{2, 29}$ = .291, p = .750). Findings of the present study suggests that recreational football training with six and four sided teams appears to be effective in bringing change in physiological and physical parameters in untrained males. Fasting blood glucose and HbA1c reduced significantly in both six a side group and four a side group after 16 weeks of recreational football. (Ref: Rakesh Tomar, Varghese C Antony. Effect of small-sided recreational soccer on metabolic controls, lipid profile and physical characteristics in untrained males. *Medical Science*, 2019, 23(100), 835-842), (Image: https://images-na.ssl-images-amazon.com/images/I/71WV1gprzQL.jpg).

RESEARCH

ABO blood groups and Rh factor are risk factors for Epithelial Ovarian Cancer?

Görker SEL, Anıl T Çakır, Müge Harma, Mehmet I Harma

The initial aim of this study is to research the allocation of blood types ABO and Rh factor antigens in patients with epithelial ovarian cancer (EOC). *Design:* Retrospective *Setting:* University Hospital (Tertiary center) *Subjects:* From the records at Zonguldak Bulent Ecevit University Faculty of Medicine Hospital in the period January 2010- June 2018, data on 100 EOC patients were obtained concerning blood groups ABO and Rh factor in 90 women. *Intervention(s):* The control group was constituted from the Zonguldak Bulent Ecevit University Faculty of Medicine Hospital Blood Transfusion Center and included 17065 females, to make reliable comparison, same region-same gender. *Main Outcome Measure(s):* Blood types ABO and Rh factors, patients having EOC. *Result(s):* Data on 90 women with EOC and recorded blood types ABO and Rh factors were taken for retrospective analysis. Although, blood type O was seemingly related with higher risk of EOC, this difference was not statistically significant. Also, blood type B was seemingly allocated with low risk of EOC, albeit this difference was not statistically significant. *Conclusion(s):* Most previous studies have reported increased cancer of the ovaries associated with the A blood type compared to the O group. Contrary to our data, Zhang et al found that, blood type O is allocated with lower risk of cancer of the ovaries. Our studies results show possible allocation between the O blood type and higher risk of EOC B blood type and decreased probability EOC.

Medical Science, 2019, 23(100), 829-834

ANALYSIS

Effect of small-sided recreational soccer on metabolic controls, lipid profile and physical characteristics in untrained males

Rakesh Tomar, Varghese C Antony

We compared effects of small-sided recreational soccer on metabolic controls, lipid profile and physical characteristics in untrained males. Thirty-five participants with mean age 19.08 years were randomized into three different groups namely; six a side group (n = 12), four a side group (n=8) and control group (n = 15). Participants in six a side and four a side group played supervised recreational football on artificial outdoor pitches for sixteen weeks. Duration of each session was 30 minutes with two halves of 15-15 minutes. Testing for lipid profile and metabolic controls was done at designated laboratory as per standard protocols. Polar heart rate monitors were used to measure intensity of football sessions. To compare effects, one-way anova was used. We observed significant differences among three groups in HbA1C ($F_{2, 29}$ = 12.82, p = .000), fasting sugar ($F_{2, 29}$ = 10.81, p = .000), total cholesterol ($F_{2, 29}$ = 7.51, p = 0.002), triglycerides ($F_{2, 29}$ = 10.11, p = .000), low-density lipoprotein ($F_{2, 29}$ = 9.39, p = .001) and very low-density lipoprotein ($F_{2, 29}$ = 6.27, p = .005). We also observed significant differences among three groups in systolic blood pressure ($F_{2, 29}$ = 13.77, p = .000), diastolic blood pressure ($F2_{, 29}$ = 8.97, p = 0.001) and resting heart rate ($F_{2, 29}$ = 13.81, p = .000). However, no significant change was reported in high-density lipoprotein among three groups ($F_{2, 29}$ = .291, p = .750). Findings of the present study suggests that recreational football training with six and four sided teams appears to be effective in bringing change in physiological and physical parameters in untrained males. Fasting blood glucose and HbA1c reduced significantly in both six a side group and four a side group after 16 weeks of recreational football.

Medical Science, 2019, 23(100), 835-842

Development and validation of the interpersonal stress scale: An Item Response Theory Analysis

Hamid Amiri, Abbas Masjedi Arani, Maryam Bakhtiari, Ahmad Borjali, Abdollah Omidi, Ali Reza Baneshi

Interpersonal stress is associated with significant declines in physical health and is a significant predictor of risk for the onset of some mental disorders. In spite of this, little is known about the assessment of this construct. This study aimed to apply Item Response Theory (IRT) to develop and examine psychometric properties of the Interpersonal Stress Scale (ISS) to assess five domains of interpersonal stress. Exploratory factor analysis and IRT were utilized to test validity and reliability of ISS. The study was conducted on 512 participants aged 15-45 years (*M* = 29.14; *SD* = 8.08) who were selected using convenience sampling method. Current results showed a five-factor structure of the ISS and revealed that 32 items of the ISS could be scored using IRT methods. The ISS also showed satisfactory test-retest reliability (*r*= .83; *p*< .01) and internal consistency, with Cronbach`s alpha coefficients ranging from .67 to .89. Moreover, the ISS scores were correlated with other constructs, which provides evidence for the predictive and divergent validity of the scale. These findings supported the Interpersonal Stress Scale as a reliable and valid tool to measure interpersonal stress in Iranian population.

