



# Medical Students Forum MSF2018







Due to the great success of the Medical Student Forum 2016 and 2017 that was held in conjunction with *Gulf*Thoracic Congress, we are happy to announce the Medical Student Forum (MSF2018) which will once again be held in conjunction with the upcoming *Gulf*Thoracic Congress 2018, taking place at InterContinental - Dubai Festival City, UAE on 14-17 March 2018.

# WHO SHOULD ATTEND

All colleges of medicine are invited to encourage participation of their medical students of all levels to submit abstracts and attend this great educational opportunity.

# SCIENTIFIC PROGRAM

At MSF2018 will deliver state of the art lectures and interactive sessions conducted by renowned International and Regional Faculty Members, catering for medical students at all levels.

# MEDICAL STUDENT ABSTRACTS

The Scientific Committee invites all Medical Students to submit their abstracts for poster display and/or oral presentation at the upcoming Medical Student Forum (MSF2018). Abstracts in any Medical Specialty or Medical Education may be submitted.

On behalf of the *Gulf*Thoracic 2018 Scientific Committee, I am delighted to welcome you to the Medical Students Forum 2018 (MSF2018) which is taking place at InterContinental - Dubai Festival City, UAE on 14-17 March 2018.

The MSF is coming this year as continuation of the success of the two proceeding forums with new vibrant and exciting program. Our program this year will cover important general and diagnostic topics. As the students are the real partners of the success of MSF, we have dedicated special sessions for short communication where they can present their research in different research themes.

This track was developed to encourage medical and other health professions students to present their basic science, clinical, community based, or medical education research. I am pleased to re-welcome everyone to MSF2018 wishing you an enjoyable, motivational, and useful meeting

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Councilor, European Society of Thoracic
Surgeons (ESTS)
Professor, University of Torino,
Department of Thoracic Surgery
Torino, Italy

**SESSION - KEY OPINIONS** 

Chairpersons: Khalid I. AlQumaizi - KSA | Mohammed Al Houqani - UAE

08:30 - 09:00

"Making it" In Medicine!!

Atul C. Mehta - USA

09:00 - 09:25

**Career Development After Graduation** 

Charles B. Cairns - USA

09:25 - 09:50

How to Choose a Mentor and Make the Most of that Experience

Monica Kraft - USA

09:50 - 10:15

The Medical Database: Why, How and What for?

**Enrico Ruffini - Italy** 

10:15 - 10:45 **COFFEE BREAK** 

**SESSION - SELECTED TOPICS FOR MEDICAL STUDENTS** 

Chairpersons: Issa S. Al Jahdhami - Oman | Mohammed Alhajji - KSA

10:45 - 11:10

Responding to Patient Needs and the Changing Environment

Mina Gaga - Greece

11:10 - 11:35

**Common Pulmonary Outpatient Problems** 

James Beck - USA

11:35 - 12:00

**ABCs of Mechanical Ventilation** 

Nabil Abouchala - KSA

12:00 - 13:30 LUNCH BREAK

**SESSION - MEDICAL DIAGNOSTICS** 

Chairpersons: Ghazi Alotaibi - KSA | Hatem Al Ameri - UAE

13:30 - 13:55

Chest X-Ray: Beginners Steps

Amr M. Ajlan - KSA

13:55 - 14:20

PFT Interpretation; A Medical Students Guide

Peter George - UK

14:20 - 14:45

**Blood Gases Interpretation Made Easy** 

Khaled Al Awam - KSA

14:45 - 15:05 **COFFEE BREAK** 

**SESSION - STUDENTS ABSTRACTS** 

Chairpersons: Khalid I. AlQumaizi - KSA | Badr Al-Sayed - KSA

15:00 - 15:20

**Opinion vs Evidence?** 

Mohammed Alabdrab Alnabi - KSA

15:20

Inhibiting Protein Arginine Methyltransferase 5 Using AMI-1: A Promising Therapeutic Target for Lung Cancer

Reem Abdullah - University of Sharjah, Sharjah

15:28

**Electronic Cigarettes Use Among Medical Students** 

Abdulaziz Almalki - Imam Mohammed ibn Saud Islamic University, Riyadh

15:36

Pulmonary Function Test Variables and Exhaled Nitric Oxide Among Gas Station Workers in Saudi Arabia

Omar Khalid Alkhaldi - Inaya Medical College, Riyadh

15:44

The Association Between Obesity and Complications Following Trauma Among Diabetic Patients: Findings from a Large US-based Sample

Alanood Alharbi - King Saud bin Abdulaziz University for Health Sciences, Riyadh

15:52

**Narcolepsy and Immune Mediated Comorbidities** 

Majed Alomar - King Saud University, Riyadh

16:00

Oral Carriage of Candida spp. Among Attendants at the College of Medicine - Aljouf University, Saudi Arabia

Saad Alrayyes - Aljouf University, Aljouf

16:08

Hepatitis B Reactivation in Chronic Hepatitis C Patients Treated with an Interferon-free Regimen with Direct-Acting Anti-Virals in Saudi Arabia

Abdullah Albassam - King Saud bin Abdulaziz University for Health Sciences, Riyadh

16:16

Comparison of Contact Lens Hygiene Compliance and Self-management Behaviors Between Medical and Non-medical Students in Saudi Arabia

Shehana AlQahtani - Princess Nourah Bint Abdulrahman University, Riyadh

16:24

Helicobacter Pylori Gastric Ulcer: Knowledge About Its Health Impacts Among Adults in Sharjah

Layan Odeh - University of Sharjah, Sharjah

16:32

RNAi Screen on C. Elegans Paralysis Phenotype

Salam Almustafa - Imam Abdulrahman Bin Faisal University, Dammam

16:40

Association Between Hormone Receptor Status of Breast Tumors and Cumulative Survival Women in United States.