Medical Science, 2019, 23(100), 843-854

Knowledge attitude and practices about pneumococcal infection and vaccination patients who visit the primary health at Taif centers, KSA

Faisal Khaled H Alhomayani, Metab Ali Alasmari

Streptococcus pneumoniae (pneumococcus) is that the leading explanation for morbidity and mortality worldwide. Saudi Arabia could be a host to scores of pilgrims WHO travel annually from everywhere the world for Umrah and therefore the Hajj pilgrimages and are in danger of developing pneumonia or invasive pneumococcal malady (IPD). there's additionally the danger of transmission of *S. pneumoniae* together with antibiotic resistant strains between pilgrims and their potential world spread upon their come back.

The World Health Organization (WHO) estimates that pneumococcus is responsible for over 1,000,000 deaths worldwide annually, the very highest mortality from all vaccine-preventable infectious diseases. The country additionally has distinctive challenges posed by inclined population to IPD thanks to folks with hemoglobinopathies, younger age teams with chronic conditions, and growing downside of antibiotic resistance. Since the medicine of pneumococcal illness is constantly changing, with a rise in non-vaccine pneumococcal serotypes, vaccination policies on the effectiveness and utility of vaccines need regular revision. As a part of the Saudi Thoracic Society (STS) commitment to market the most effective practices within the field of respiratory diseases. Saudi Thoracic Society (STS) we tend to advocate vaccination against pneumococcal infections for all youngsters <5 years old, adults ≥50 years old, and people ≥6 years old with certain risk factors .These recommendations are based on the presence of a large number of comorbidities in Saudi Arabia population <50 years of age, many of whom have risk factors for contracting pneumococcal infections. To assess the knowledge, attitudes and practices of towards pneumococcal infection and vaccination patients who visit the health centers in 2018. A cross sectional study will conduct to primary health centers Taif during 25 of august 2018 till 6 of December, 2018. The survey will conduct on a sample of 101 participant patient in Taif city sampling technique will be used then simple random. Regarding sociodemographic characteristics, that the highest proportion of participants age more than 60 years (36.4%) and male participants (60.8%). The majority of participants (82.1%) have a weak knowledge while more than half of them (55.07%) have a positive attitude about the disease .a significant correlation between level of knowledge and education (P= 0.001) and is a significant positive correlation between education and attitude were r= 0.285. The study that there have been weak levels of information and positive perspective toward Pneumococcal infection with a major correlation between knowledge, perspective and participants years of education. Pneumococcal vaccines are shown to scale back the danger of IPD (invasive Pneumococcal disease).

Medical Science, 2019, 23(100), 855-868

Prevalence of various morphological types of Condyle seen among Malaysian Ethnic groups using Conventional Orthopantomogram

Priyadarshini Karthikeyan, Lau Peng Hoe, Koh Pei Yen, Lau Wen Weng, Ramesh Kumaresan

Orthopantomograph (OPG) is a routine imaging modality utilized by most dental surgeons for obtaining general information about the teeth, mandible, and adjacent regions of the jaw as it yields a favorable cost-benefit relationship and exposes patients to relatively low doses of radiation. Among various imaging modalities used for temporomandibular joint (TMJ) and condyle imaging panoramic radiographs still remain the main screening modality for TMJ abnormalities. The current study was done to evaluate variations of TMJ condylar morphology among various ethnic groups (Malay, Chinese and Indian) in Malaysia using conventional OPG. 300 conventional OPGs free of any projection errors showing a full condylar view on either side with optimal density and contrast were selected for this retrospective study. They were categorized into three groups i.e group A (50 Malay males and 50 Malay females), group B (50 Chinese males and 50 Chinese females) and group C (50 Indian males and 50 Indian females). Result of the condylar morphology was obtained and divided into Type I (Oval shape), Type II (Diamond shape), Type III (Bird beak shape) and Type IV (Crooked finger shape) and all the results were evaluated. The variations which are observed were tabulated. All the data was statistically analyzed. Oval-shaped of the mandibular right condyle which constitutes about 82% is the most prevalent shape amongst all ethnic groups. Low exposure dose and ease of prescription make OPG a common choice of imaging prescription. Evaluation of condyle on OPG seems to attract clinicians to make fine observations.