Hani Alanazi - Imam Mohammed ibn Saud Islamic University, Riyadh

16:48

Statin in Emirates Population: a Retrospective Cohort Study

Maryam Alzubaidi - United Arab Emirates University, Abu Dhabi

16:56

A2A Receptors are Highly Expressed in Young Patients with Luminal B and Triple Negative Breast Cancer Subtypes and are Associated with a Higher Proliferate Index

Dalia Said - University of Sharjah, Sharjah

17:04

Improving the Viability of Pseudo-islet for Efficient Insulin Production

Mohammed Almasri - Imam Mohammed ibn Saud Islamic University, Riyadh

17:12

The Effect of Acetone on Histopathological Aspect in Rats Lungs

Lulwa Alharmi - Inaya Medical College, Riyadh

17:20

Laparoscopic Intervention for Gastrectomy in Case of Gastric Cancer: Systematic Review

Abdulrahman Korkoman - King Khaled University, Abha

17:28

Knowledge of Scientific Misconduct in Publication Among Students at King Saud Bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

Bassam Alghamdi - King Saud bin Abdulaziz University for Health Sciences, Riyadh

17:36

The Impact of Air Conditioner Sound on Sleep Latency, Duration and Efficiency in Young Adults

Najla Aldraiweesh - King Saud University, Riyadh

17:44

Sequence Analysis of G gene of Human Respiratory Syncytial Virus A Strain from a Saudi Children with Severe Respiratory Distress

Wateen Hammadi - Taif University, Taif

17:52

Sleep Patterns and Disturbances Among Secondary School Students in Sharjah, UAE

Obaidah Adi - University of Sharjah, Sharjah

18:00

Bronchial Carcinoid Tumor in a 35-Year-Old Woman: A Case Report

Djouabi Rahma - University Salah Bobnider 3, Hospital Didouche Mourad, Constantine

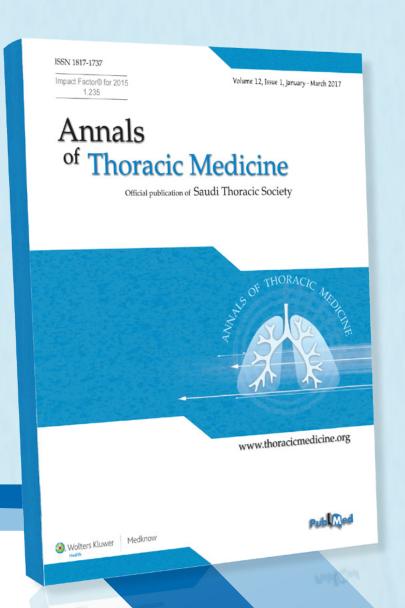
18:08

The Incidence Rate of Mediastinal Pathology, Clinical Features, and Treatment Modalities, King Khalid University Hospital Experience

Ghadah A. Alharbi - King Khalid University Hospital, Riyadh

18:16 MEDICAL STUDENT FORUM CLOSING REMARKS







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University of Sharjah Sharjah, UAE	جاوع ــــــــــــــــــــــــــــــــــــ	21
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King Abdulaziz University Jeddah, Saudi Arabia	Sunday Wall of the gray	3
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University of Al Baha Albaha, Saudi Arabia	Cariba Ca	2
Taibah University AlMadinah AlMunawwarah, Saudi Arabia	حامیة خامیه طیبة TAIBAH UNIVERSITY	1
Princess Nourah Bint Abdulrahman University Riyadh, Saudi Arabia	Princess Noural Bird Abdulrahman University	1
Jazan University Jazan, Saudi Arabia	2006 NATT AND THE STATE OF THE	1

# RNAi Screen on C. Elegans Paralysis Phenotype

A. Tauffenberger, L. Mottier, S. Almustafa, H. Fiumelli and P. Magistretti

#### **Content: Introduction:**

Our aging population will get an ever-increase in the prevalence of dementia and neurodegenerative disorders over the coming decades. The most common age-related neurodegenerative disorder is Alzheimer's disease, which has amyloid-beta and hyperphosphorylated tau as misfolded proteins. Other neurodegenerative diseases, such as Parkinson's disease, amyotrophic lateral sclerosis, and Huntington's disease, have other specific misfolded proteins. How specific misfolded proteins affect the pathogenicity is still unclear. Hence, treatments are still elusive to date.

Mitochondrial unfolded protein response (UPRmt) is a protective mechanism upregulated whenever there is stress. Misfolded proteins accumulate and malfunction, which are perceived as stress. UPRmt upregulates chaperones, proteases, innate immune, and glycolysis, while downregulates oxidative phosphorylation and TCA cycle to decrease reactive oxygen species and hence stress.

Based on previous literature, it was shown the end-product of glycolysis (L-lactate or pyruvate) work as neuroprotective substances. L-lactate (or pyruvate) was shown to promote neuroprotection when applied to mouse cortical neurons who engage excitotoxicity event. The result of adding L-lactate decreased neurodegeneration from 65% to 32%.

However, how the L-lactate (or pyruvate) function as neuroprotective is still relatively unclear. In this project, we investigated the role of glycolysis, UPRmt, and other metabolic factors, in mediating the effect of L-lactate (or Pyruvate).

#### **Methodology:**

C. elegans CB307 unc-47(e307) mutant worms were used. The unc-47 is responsible for allowing GABA to join inside the vesicle as a process to reach the synapse. When mutated, GABA is accumulated inside the neuron and perceived as cellular stress, to mimic the neurodegenerative diseases.

RNAi-treated strains were fed with E. coli(HT115) containing an empty vector (EV), atfs-1, ldh-1, slcf-1, spg-7, gpi-1, tpi-1, pmk-1, and mpk-1. RNAi experiments were performed at 20 oC. Worms were grown either on NGM, NGM + L-lactate, or NGM + pyruvate. Each plate had around 25 L4 worms with 6 plates in each condition. Worms were scored for paralysis till day 12. An independent t-test was calculated using SPSS.

#### **Results:**

The knockdown of atfs-1, ldh-1, slcf-1, and mpk-1 neither abolished the effect of L-lactate nor pyruvate. Hence, we concluded that L-lactate and pyruvate pathways are not associated with the mentioned genes. However, the knockdown of pmk-1 showed a significant association with L-lactate pathway, and tpi-1 showed a significant association with pyruvate pathways. The knockdown of spg-7, and gpi-1 showed a significant association with both L-lactate and pyruvate pathways.

#### **Conclusion:**

L-lactate and pyruvate were shown to promote neuroprotection. However, how L-lactate and pyruvate function is still relatively unclear. Hence, in this project, we wanted to discover the pathways of L-lactate and pyruvate which mediate their function, by using the RNAi method. The pmk-1 was found to be significantly associated with only L-lactate pathway, and tpi-1 was significantly associated with only the pyruvate pathway. Other genes who showed a significant association (spg-7, gpi-1) were associated to both L-lactate and pyruvate pathways.

### Utilization of Medical Services in Imam University Medical Services Center

#### Mohammad Binnwejim, Saleh Alsulami, Saud Aman

#### **Content: Background:**

Primary Health Care (PHC) is an essential element of integrated health care services that deal with preventive, curative and rehabilitative aspects of medicine. Inappropriate utilization(over utilization or underutilization) of hospital resources is not a new phenomenon and has been an issue of concern to medical staff, administrators and policy makers worldwide.

Medical center in Imam Mohammad Bin Saud University Medical Complex (IUMC) is a primary health center that the Employees of the university, there is a female department and Male Department. They usually the patient visit the center in one year is 138254

#### **Methods:**

The study was a retrospective study type conducted from February 2014 to May 2015. And involved all patients visited the medical center during April, which was 1716 visits. The data collection tool was constructed to fulfill the needed variables. The study included two main sets of variables, socio-demographic variables and clinical data variables.