Medical Science, 2019, 23(100), 869-875

Early postoperative total corneal Wavefront aberrations, higher order coma, trefoil and spherical aberrations following successful Photorefractive keratectomy using optimized ablation with Mitomycin C application for mild to high myopia

Tamer Adel Refai

To study early post-operative variation in total corneal aberration, higher order Coma, spherical and trefoil aberrations induced by Photorefractive keratectomy (PRK) using optimized ablation profile with mitomycin C application for myopic eyes. Design: Retrospective, consecutive case series. Participants: twenty –five eyes (of 14 myopic patients) in which photorefractive keratectomy (PRK) with mitomycin C application were examined preoperatively and early postoperatively for induced total corneal aberrations as well as for higher order Coma, trefoil and spherical aberrations to evaluate the early post operative stabilization. Patients were examined preoperatively as well as one to three months postoperatively after stabilization of the refractive status. Examination included Uncorrected visual acuity (UCVA), refractive error evaluation by Topcon autorefractometer (and confirmation by trial), Best corrected visual acuity (BCVA), Scheimflug imaging (i.e., Pentacam, (ALLEGRO Oculyzer Version 1074; Allergo, Germany) to detect Keratometric readings, central pachymetry, higher order spherical, Coma, trefoil aberration coefficients, total aberration coefficient for the corneal front surface (from Zernike values at 6.0 mm optical zone) and Ocular response analyzer (ORA) for Corneal hysteresis (CH) ,Corneal resistance factor (CRF) to detect case suitability for refractive ablation. Tabulation of the collected data as well as well as analyses by suitable statistical methods was done. For each studied item, mean value, standard deviation, minimum as well as maximal values were provided. Comparison tests and correlation tests are also performed. In this study, a post-PRK statistically significant increase ($p<0.05$) occurs in the mean values of higher order coma aberration coefficient (from 0.12±0.07μ preoperatively to 0.24±0.15 μ postoperatively), higher order trefoil aberration coefficient, (0.09±0.05μ preoperatively to 0.15±0.11μ postoperatively), higher order spherical aberration coefficient , (from 0.08±0.07μ preoperatively to 0.21±0.18 postoperatively) as well as in the Total aberration coefficient (ABR), (increased 1.04±0.55μ preoperatively to 1.64±0.31 postoperatively). Also, a highly significant correlation ($p<0.01$) existed between post-PRK decrease in the average keratometric readings and the post-PRK increase

in higher order coma aberration coefficient (r=0.58) and a statistically significant (p<0.05) correlation existed between post-PRK decrease in the average keratometric readings and the post-PRK increase in the total aberration coefficient (r=0.22). Similarly, a highly significant correlation (p<0.01) existed between post-PRK decrease in the central pachymetrty readings and the post-PRK increase in the higher order coma (r=0.41), while a statistically significant correlation (p<0.05) existed between post-PRK decrease in the central pachymetrty readings and the post-PRK increase in higher order trefoil (r=0.21) and spherical aberration coefficients (r=0.28) as well as the total aberration coefficients (r=0.20). Also, a highly significant correlation (p<0.01) existed between the corrected spherical error and the post-PRK increase in the higher order coma(r=0.44). Similarly, a highly significant correlation (p<0.01) existed between the corrected cylinderical error and the post-PRK increase in the higher order trefoil aberration (r=0.46) as well as in the total aberration coefficients (r=0.49). Also, a statistically significant correlation (p<0.05) existed between total corrected sphero-cylinderical error and the post-PRK increase in the higher order coma (r=0.27) and trefoil aberration coefficients (r=0.22). Following successful PRK with mitomycin for mild to high myopia with astigmatism using optimized ablation profile, a statistically significant increase occurred in the higher order coma, trefoil, and spherical aberration as well as for the total aberration coefficient values which was largely related to the extent of spherocylinderical correction. The higher order trefoil aberration as well as the total aberration coefficient increase was particularly related to the extent of cylinder corrected.

Medical Science, 2019, 23(100), 876-884

Comparison of effects of pomegranate peel and Mefenamic acid consumption on the treatment of Menorrhagia: A Triple-Blind Randomized Controlled Trial

Golamreza salsali, Fatemeh Emadi, Sayed Saeed Esmaeili Saber, Mohamad Gholami Fesharaki, Nafise Zafarghandi

Menorrhagia is a type of menstrual disorder and a major health problem for many women. The consumption of pomegranate peel is a way to treat menorrhagia in the Traditional Persian Medicine (TPM). The present study aimed to compare the impact of two oral capsules of pomegranate peel extract and mefenamic acid on the treatment of Menorrhagia. In the present triple-blind randomized controlled trial on 56 women aged 20-50 years with menorrhagia (intervention group: n=28, control group: n=28), the intervention group received 250 mg capsules of pomegranate peel extract; and the control group received 250 mg capsules of mefenamic acid in 7 days of menstruation three times a day for 3 months. Pictorial Blood Loss Assessment Chart (PBAC) scores and amount of Blood hemoglobin (Hb) and scores of Menorrhea Questionnaire (MQ) were utilized to evaluate the amount and duration of bleeding. PBAC scores significantly decreased from 352.07 (33.26) to 166.85 (27.42) (p <0.001) in the pomegranate group and from 303.18 (24.84) to 171.03 (27.3) in the mefenamic acid group, but the difference was not significant between two groups. Furthermore, a significant increase was seen in scores of MQ and amount of Hb in both groups after the treatment (p <0.05). However, no significant difference was found between both groups. The pomegranate peel extract reduces bleeding, improves quality of life and increases the blood Hb in women with menorrhagia. Accordingly, it can be used in menorrhagia.