#### **Results:**

Mean age for patients visiting IUMC is 29.1 SD 16.8 of 10237 visits that were recorded in the electronic medical record system in Imam University medical complex (IUMC). At IUMC, 7630 lab requests were recorded during one month. 47.5% of lab requests were for males and 52.5% were for females. 76% of lab requests were for Saudis and 24% of them were for Non-Saudis.

For diagnosis, 1716 confirmed diagnosis was recorded at IUMC medical records, majority of them are females 88%. During one month, 15370 medications were prescribed at IUMC, 60% of which are for males and 40% are for females. 70% of medications are prescribed for Saudis and 30% for Non-Saudis.

#### **Conclusion:**

This study aim to explore the patterns of utilization of health service at Imam University Medical Complex IUMC, where we found it is poorly studied in the literature review. A retrospective design was used via extracting medical records data from IUMC IT team. 10236 visits, 15370 drug and 7630 lab tests were recorded in IUMC medical records. Saudis, males, singles and faculty are the major health services utilizer at IUMC.

#### Sequence Analysis of G Gene of Human Respiratory Syncytial Virus A Strain from a Saudi Children with Severe Respiratory Distress

Wateen A. Hammadi, Mater I. R. Al-Malky B, Ahmed S. Abdel-Moneim

#### **Content: Background:**

Human respiratory syncytial virus (hRSV) causes severe acute respiratory distress in children. hRSV infection may lead to severe bronchopneumonia and death due to respiratory failure. The virus exists in two major groups (A and B) based on antigenic and genetic variation among virus strains and each group contains different genotypes.

#### Subject:

One-year-old male child, who suffered from a severe respiratory distress, was admitted to the paediatric hospital, Al-Taif, Saudi Arabia. The clinical signs were severe enough to necessitate the transfer to the intensive care unit (ICU) for ventilator support.

#### **Methods:**

Taif University Ethical Committee approved the study. A naspopharyngeal swab was collected using sterile swab in a virus transport medium. The nucleic acid was extracted using viral RNA/DNA extraction kit. The sample was screened for the existence of different respiratory viral pathogens using monoplex real-time reverse transcriptase polymerase chain reaction (rRT-PCR) commercial kits for hRSV (A/B) group specific antigen, human parinfluenza 1,3 viruses human parinfluenza 3, respiratory adenovirus, bocavirus, and influenza A virus.

The full-length G gene of the RSV was amplified using conventional RT-PCR using a standard primer set and sequenced using the same primer. The nucleotide sequence of the PCR amplicon was subjected to blast analysis of the sample prior to its alignment with different published RSV-A strains in the GenBank database using ClustalW Multiple Sequence Alignment. A phylogenetic analysis using Maximum Likelihood statistical method with 1000 bootstrap phylogeny test and Tamura-Nei substitution model was used to construct the phylogenetic tree.

#### Results

Although the respiratory distress was severe, the patient improved after supportive treatment. The sample showed positive reaction only to RSV-A by rRT-PCR using RSV-type specific kit. Blast analysis of the G gene showed a correct sequence and high homology (99%) to the RSVA/Homo sapiens/JOR/A0417/2012. The phylogenetic tree showed that the detected virus belongs to N1 genotype of the RSV-A.

#### **Conclusion:**

To our knowledge, it is the first study that described hRSV-A sequence from Taif region. Extensive surveillance of hRSV regionally is needed to determine the hRSV strains circulated in Saudi Arabia and to better understand the virus evolution.

#### **Keywords:**

hRSV-A; hRSV genotypes, children, respiratory distress, Saudi Arabia, Taif,

The Incidence of Pulmonary Venous Obstruction in Patients Eighteen Years and Younger Who Underwent Surgical Repair of Total Anomalous Pulmonary Venous Connection

Dawary M, Alshamdin F, Alkhalaf L, Khougeer F.

#### **Content: Background:**

Surgical Repair of total anomalous pulmonary venous connection (TAPVC) is the optimal treatment option. We studied the incidence of Preoperative and postoperative pulmonary venous obstruction (PVO) in patients eighteen years and younger in a single institute.

#### Methodology:

Ninety-one patient's medical records from January 2004 to December 2014 were retrospectively reviewed.

#### **Result:**

The average age 3 months and weight 5 kg at presentation. The majority of patients presented with supracardiac type (53%). Six patients had reoperation show younger age (p = 0.013) and weight (p= 0.035). Four out of thirty-five readmissions were readmitted because of pulmonary venous obstruction. The cohort mortality rate was 16%. The average age for mortality was 11 months and average weight was 5 kg. Fifty percent of that mortality had supracardiac type. For those who died, 64 % had preoperative PVO.

#### **Conclusion:**

Preoperative PVO is common (41%) in patients with TAPVC. Surgical repair carries a good prognosis. Need for reoperation is not common (7%) but carries a high mortality.

# Prevalence of Oral Candida Among Attendants at Aljouf University, Saudi Arabia

Saad F.A Alrayyes, Hamad M.H Alruwaili, Khaled Elrahawy, Ibrahim A.A Taher

#### **Content: Background:**

Candida is a ubiquitous organism in nature, that forms part of the normal microbial flora of the oral cavity. The oral carriage of Candida is perpetuated by several predisposing factors. Hence, we aimed to study the prevalence of Candida in correlation with certain oral and systemic conditions, life styles, medications, and living conditions.

#### **Methods:**

Participants of this study were 104 attendants at college medicine, Aljouf University. Candida species were isolated using the concentrated oral rinse technique on Sabouraud Dextrose agar plates supplemented with 0.05% Chloramphenicol.

Questions regarding the lifestyle, living conditions and medications used by the participants, were tabulated in a questioner.

The relative factors affecting the colonization of Candida and the concentration of each type were also determined.

#### **Results:**

Of the 104 participants in this study 45 (43.4%) were found to harbor Candida species in their oral cavity. Candida albicans constituted 84.4% of the isolates. Subjects with very poor plaque status, severe gingivitis had significantly higher density of Candida than subjects with better plaque status and gingival status (P = 0.001). Diabetic subjects were associated with significantly higher density of Candida colonies ( $P \le 0.00$ ).

#### **Conclusion:**

Poor oral hygiene and diabetes significantly increased the rate of Candida colonization among the study participants. Other factors such as: blood group O was also found to be associated with a higher colonization rate of Candida, whereas, blood group A was associated with a higher density of Candida colonies.

#### **Key words:**

Oral Candida, Candida Albicans, oral Hygiene, Diabetes mellitus

# Knowledge Regarding Contact Lenses and its Accessories and Practice among Saudi Contact Lens Users

#### Alnamlah SA, Alobaidan OS, Waleed AlRashid

#### **Content: Purpose:**

To assess the level and determinants of knowledgeand practice regarding contact lens (CL) and its accessories among adult Saudi CL users

#### **Methods:**

This survey was conducted in 2015 for Saudi contact lens users visiting a Mall in Riyadh, Saudi Arabia. The questions were related to knowledge about contact lenses, correct CL and accessories use. We inquired indication, initial prescription, contact lens use, complications experienced and their management. The knowledge and practice responses were correlated to risk factors.

#### **Results:**

In this survey, 510 contact lens users participated. Three participants did not complete the survey. The level of knowledge was of excellent grade among 279 [54.7% (95% Confidence Interval 50.4 - 59)]. The practice was of excellent grade in 210 [41.4% (95% CI 37.1 - 45.7)] CL users. Variation in level of knowledge was not associated to gender (P = 0.1), education (P = 0.4), type of work (P = 0.3), funding for CL( P = 0.1). Occasional users and those not having prescribed CL had significantly poor knowledge (P <0.001). The excellent level of practice was associated to male gender(P = 0.8), age-group (P = 0.004), type of CL (P = 0.9), funding for CL (P = 0.2), education (P= 0.7) and occupation (P = 0.1).

#### **Conclusion:**

The knowledge and practice among contact lens users was less than desired. Those using contact lens for cosmetic purpose and procuring them without prescription need special focus for health promotion so that their CL related practice improve and eye complications are reduced.

#### **Key word:**

contact lens, refractive error, cornea, keratitis, Cosmesis.

Comparison of Contact Lens Hygiene Compliance and Self-Management Behaviors between Medical and Non-Medical Students in Saudi Arabia

Shehana Alqahtani, Fatimah Fayez, Hala Alqahtani, Hiba Alrowibah, Anfal Aldulhum, Sumera Nisar

#### **Content: Objectives:**

To compare contact lenses hygiene compliance and the selfmanagement behavior. With a focus on wearing habits, cleaning and maintaining contact lenses by different methods. As well as, habits of sharing and self-prescription between medical and nonmedical students in Saudi Arabia.

#### Method:

Five hundred young contact lenses wearers with an average age of 18-22 years were conveniently selected from the student population at Princess Nourah Bint Abdulrahman University, Riyadh. After taking verbal consent from the participants, their level of contact lenses hygiene compliance and self-management was assessed through a questionnaire.

#### **Results:**

The mean ( $\pm$ SD) age of the participants was 20.87 $\pm$  1.696 years. Out of 500 students 37.8% of them were medical students and 62.2% were non-medical students. 56% of students were wearing contact lenses for the cosmetic reasons while 43.6% of students were using them for the correction of their myopic refractive error. Most of the students were using daily wear soft contact lenses (96.6%) by self-prescription (51.4%) and majority of them were buying them from general retail store (83.6%) instead of some proper optician.

The self-management behavior was statistically significant among non-medical students (p= 0.026). There was no significant difference between the two groups regarding the compliance of the contact lens hygiene but, the knowledge and the awareness about the risks and complications was statistically higher in the medical students (p= 0.028). Most of the students in our study had rated themselves as average wearers.

#### Conclusion

This study concludes that self-management with the contact lenses use is very common among non-medical students in Saudi Arabia. Although they are good at hygiene compliance, their knowledge about the risks and the complications of contact lenses use as well as their knowledge about lens care accessories were significantly low.

Migraine Headache in the Pediatric Population of Saudi Arabia: Prevalence and Risk Factors

Ghada AlHindi, Nada Dammas, Fawaz AlHussain, Fahad AlBashiri, Muath AlBalawi, Manar AlShamari, Yousef Mohammad

#### **Content: Introduction:**

Headache is one of the most common complaints by the pediatric age group. Additionally, its negative impact on the child's life and school performance cannot be overestimated. Data on the prevalence and risk factors of this agonizing condition would help the community health force to rationally and properly address its management. Unfortunately, very scarce data exist on the prevalence of headache and its associated risk factor in the pediatric population of the Kingdom of Saudi Arabia.

#### **Methodology:**

We conducted this study to determine the prevalence of headache and its associated risk factors in the pediatric population of Saudi Arabia. This is a cross-sectional study that was conducted from October 2015 to August 2017. Children (6-18 years) and their parents visiting major shopping malls in Riyadh, who agreed to participate in the study, were interviewed to complete a set of questions related to headache and its risk factors.

We strictly adhered to the ICHD-3 beta criteria for the diagnosis of pediatric headache. The sample size was determined with the prior knowledge that the prevalence rate of migraine and headache in Saudi school children is somewhat similar to Western countries.

#### **Results:**

1455 subjects completed the questionnaire. The data revealed a headache prevalence of 36% (n=528) and it was more prevalent in females 68% (n=359) than in males 32% (n=169). The mean age of the subjects who suffered from headache was 14 years old (6-18 years old).

Migraine constituted 16% (n=232) of all headaches, of which 13%(n=186) have associated aura. Stepwise multivariate logistic regression showed that female gender, use of electronic devices, bullying at school, Vitamin deficiency, snoring, and depression are independent risk factors for the development headache in this age group population.

#### **Conclusion:**

Headache in the pediatric population of Saudi Arabia is quite prevalent and similar to that of other populations. Multiple modifiable risk factors have been identified. Hence, urgent measures must be implemented in addressing these factors.

# The Effectiveness of Peer-Led Learning in Respiratory Care Laboratories in Imam Abdurrahman Bin Faisal University

Amal Al-Ahmery, Jameelah Al-Mahmoudi, Fatimah Al-Haddad, Samar Al-Mutairi

#### **Content: Background:**

Peer-led learning (PLL) is a method of teaching where students learn from each other under the supervision of experts (i.e. academic staff). Moreover, PLL was proven to improve students' learnings and outcomes. Respiratory care (RC) profession is an evolving health specialty that could benefit from applying this teaching method in both educational and clinical field. Additionally, PLL method can provide a solution for the lack of faculty in RC departments.

#### **Objective:**

To assess retention of information process, measure the improvement of students' outcomes of PLL, and to evaluate the students' satisfaction of peer-led learning experience from both peer-teachers and peer-learners' perspectives.

#### **Materials and Method:**

A total of 30 students agreed to participate in this quasi study. 27 of second-year respiratory care (RC) students were divided into two groups using clustered sampling. Group one is the experimental group (n=14) were taught by three from fourth-year RC student. Group two is the control group (n=13) were taught by the course instructor. The experiment conducted on four labs sessions, two hours each. Both groups completed a quiz after each lab session. A five-points Likert scale survey was filed by both peer-learners and peer-teachers at the end of the experiment.