Medical Science, 2019, 23(100), 885-892

Placental morphometry in normal and anaemia complicating pregnancy in South Indian Population

Manoj Navamani, Hannahsugirthabai Rajilarajendran, Siva Govindan, Maghesh Ramesh, Indumathi Sundaramurthi, Jonathan Seshiah

Anaemia is one of the most common nutritional deficiencies among Indian woman in reproductive age group. Maternal anaemia not only affects the mother but also the growing fetus. The aim of this study is to compare the anatomical variations in the placenta of the normal pregnant mothers with that of the anaemic mothers. Only a very few literatures are available in this topic. A prospective cohort study was done in 68 placentas collected over a period of 4 weeks, to determine whether the anaemia during pregnancy has any gross morphological effect on the placenta. Of the various parameters studied, the shortest placental diameter was found among the anaemic.

Medical Science, 2019, 23(100), 893-899

RESEARCH

The effect of Clomipramine versus Sertraline on the structure of Rat Submandibular Salivary Gland

Wael Y Elias

The objective of this study is to evaluate the effect of clomipramine and sertraline on the histological structure of the rat submandibular salivary gland. Thirty-six adult male albino rats were divided into three equal groups, each comprising 12 rats. Group I served as the control group. Group II received a daily oral dose of clomipramine that was equivalent to the therapeutic dose (equivalent to 25 mg/kg) for eight weeks. Group III received sertraline (equivalent to 30 mg/kg). Three rats from each group were sacrificed, and their submandibular salivary glands were dissected, prepared, and stained with hematoxylin and eosin. The stained samples were examined under a light microscope. The administration of either drug induced degenerative and atrophic changes in the submandibular salivary gland. These changes were more evident in the samples from rats that received clomipramine than in those that received sertraline. The degenerative and atrophic changes in the submandibular salivary glands of the rats that received clomipramine were pronounced and progressive while in the sertraline group, they were mild and ceased after four weeks. Sertraline proved to be preferable over clomipramine because it has less deleterious effects on the submandibular salivary gland.

Medical Science, 2019, 23(100), 900-909

ANALYSIS

Relationship between malocclusion and oral health related quality of life among high school girl students in Ahvaz-Iran

MashallahKhaneh Masjedi, Marzieh Araban, MarziehAhmadi Arpanah

Malocclusion is a departure from normal aesthetic of the community rather than a disease. It is expected that its treatment can improve oral function and the appearance of the people which can affect the quality of their life. The purpose of this study was to investigate the relationship between IOTN index-based malocclusion and quality of life related to the oral health using OIDP index in high school girl students in Ahvaz in 2018. 200 high school students aged 15-18 years old participated in this descriptive-analytical and cross-sectional study. Data were collected using the OIDP and IOTN indexes. Data analysis was performed using spss-20 software at a significance level of 95% ($p<0.05$). Considering the importance of the relationship between AC component and quality of life, it is recommended to consider various social and psychological aspects of oral and dental condition in providing dental services in order to improve the overall quality of life of individuals.

Medical Science, 2019, 23(100), 910-919

RESEARCH

Hypocholesterolemic and antioxidant effects of *Persea americana* leaf extract on hypercholesterolemic rats

Maha A Althaiban

Plants are a major source of substances with therapeutic abilities. However, only a little number of plants around the world had been phytochemically examined. Hypocholesterolemic and antioxidant activity of *Persea americana* leaves methanolic extract (PALE) was assessed *i*n this research. Hypercholesterolemia was induced by feeding the animals diets enrich with cholesterol (2%) for four weeks. Fifty male albino rats had been distributed into five equivalent groups. Group 1 was held as a non-treated group (negative control) Group 2, which was held as a hypercholestrolemic group (positive control) (cont. (+), groups (3), (4) and (5) received orally Atorvastatine (AT) (40 mg/ kg), PALE in doses of twenty and forty mg/kg/day respectively, for 4 weeks. At the last day, blood was collected for biochemical analysis from all groups. The heart was also examined histopathologically. The results illustrated that the PALE significantly decreased serum levels of lipid profile, total cholesterol (TC), triglycerides (TG), liver enzymes and lipid peroxidation (MDA) but there were an increased in the antioxidant enzymes of hypercholesterolemic rats compared to control rats. There was also an improvement in histopathological changes observed in the heart of hypercholesterolemic rats. Therefore, the administration of PALE has antioxidant and anti-hypercholesterolemic effects on hypercholesterolemic rats.