#### **Results:**

The PLL group scores in the quiz were significantly higher than the faculty-led group. The independent t-test results show a statistical difference with a P = 0.002. The survey results for peer-learners and peer-teachers show positive responses "agree or strongly agree" with 87% and 100% respectively. Moreover, 100% of the students agreed that PLL increases their retention of information.

#### **Conclusion:**

At the end of this study, PLL is proven to be an effective method of teaching that improves students' outcomes. It also improves retention of information and increases students' satisfaction of the learning experience in RC laboratories. Future studies should emphasize on examining the diversity among students, and apply PLL on a large healthcare population.

#### **Keywords:**

Peer-teachers, peer-learners, peer-led learning, faculty-led learning, respiratory care, laboratories, retention of information.

## Internal Jugular Vein Aneurysm: A Case Report

Abdulrahman M. Nasiri, Nora Rayes, Khalid Bakarman

#### **Content: Patient Information**

A 57-year-old Saudi woman, with no significant medical history, such as diabetes mellitus, hypertension, asthma, dyslipidemia, or other chronic condition, presented to Prince Sultan Military Hospital complaining of right-side neck swelling that started 3 years ago. The patient reported that the swelling enlarged with coughing and straining, but there was no pain, change in skin color, dysphagia, change in voice, neurological defect, shortness of breath, history of any trauma to the neck, surgical intervention, or any lump.

#### **Clinical Findings**

Examination of the neck showed a round, compressible, non-tender, non-pulsatile lump, measuring about 4×4 cm, on the right side on level 3; there was no change in the overlying skin. Performance of the Valsalva maneuver by the patient enlarged the swelling. Upper and lower limb examination finding was normal. No other swelling was noted.

#### **Timeline**

Diagnostic Assessment Ultrasound examination showed a 5.1×3.8×1.4-cm cystic structure at the right side of the neck just above the level of the thyroid gland and anterior to the right internal jugular vein and the right internal carotid artery that contained fluid with internal echoes and with a thin wall. The structure was non-communicating with the surrounding vascularity, which is consistent with second branchial cleft cyst; however, evaluation by magnetic resonance imaging of the neck was advised to confirm the diagnosis and to rule out underlying fistula. The thyroid gland had a normal size and echogenicity with no lesions. No cervical lymph node enlargement was noted.

Computed tomography scan showed a right-sided neck saccular contrast-filled lesion that was continuous with the lumen of the right internal jugular vein and measured about  $4.5 \times 3.0$  cm in maximum diameter (Figures 1 and 2). It displaced the right carotid vessels medially. Figure 3 shows an anterolateral filling defect, which could represent a thrombus. A linear low-attenuation area is also seen at its posterior aspect, which could represent an intimal flap. Findings of the left carotid vessels and internal jugular vein were unremarkable. Although findings of the parotid and submandibular salivary glands were unremarkable, a subcentimetric cervical lymphadenopathy was noted. Computed tomography sections passing through the brain and upper chest showed no significant abnormality.

#### **Therapeutic Intervention:**

As the patient was anxious regarding the increase in the size of the swelling, which she felt had a negative psychosocial impact, and as the sizable venous aneurysm harbored a mural thrombus that increased the risk of embolization and pulmonary embolism, surgery was offered. Surgery was performed under general anesthesia through an incision along the anterior border of the sternocleidomastoid muscle up to the carotid sheath (Figure 4). The internal jugular vein was separated from the carotid artery and sternocleidomastoid muscle (Figure 5). Then, the patient was anticoagulated with 5000 U of heparin (intravenous) and vascular clamps were applied proximal and distal to the aneurysm. Excisional venotomy was performed, and the mural thrombus was removed with partial wall excision (Figure 6). Finally, the internal jugular vein was closed using 5.0 Proline suture (Figure 7). Hemostasis was accomplished, and the specimen was sent for histopathological examination.

#### **Follow-up and Outcomes:**

The patient did well postoperatively, and 3 days later, enoxaparin 60 mg was subcutaneously administered and she was discharged. According to the patient, her condition has improved and she can function well again. Follow-up duplex ultrasound performed 2 weeks postintervention showed a patent internal jugular vein.

# Public Awareness, Knowledge and Attitude of Vitamin D Deficiency and Its Effects on Their Serum Levels

Alzahrani Ahmed, Alsebayel Yazeed, Alahmari Ahmed, Alkhazi Ahmed, Almalki Abdulaziz, Aldhahi Ahmed, Alqumaizi Khalid

#### **Content:**

Vitamin D deficiency is one of the most common conditions encountered by health care providers worldwide. Vitamin D deficiency is linked to many complications; recent data suggest that vitamin D deficiency is associated with many serious conditions including cancers, autoimmune diseases and depression along with its classical role in calcium homeostasis.

#### **Objectives:**

- 1- Describe the knowledge and awareness about Vitamin D deficiency and its complications among Riyadh Residents.
- 2- Find the Prevalence of Vitamin D deficiency, Natural Sources, Dietary and

Environmental Intake of Vitamin D in Riyadh Residents.

#### Results

The study sample comprised of 1207 participants, 515 were males and 692 were females. We categorized participants to 3 sub-groups according to their vitamin D status, those with (>30ng/ml) were considered normal, (30-21 ng/ml) were considered to be vitamin D insufficient and those with (<20 ng/ml) were considered deficient. 4.8% of participants were within the normal range whereas 79.1% were vitamin D deficient and 16.1% were insufficient. Chronic diseases including diabetes mellitus, cardiovascular disease and kidney disease were included in the questionnaire and correlated with vitamin D results.

13.4% of participants had chronic diseases. The authors compared the participants' vitamin D levels to medically free individuals. In the present study, there was no significant difference. Those who scored the highest in the scoring system had the best vitamin D levels in comparison to those who had poor or insufficient knowledge. 6.8% of participants who had appropriate knowledge had normal vitamin D level, compared to 4.4%, 3.8% of insufficient and poor knowledge, respectively.

#### **Conclusion:**

Vitamin D deficiency accounted for 79.1% of our sample (1207) participants, even among those who scored the highest in the knowledge scoring system accounts for 75%. However, results show an increase in the percentage of vitamin D deficiency in relation to lower levels of knowledge, whereas the group who has poor knowledge has the highest percentage of vitamin D deficiency 82.7% compared to 79.9% in the insufficient knowledge group and 75% in the appropriate knowledge group.

# **Breast Cancer and Nasal Cancer Association; About A Case Report**

Dr. R. Djouabi, N. Yousfi, Pr. A. Bensalem

#### **Content: Introduction:**

Breast cancer is the leading cancer in women in both developed and developing countries. The incidence of breast cancer is increasing worldwide. This is a real public health problem. Cancers of the sinuses of the face and nasal cavity are rare and represent only 1% of all cancers. They develop preferentially at the expense of the mucosa lining naso-sinus cavities and are in 60-80% of cases squamous cell carcinoma. The association of these 02

cancers is rare; we report in this work a clinical case of a woman who developed both cancers simultaneously.