Medical Science, 2019, 23(100), 920-928

ANALYSIS

Study retrospective medical record to review of Otolaryngology: Institutional experience

Fatmahalzahra R Banaz, Nada Hashim Fagira, Turki Al Mutairi, Maha Nageeb Alkatheri, Mohammed Jamal Goname, Yaser Saeed Sharif, Bashayer Salem Bamashmos, Dina Alamin Gaber, Ahmad Mohammed Kashha

The consultation patterns of an otolaryngology service have not previously been reported. The Emergency departments (ED) across the world are routinely overcrowded and will likely continue to remain so due to the patients' unwillingness to wait for outpatient visits. The time, resources, and attention required to operate such consultation services are unknown. Patients with diverse otorhinolaryngologic concerns often have conditions that can be appropriately triaged and medically managed by primary care professionals. The overwhelming number of ENT related ED visits has spawned the creation of otolaryngology-specific EDs to address this high demand for services. Consequently, most EDs continue to see a high volume of patients with ENT conditions, a large proportion of which do not need to be evaluated in the ED by an otolaryngologist-head and neck surgeon but may require outpatient follow-up. However, recent database reviews demonstrate that individuals with poor access to health care services may be more likely to present to the emergency department (ED) for evaluation and treatment of routine conditions, Although the ED is designed to serve patients with urgent medical needs, it has become a convenient access point for many patients with non-urgent conditions, despite the extended wait times and potentially inferior clinical outcomes. To identify the relationship between numbers of consultation each year sent to the otolaryngology department, age and location of each referring department in the facility. Retrospective administrative database review at a tertiary referral hospital. This is a Retrospective study of in-hospital referrals made to the department of Otolaryngology over three years and six months period in a tertiary referral hospital; the proportion of patients with consultations to an Otolaryngology department from 2015 to 2018 has increased significantly. Most cases were seen by junior members of staff and were of minor problems that could have been referred to a routine out-patient clinic. Our institute had a total number of 3539 patients with otolaryngology in hospital referrals from a variety of departments. The emergency department had a total of 1372 (38.8%) referrals, while internal medicine counted 518 (14.6%). There has been a significant increase in the volume of on-call otolaryngology consultations in our tertiary Institutions. Patients referred to the Otolaryngology department were of a varied clinical nature. Emergency department referrals were on the top of the list and then followed by internal medicine. This suggests the need for improvement in the Consultation criteria, as well as an improvement in the information provided. The need to identify changes in the volume of consultations in an inpatient setting, plus Emergency visits to set better access to care to urgent cases.

Cost savings measures may be done by increasing health care access points for non-urgent concerns that can be evaluated in an outpatient setting.

Medical Science, 2019, 23(100), 929-938

Diagnostic value of Magnetic Resonance Spectroscopy (MRS) for detection of Brain Tumors in patients

Ali Hekmatnia, Masih Sabouri, Amir Hosein Ghazavi, Peyman Shahriyari Far, Farzaneh Hekmatnia, Ghazaleh Jamalipour Sofi, Fariba Alikhani, Mina Salehi

In the present research, the sensitivity and specificity of MRS in the diagnosis of brain tumors were investigated in patients with brain tumors. Patients visiting the Kashani Hospital and Sepahan Clinic of Isfahan in 2017, who met the inclusion criteria, were enrolled in this cross-sectional study. The 35 patients included in the study were examined by an experienced radiologist through MRI with and without contrast. Patients with a brain tumor diagnosed by the radiologist were enrolled in the study and evaluated through MRS. A part of the brain tumor was removed by a neurosurgeon and examined by a pathologist to determine the degree of malignancy. The pathologist was blinded to the MRS results, and the radiologist was blinded to the biopsy results. In the present study, the measured variables in terms of the area under the ROC curve (AUC), sensitivity, and specificity showed a high accuracy for the diagnosis of brain tumors (AUC=0.917, 95%CI=80%-100%). The cutoff point was determined as 1.5 (p =0.002 <0.05) which had the highest sensitivity (0.667) and specificity (0.955) in comparison with other cutoff points. In this study, the measured variables in terms of the area under the ROC curve, sensitivity, and specificity showed a high accuracy for the diagnosis of brain tumors by MRS.