**Case Report:** 

We report the case of a 58-year-old woman, with no particular antecedents, admitted in medical oncology department for the management of right breast cancer. The onset dates back to December 1999, when a node appeared whose histological examination of the microbiopsy sample revealed a grade II infiltrating ductal carcinoma. The extension assessment was without particularity. A straight mastectomy with lymph node dissection was performed and the pathological anatomy study returned to Grade II infiltrating ductal carcinoma with 1N + / 3N.

#### **Treatment:**

The patient received adjuvant chemotherapy type FAC (Doxorubicin, 5 FU and Cyclophosphamide) with 06 cures, followed by radiotherapy and hormone therapy (initiated since 2003) with tamoxifen for 05 years, then the patient was under control until 24/01/2010 when she presented a nasal obstruction and an epistaxis of great abundance. A CT scan of the nasal cavities shows a malignant tumor process in the septal nasal cavity. Tumor excision was made respecting the healthy limits on 02/03/2010. The pathological anatomy study of 21/04/2010 confirmed a well-differentiated squamous cell carcinoma with little maturity associated with papillomatous lesion. An evaluation CT has returned without any particularity with any tumor recurrence. At present the patient is in complete remission and put under control.

#### **Conclusion:**

The association of breast cancer and nasal fossa is relatively rare, but good multidisciplinary management allows a better prognosis.

Male Diabetic Patients Satisfaction with the Services Provided by the Primary Healthcare Centers and its Relationship with the Control of Diabetes, Sakaka, Al-Jouf, Saudi Arabia

Saleh A. Alzaid, Nwaf AW Almndil, Abdulrahman B. Almazyad, Abdullah K. Alghutayghit, Anas M. Alomair, Altaf H. Bandy

#### **Content: Background:**

Patients' satisfaction is a corner-stone of the quality of the medical care impacting application and management of the system. The satisfaction level also determines how the patient cares about his status.

#### Objective:

Current study was intended to assess the patient satisfaction and its relationship with healthcare services.

#### **Participants and Methods:**

Cross-sectional study was carried out at accredited primary healthcare centers (PHCs) of Sakaka city. It consecutively enrolled 400 male diabetic patients. Data was collected using a pre-validated questionnaire. SPSS version-20 was used for data analysis, descriptive statistics was performed. Chi-square test

and odds ratio was calculated to assess any relationship across various variables of patient satisfaction.

#### Results:

With a response rate of 75%, the average age of the study participants (n= 300) was  $43.8 \pm 9.2$ . 63.7% of them were on insulin, and 36.3% were receiving oral hypoglycemic. Most of the patients were satisfied with three components of global satisfaction questions that include; the cleanliness of the PHCs, availability of the drug in the PHC pharmacy and the way doctors take care of them. Three factors that had significantly (P<0.05) positive effect on the control of diabetes were the level of drug form, and patient&#39; education and job status. The same relationship was depicted by odds ratio (OR &lt;1.0). They had a significant protective effect (better control of diabetes). Marital status did not show the alike.

#### **Conclusion:**

Patients were satisfied with regard to various parameters of global satisfaction of health care, patient's demographic characteristics viz; education, drug form and employment showed a positive protective relationship with diabetic control.

#### **Key Words:**

Diabetes Mellitus, Patient's satisfaction, Primary healthcare centers

# The Impact of Parents and Peers Smoking on the Behavior of University Students Towards Smoking

#### **Hussein Mohammed Resen**

#### **Content: Introduction:**

Smoking prevalence has increased in both sexes, especially among young adults, various factors have led to this catastrophe, examples include TV, social media and its availability in the market. An interesting factor that I thought was worth studying, is the impact of smoking parents and peers, I noticed that a lot of students start smoking because of parents or peers impact, and I believed that if the results were true, it would direct future research to study and analyze this factor to prevent it. The aim of this project is to study whether parents and peers smoking habits have any impact on the students of University of Sharjah's behavior toward smoking.

#### **Methods:**

A cross-sectional observational study with non-probability convenient type of sampling, the sample included in the study are university students aged 18 to 23. The information was collected using a Self-administered questionnaire, the questionnaire contained 23 questions and it was developed by the investigators.

#### **Results**

A total of 400 University of Sharjah students (50% males & 50% females) within an age range from 18 to 23 years old were included in the study, 15.8% of the smoking students had smoking parents, and 17.1% of them had smoking peers. 22.2% of the smoking male students had smoking parents, meanwhile, 10% of the smoking female students had smoking parents. 21.7% of the smoking male

students had smoking parents, while 7.8% of the smoking female students had smoking peers.

#### **Conclusion:**

Peers had a stronger impact than parents, parents and peers had more impact on males rather than females, interestingly almost 80% of the smoking students didn't have smoking parents or peers, which leaves the question of why did they start unanswered, action should be taken on a societal level to prohibit smoking for the aim of creating a non-smoking generation.

## **Double Localization of Cancer: Breast and Lung: A Case Report**

#### N. Yousfi, A. Bensalem

#### **Content: Introduction:**

Breast cancer is the first cancer in women in both occidental and under-developed countries. The incidence of breast cancer is increasing worldwide making it a real public health problem. Lung cancer is the leading cause of cancer death in the world; non-small cell lung carcinoma is a Heterogeneous disease that knows nowadays a real increasing among women too. It is not very common in our daily practice to see patients with double localization; we report in this work a clinical case of a woman who developed both cancers simultaneously.

#### **Case Report:**

It is a 40 years female, with no particular medical history, presented to our unit for the treatment of tumor in the right breast, the symptomatology started in December 1999 marked by the appearance of a breast lump, pathological exam confirmed as an infiltrating ductual carcinoma grade II SBR, a right mastectomy with lymph node dissection were performed .

The staging was negative. The patient has received 6 cycles of FAC followed by radiotherapy, the patient is in complete remission .12 years later during a routine follow up, a chest CT scan was made on 17/12/2012 objectifying: malignant tumor mass with mediastinal lymph node and lung left upper lobar bronchial vascular infiltration. Bronchoscopy performed 23/03/2013: appearance of a lung tumor process of the upper left bronchus; a biopsy is returning to normal tissue.

A second biopsy made on 03/08/2014: adenocarcinoma of the left lung a study immuno histochemistry: anticytokératine (7+, 19+) anti TTF1 - A second chest CT scan showed a malignant process tumor in the upper left lung with proximal mediastinal extension, supeo-anterior mediastinal lymph nodes magma pre vascular, with metastatic lung and pleural thickening. The patient had started carboplatin; pemetrexed and Bevacizumab. After 08 cycles, a CT scan showed stability and maintenance by bevacizumab and pemetrexed was initiated. The follow up showed regression of the tumor and the lymph nodes. The patient is actually completing the treatment by Bevacizumab associated with Pemetrexed.