Medical Science, 2019, 23(100), 939-945

Diagnostic value of MRI enhancement in determining the degree of malignancy of Brain Tumors in patients

Ali Hekmatnia, Masih Sabouri, Amir Hosein Ghazavi, Mina Salehi, Farzaneh Hekmatnia, Ghazaleh Jamalipour Sofi, Marziyeh Alinezhad, Peyman Shahriyari Far

The present study aimed to evaluate the diagnostic value of MRI enhancement in determining the degree of malignancy of brain tumors. In this cross-sectional study, a part of the brain tumor was extracted by a neurosurgeon and its malignancy degree was assessed by a pathologist who was unaware of the MRI results. Information about tumors benignancy or malignancy and their malignancy status were recorded on a checklist. Patients whose pathological results were uncertain or undetermined were excluded. Data obtained from the positive and negative results of tumors MRI enhancement and pathology were analyzed in SPSS 20 to determine the sensitivity, specificity, positive and negative likelihood ratio, and AUC. The probability value (p-value) of greater than 0.05 showed that MRI had no significant positive predictive value in determining the malignancy of brain tumors before and after contrast, but the probability value (p-value) of less than 0.05 indicated that enhancement had a positive significant diagnostic value in determining the degree of malignancy in patients with brain tumors, and the most appropriate cutoff point was 1.5 with a sensitivity of 0.77% and a specificity of 85%. MRI enhancement has a high diagnostic value for determining the degree of malignancy of brain tumors.

Medical Science, 2019, 23(100), 946-952

RESEARCH

Clinical and anamnestic indicators for the risk assessment of airway remodeling in children with asthma

Olena Koloskova, Tetiana Bilous, Galyna Bilyk, Tetiana Shchudrova, Olena Korotun, Tamara Kopchuk, Mariana Hrytsiuk, Mariana Dikal

The aim of the research was to analyse the diagnostic value of anamnestic and clinical indices for the risk assessment of bronchial remodeling to improve asthma management in children. The study involved 116 children with persistent bronchial asthma who have been subjected to a comprehensive clinical and paraclinical examination. At the beginning of the study patients with high levels of VEGF and MMP-9 in sputum were characterized by higher incidence of a birth weight of less than 2500 g (8.1% vs. 2.6%), history of maternal and paternal atopic diseases (13.5% vs. 2.6%), history of drug allergy (10.8% vs. 2.6%), and maternal smoking as a source of long-time exposure to second-hand tobacco smoke (27.0% vs. 13.2%) compared to children with low levels of bronchial remodeling markers. Children with high levels of airway remodeling markers in sputum were characterized by an increase in the incidence of severe asthma (from 13.5% to 26.8% vs. a decrease from 23.7% to 14.2%), as well as uncontrolled asthma (from 38.2% to 42.6% vs. decrease from 39.3% to 25.0%) compared to patients with lower levels of markers.

Medical Science, 2019, 23(100), 953-962

ANALYSIS

The comparison of the effects of the natural micronized Progesterone and the Gonadotropin Releasing Hormone (GnRHa) agonist compounds on the rate of bleeding during hysteroscopic myomectomy in the women with abnormal uterine bleeding

Mehri Jafari Shobeiri, Maryam Pourbarghi Soufiani, Parvin Mostafa Gharabaghi, Manizheh Sayyah Melli, Elaheh Ouladsaheb Madarek, Simin Atashkhoyi, Masome Bakhshandeh, Neda Shoari, Farzane Farhang

Sub-mucosal myomas are one of the causes of abnormal uterine bleeding. Hysteroscopy is a minimally invasive procedure whereby sub-mucosal myomas can be respected. Various drugs are used to reduce the endometrial thickness and the volume of myoma, which may facilitate the removal of myoma. The aim of this study was to compare the effects of the natural micronized progesterone and GnRHa in controlling the rate of bleeding during hysteroscopy. In this controlled clinical trial study, 50 patients with sub-mucosal myoma were selected, with the myoma diameter of 30 mm or less, and were randomly divided into two equal groups. The first group was admitted at the end of the day of taking the Utrogestan tablet, and the second one was admitted 4 weeks after the second injection of GnRHa, for myomectomy. In both groups, the rate of bleeding during surgery, the success rate of myomectomy, the duration of surgery, the image resolution, the amount of the absorbed fluid, the length of stay in hospital and the drug side effects were compared with Spss20 software used for statistical analysis. In this study, 50 patients were identical in terms of age, the number of gravida, the number of parity and the number of intrauterine myomas. The no bleeding cases were higher in the progesterone group (72%) than in the GnRHa group (16%) (P = 0.001). The image resolution of the progesterone group was significantly higher than that of the GnRHa group (88% and 56%, P = 0.013). The rate of decline of Hb and Hct after the surgery, the mean duration of surgery, the volume of the absorbed fluid, the change of sodium and potassium were similar in both groups. The results of this study showed that the rate of bleeding during surgery was lower and the hysteroscopic image resolution was better in the progesterone group than in the GnRHa group. However, as the duration of treatment with Uterogstan is shorter than GnRHa, and the cost of Uterogstan is lower than that of GnRHa; it is recommended that this drug be used for endometrial preparation to reduce the rate of bleeding during surgery and for more image resolution before hysteroscopic myomectomy.

Medical Science, 2019, 23(100), 963-971

The study of adult attention deficit hyperactivity disorder symptoms as the main predictor of college student's lifestyle

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One of the factors affecting the person's lifestyle is their psychiatric disorders state. Therefore, this study has been conducted with the aim of investigating the effect of ADHD on the college student lifestyle. The present cross-sectional study was conducted of 388 College students on 2018. The data were collected through online with demographic information, CAARS and Student Lifestyle Questionnaire. All data were analyzed using linear and logistic regression models with Stata V. 14.2 software. The mean lifestyle score (out of 100) was equal to 58.15 and its standard deviation was 12.65. Bivariate analysis revealed a significant relationship between ADHD subscales and lifestyle (p=0.05). A one-point increase in the H-index score increases the chance of one falling into the lower lifestyle group by 1.3 times. In other words, the chance of having a bad lifestyle for people with a high H-score increases by 30%. The state of mental health in college student is very important, and if neglected it, can result in difficult. Given the high prevalence of self-reported ADHD symptoms by the students, screening for early-stage challenges should be done among teenagers before starting the university.

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A prospective study on the role of antibiotics in abbreviating the frequency of post extraction complication following the third molar extraction

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To assess the role of antibiotic usage in lowering postoperative inflammatory complications after third molar extraction. A questionnaire based study was conducted among the oral surgeons who regularly do third molar extractions. Primary variable assessed was incidence of inflammatory complications after 3rd molar extractions. A total of 40 oral surgeons participated in the study. Details of 725 patients were recorded in whom 950 third molars were removed. 370 patients have taken antibiotics post operatively. There was a high male predominance (543). Mean BMI was 24.6±8.3 kg/m2. The mean PDS and ODS was 2.09±2.6 and 11.92±6.2 respectively. The incidence of post operative complications was less in patients who underwent the post extraction antibiotic regimen after the extraction of the third molar.

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The ameliorative effect of dietary supplementation of Curcumin on 1,2-dichloroethane (1,2DCE) -induced oxidative stress in rat organs

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Curcumin was investigated for a possible anti-oxidant influence against 1,2-dichloroethane (1,2DCE) induced oxidative stress in rats. Fifty male adult male albino rats were divided into five groups (10 rats each). G1 served as negative control fed basal diet, G2 (positive control) fed basal diet contain 1,2DCE for 4 weeks, G3 (Protective group) fed standard diet supplemented with curcumin as 1.5 g/kg/diet for 4 weeks , then 1, 2-dichloroethane was added to diet for further 4 weeks. G4 (Preventive group) fed standard diet with curcumin as 1.5 g/kg/diet for 4 weeks along with 1, 2-dichloroethane for 4 weeks. G5 (Curative group) fed standard diet + 1, 2-dichloroethane for 4 weeks after that, the diet supplemented with curcumin as 1.5 g/kg/diet for 4 weeks. Biochemical parameters including RNA, DNA, antioxidant biomarkers in tissues homogenates and lung, brain and kidney function tests were performed. A remarkable disturbance in tissues homogenates antioxidant status and lung, brain and kidney function tests were seen following administration of 1,2-dichloroethane. While, dietary supplementation of curcumin as different treatments ameliorated the

investigated biomarkers. It could be concluded that dietary supplementation of curcumin reduced toxicity sings of 1,2DCE on kidney, lung and brain, which were considered as the most targeted organs of 1,2DCE toxicity.

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Identification of non-alcoholic fatty liver disease in Saudi females and validation of non–invasive indices

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There is a need to identify cost-effective, simple, non-invasive diagnostic tools for Non Alcoholic Fatty Liver Disease (NAFLD), in high risk communities, as an alternative to the invasive and costly methods. The objectives of this study were to study the prevalence of NAFLD using ultrasound among female students in Hail, Saudi Arabia and using these results to validate different simple non-invasive indices. A total of 568 females, 20-30 years of age, were enrolled. Ultrasound tests were performed to identify different grades of NAFLD. An age-matched case (NAFLD) and control (healthy) groups (105 participants, each), according to the ultrasound results, were compared to identify risk factors for NAFLD. Regression models were used to examine the associations between NAFLD and potential risk factors. Validation of different non-invasive indices against ultrasound results were conducted using Receiver Operating Characteristic (ROC) Curve cut offs. The prevalence of mild NAFLD was 15.5% and moderate NAFLD was 4.9%, while no severe NAFLD cases were observed. The percentage of participants in the case group who had body mass index (BMI) ≥ 30, impaired fasting glucose, aspartate aminotransferase over alanine aminotransferase, [AST/ALT] ≥0.8, was higher ($p<0.001$) than that of the control group. AFLD fibrosis score showed the highest sensitivity (96%) for the diagnosis of NAFLD, while the highest specificity was for the HAIR score (89.7%). Prevalence of NAFLD among young females in Hail was high. NAFLD fibrosis score showed the highest accuracy among the non-invasive methods in the diagnosis of NAFLD.