#### **Conclusion:**

Lung cancer can be associated with breast cancer as part of a metastatic disease that's why we need to confirm with

immunohistochemistry and molecular biology to clarify the primitive or secondary origin and that leads to a better therapeutic management.

### The Effect of Curcumin and Rapamycin on A549 Human Lung Cell Carcinoma

Amma AL-Wandi, Muzan Alkhalidi, Abdelrahman Omara, Fardous Abedalqader, Omar Al-Ali, Mohamed Darwish

#### **Content: Introduction:**

One of the proved drugs used to treat this NSLC is Rapamycin. The NCI Developmental Therapeutics Program demonstrated that Rapamycin inhibited cell growth in (NSCLC) line via binding to (mTOR) which is critical to cell growth. Another drug that works on mTOR is Curcumin. Learning outcome: compare the antiproliferative effects of Rapamycin and Curcumin individually with their combination and whether this combination exhibits synergistic or antagonistic effect.

#### **Methods:**

Stock concentrations were dissolved in 100% DMSO. MTT assay was used to determine the viability. After optimization, final working concentrations were 20, and 40 mM of Curcumin, and 50, 150 and 300 ng/mL of Rapamycin. Control groups included media, media and cells, DMSO equivalent to the different concentrations of Rapamycin and Curcumin.

#### **Results:**

Cell viability of 50, 150 and 300 ng/ml of rapamycin alone show 80.14%, 123.42% and 62.433% respectively. Cell viability of 20 and 40 mM curcumin alone show 171.38%, 159.21% respectively. Cell viability of combination of 20 (mM) curcumin with 50,150 and 300 (ng/ml) rapamycin show 77.46%, 110.91% and 96.24% respectively.

Cell viability of combination of 40 (mM) curcumin with 50, 150 and 300 (ng/ml) rapamycin showed 82.59%, 90.04% and 76.86% respectively. And for synergistic determination, we used this equation CDI=AB/[A×B]. and it was shown to be less than 1 in all those combinations which is considered as synergism.

#### **Acknowledgements:**

Boehringer Ingelheim, Prof. Taleb Al-Tal

## **Statin In Emirates Population: A Retrospective Cohort Study**

Abdulla Shehab, Asim Elnour, Ali Alshamsi, Saif Al Nuaimi, Akshaya Srikanth Bhagavathula, Jamshid Khan, Masood Uzzafer, Maryam Al Zubaidi

#### **Content:**

There is a dearth of studies regarding the muscular adverse effects of statin in our population as few studies from the Gulf countries have addressed these patient's preferences.

#### Aim:

The objective was to estimate the incidences of statin-induced muscular ADRs (relative risk) and to report the achievement of optimum target of lipid profile.

#### **Method:**

Ethical approved retrospective cross-sectional study conducted at Al Ain and Tawam hospitals, at Al Ain city-UAE. The study was performed using patient's clinical profile in electronic data-base for all patients taking statin (Cerner®). We have retrospectively retrieved data from January 2011 till January 2015 for 556 patients using statin. The primary analysis was designed to test the frequency of ADR's (rate) with statin.

#### Results

The main age of the sample was [64.9 ±10.1 (95% CI 64.1 - 65.8)] years. The majority was males 418 (75.2%) and married 513 (92.3%). More than two thirds were obese having BMI above 30 [378, 68%]. Dyslipidemia was documented in (393; 70.7%) statin users. The lipid profile depicted as total cholesterol mmol/L (5.0 ±0.89, 4.9 - 5.1; p =0.335), LDL mmol/L (5.4 ±0.76, 95% CI 5.3 - 5.5; p= 0.29), HDL mmol/L (1.1 ±0.2, 95% CI 1.1 - 1.2; p =0.04) and triglycerides mmol/L (1.8 ±0.76; 95% CI 1.7 - 1.9; p =0.77). The indication of statin based on ATP III risk categorization exhibited as very high risk (151; 27.2%), majority with high risk (276; 49.6%), moderate risk (47; 8.5%); low to moderate risk (44; 7.9%) and low risk (38; 6.8%). Statin was discontinued without any replacement or rechallenge in 20 patients (3.6%) for unknown reasons in 52 (9.4%). Myalgia was exhibited by (48, 8.6%), myopathy (32, 5.8%), myositis (8, 1.4%) and rhabdomyolysis (1, 0.2%). The correlations between covariates and statin-induced muscle symptoms have shown significant correlations (negatively and positively) at the 0.05 level (2-tailed) between gender and myopathy (p 0.045), age strata and myositis (0.025), LDL cholesterol and myopathy (p 0.044), myositis and total cholesterol (0.03).

#### **Conclusion:**

The final model of multinomial regression analysis has shown that BMI (p < 0.001), HbA1c (p 0.003), diabetes p 0.002), hypertension (p < 0.001) and discontinuation of statin (p 0.003) as the variables that were significantly correlated with risk for developing statin-induced muscular adverse effects.

#### **Key words:**

ADRs due to statin; statin and lipid, statin and diabetes, statin and cognition, statin and myalgia/myopathy/ rhabdomyolysis /myositis/ creatinine kinase.

# Laparoscopic Intervention for Gastrectomy in Case of Gastric Cancer: Systematic Review

Mohammed Jalawi M Karkaman, Awdah Abdulrahman Alkhathami, AbdulRahman Omar Hakami, Abdulrahman Jalwi M. Korkoman

#### **Content:**

Laparoscopy-assisted gastrectomy for gastric cancer has rapidly become popular in the past decades due to its minimally invasive advantages over open gastrectomy (OG). This study was aimed to evaluate the laparoscopic procedure for gastrectomy in case of gastric cancer and compare between laparoscopic and open techniques, outcomes and efficiency and safety. A systematic search using the following keywords, "laparoscopy", "laparoscopic", "gastric cancer", "gastric carcinoma" and "gastrectomy", was performed through the following bibliographic databases, PubMed, Web of Science and Cochrane Library, for literature comparing Laparoscopy gastrectomy (LG), published up to 2016, and we broadened the search range by browsing the related summary, methods and references of retrieved articles. LG is a safe, feasible method for patients with gastric cancer. The results of LG were favorable in regards to much better cosmetics, less blood loss and faster recovery.

#### **Keywords:**

Laparoscopy-assisted gastrectomy (LG), "gastric cancer", "gastric carcinoma" and "gastrectomy".

# To What Level Does the Saudi Population Know About Organ Donation?; A Cross Sectional Study From The Community

Abdulmalik Yousef Alnasyan, Abdullah Abdulrahman Albassam, Khalid Abdulaziz Aldihan, Faisal Ahmed Alhusain, Abdulrahman Al Tamimi

#### **Content: Background:**

An organ transplant is oftenly the most preferable treatment for end stage organ disease. However, organ donation still can't keep up with the continusely growing demand.