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CASE REPORT

Chilaiditi syndrome, unusual complication of rather innocuous abnormality: Case report

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In Chilaiditi syndrome there is an interposition of the colon between the liver and the right side of diaphragm leading to clinical symptoms, whereas in Chilaiditi sign there is only imaging evidence of the interposition and are mostly asymptomatic. Here, we report a case of 68 year old patient who was previously diagnosed as obstructive sleep apnoea since long, had a delayed diagnosis which may be due to the interposition of the colon between the liver and the right side of diaphragm leading to clinical symptoms, being intermittent, this time fatal.

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ANALYSIS

Socio-cultural determinants of infant and young child feeding practices in rural India

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In India, proportion of women initiating timely breastfeeding and practicing exclusive breastfeeding is relatively constant over last decade. There is paucity of information about possible reasons for practice of ideal and recommended IYCF practices not being universal across country, in spite of existence of policy, programme guidelines. To develop and implement contextual intervention for improving the IYCF practices especially in rural India, knowledge about the key determinants; especially sociocultural is essential. The present study is undertaken to assess IYCF practices and study its association with sociocultural factors. In this cross-sectional study, 612 women were included. WHO recommended ten guiding principles for IYCF were considered for developing the data collection tool. Respondents were mothers with children in the age group 0 to 23 months. The key outcome variables were timely initiation of breastfeeding, exclusive breastfeeding, timely initiation of complementary feeding and the choice and diversity of food for complementary feeding. Timely initiation of breastfeeding was seen significantly more for female child (62.5%) compared to male (37.5%) ($p<0.05$). 36.3% exclusively breast feed their babies for a period of six months. Higher schooling and socioeconomic status was significantly associated exclusive breastfeeding ($p<0.05$). The exclusive breastfeeding rates in male and female infants were 59.5% and 40.5% respectively. Nearly 96 (46.1%) women started complementary feeding at 7 months and of these 50.2% initiated with liquid food like cow milk, lentil soup, and rice water soup. Study also identified a good practice of giving *Sattu*, a powder prepared from locally available roasted pulses, cereals and groundnuts. The present study highlighted the inadequate practices around early initiation of breastfeeding and exclusive breastfeeding in rural area. It also showed that the feeding decisions are influenced by social and cultural factors and experiences within family and social networks. The current approach to educate women on IYCF practices has limitations, as decision makers related to IYCF at household level are elders in household. There is a need for more comprehensive IYCF promotion program that are socially and culturally acceptable to women from rural area.

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RESEARCH

Pregnancy outcome sonographic umbilical artery Doppler assessment in the free loop and Perivesical sites

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The aim of this study was to assess Pregnancy outcome in the intrauterine growth restriction fetuses by the means of free loop and Perivesical umbilical artery Doppler. This is a prospective study performed on 50 singleton pregnancies with IUGR between 26 and 38 weeks of gestation. UA blood flow velocities were measured at the perivesical and free-loop. The pulsatility index (PI), resistance index (RI), S/D (systolic/diastolic) ratio were calculated. At each site of sampling and were compared with each other and with outcomes of pregnancy. There were significant differences between gestational age groups and. NICU admission, umbilical artery PH, Apgar score, fetal death. With decreasing gestational age, the results are worse. Birth weight group has different S/D in perivesical umbilical artery. There is significant difference in Perivesical and free loop RI value in the fetal death group. There is 70 percent correlation between S/D in free loop and perivesical umbilical artery. There is 30 percent correlation between PI in free loop and perivesical umbilical artery. There is 90 percent correlation between estimated fetal weight by sonography and neonatal accurate weight. UA Doppler parameters are various in the different area. Free loop S/D ratio has 70% correlation to PVUA S/D ratio. PVUA is potentially reproducible in IUGR. Fetuses and sonography follow up to accurate time for delivery. The most important prognostic factors related to the adverse outcome in the management of IUGRs are Gestational age.

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ANALYSIS

Efficacy and safety of different interpositional flaps and grafts for closing fibrotomy wound in patients of oral submucosal fibrosis: A systematic review with meta-analysis

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Oral Submucous Fibrosis (OSMF) is a chronic pre-malignant condition characterized by progressive fibrosis of oral cavity. The objective of this systematic review and meta-analysis is to assess the efficacy and safety of different interpositional flaps and grafts for closing fibrotomy wound in patients of OSMF. We followed the methodology in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses. We identified 195 reports and included seven studies in quantitative synthesis. Existing evidence indicates that after one month; mouth opening was better with Buccal Fad Pad (BFP) as compared to tongue flap (MD1.24, 95%CI -0.36 to 2.84mm), split skin graft (MD0.52, 95%CI -1.12 to 2.16mm) and collagen sheet (MD0.63, 95%CI -2.87 to 4.13mm). However; after two years mouth opening was better with split skin graft (MD-0.68, 95%CI -2.41 to 1.05mm) as well as nasolabial flap (MD -1.08, 95%CI -2.73 to 0.57mm). Application of placental extract provides additional benefit to BFP in mouth opening. Risk of hair growth and extra-oral scars seems to be lesser with BFP. We did not find any data on relapse, malignant transformations, quality of life and costs estimates.

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