#### Objective:

To assess the Saudi population's opinion and attitude about organs donation and transplant.

#### **Methods:**

This was a cross-sectional study which conducted in Saudi Arabia to know the Saudi population's opinion and attitude about oragns donation and transplant. In this study, we targeted the age group from 18 to 60 since they are more vulnerable and targeted for organ donation. An Arabic-language questionnaire was distributed online via twitter.

Twitter is the most popular social media in Saudi Arabia. The questionnaire comprised sociodemographic questions in the first section, questions to assess participants' willingness to donate their organs and their knowledge about organ donation.

#### **Results:**

The study included 1453 Saudi adults aged between 18 and 60 years (mean =  $35.07 \pm 12.17$  years). Most of them (75.9%) were females. The majority of the participants have university degree or higher (76%). The majority (87.4%) of the participants haven't heard of or weren't aware of the organ donation regulations in Saudi Arabia. More than two-thirds (77.7%) of the participants were willing to donation. However, almost (95%) haven't donated organ before. Whereas 311 (24.4%) refused organ donation. 453 (32.4%) where wiling to donated to their relatives only and 1271 (87.4%) consider organ donation to be an excellent way to save life

#### **Conclusion:**

Positive attitudes toward organ donation reported by this study are justified by the high number of people willing to donate their organs. However, there is inadequate information acquired by the public about organ donation and its regulations.

### The Clinical Outcome of NIV in Preventing Intubation and Reintubation

Suliman Alanazi, Mohammed Aldwaisan, Abdulmajeed Almajed, Manjush K, Winnie Philip

#### **Content: Objective:**

Noninvasive ventilation (NIV) is the application of positive pressure ventilation without the insertion of endotracheal tube or tracheostomy tube using nasal or full face mask. It has been known that NIV is associated with less complications than conventional mechanical ventilation. However, the role of NIV in retrieving acceptable oxygenation and ventilatory status of ICU patients and thus preventing intubation and reintubation is still controversial. The main aim of this study was to evaluate the clinical outcome of NIV in preventing intubation and reintubation in critical care settings.

#### **Methods:**

This observational cross-sectional study was conducted at 5 different units of King Abdulaziz Medical City (KAMC), Riyadh in the period between November 2016- May 2017. All patients who underwent NIV and met the inclusion criteria were included. Inclusion criteria involved adult patients who don't have GCS deterioration and with intact airway reflexes. Exclusion criteria involves patients with neuromuscular diseases and patients with DNR.

A total of 54 adult patients with 19 different diagnoses were divided into two groups. 39 patients underwent NIV as first line treatment to prevent intubation (first group). The other 15 patients underwent NIV as a post-extubation measure to prevent reintubation (second group).

#### **Statistical Analysis:**

After finishing the data collection process , data was analyzed using SPSS software.

#### **Results:**

The first group showed 76.9% NIV success rate and 7.7% mortality rate. In comparison, the second group showed both higher NIV success rate (86.7%) and survival rate (100%). The most common causes of NIV initiation in the first group were desaturation, CO2 retention and COPD exacerbation. On analyzing causes of NIV failure, the study showed that desaturation, decreased level of consciousness, and tachycardia were the most common three.

#### **Conclusion:**

This study showed that the use of NIV is associated with high success rate (preventing intubation and reintubation) and low mortality rate. In conclusion, this study suggests the use of NIV as both first line treatment and post-extubation method in critical care settings.

#### **Phyllode Breast Tumor: A Case Report**

R. Djouabi, K. Djebbes, N. Yousfi, Pr. A. Bensalem

#### **Content: Introduction:**

High-grade breast phyllodes tumors (HBPT) are defined by fibro epithelial tumors; they are rare tumors; less than 1% of primary malignant breast tumors and 2.5% of fibro epithelial tumors. The peak frequency is between 35 and 50 years old and their diagnosis is mostly histological with a foliated structure hence their phyllode name.

#### **Case Report:**

We report the case of a 39-year-old single woman with insulindependent diabetes who consults for a left breast mass. The onset of symptomatology dates back to 15 months ago by the selfexamination of a painless firm nodule in the left breast, gradually increasing in volume, which motivated a consultation. The clinical examination of the breasts has found a huge mass of firm, painless consistency, with inflammatory signs, hyper vascularized purplish color. Examination of ganglionic areas does not include axillary or supraclavicular lymphadenopathies. Histopathological analysis of the micro-biopsy specimen concluded in a phyllode sarcoma and the extension budget being negative.

#### **Treatment:**

The patient received a neo-adjuvant chemotherapy type Al (Doxorubicin – Iphosphamide) with 03 courses, but in front of the clinical and radiological progression, the patient received a 2nd line of chemotherapy type TAC (Docetaxel – Doxorubicine-Cyclophosphamide) with 3 cures. The answer was better from where the patient directed towards the surgery.

#### **Conclusion:**

Phyllodes tumors are relatively rare. Our observation illustrates a good multidisciplinary management will allow a better prognosis.

Incidence and Outcome Among COPD Patients Attending The Emergency Department of the King Abdul-Aziz Medical City Hospital, Riyadh, Saudi Arabia

Salem Al Qahtani, Noora Mumenah, Gadhah Al- Oshish, Sahar Al Joiser, Kavita Sudersanadas, Winnie Philip, and Shoeb Qureshi

#### **Content: Background:**

Chronic Obstructive Pulmonary Disease (COPD) is a common chronic lung disease.

#### Objectives

The aim of this study is to determine the incidence and outcome among the patients attending the emergency department of the King Abdul-Aziz Medical City (KAMC) Hospital, Riyadh and receiving a discharge diagnosis of COPD.

#### Methods:

We reviewed all the charts of subjects attending the Emergency Department of the KAMC (King Abdul-Aziz Medical City) hospital

in the period, from 1 June to 31 September 2016. We analyzed the chart of all subjects receiving a diagnosis of COPD. They formed the subjects of this retrospective study.

**Results:** 

Two hundred and ten subjects accessed the emergency department into the study period. We selected 140 subjects with mean (±SD) age of 71.9 (±9.84) years; males 54, 38.6 %) with a discharge diagnosis of COPD. The incidence of COPD was 1.9%. The outcome of COPD management indicated that the majority of the subjects discharged with home ventilation were 85 (60.7%), 30(21.4%) subjects were shifted to different wards, whereas 22 (15.7%) were discharged in stable condition, while 3 (2.2%) died.

#### **Conclusion:**

The study revealed a high pervasiveness of COPD (66.66%) among the Saudi patients. The outcome of COPD ranged from living with home ventilation to mortality.

#### Prevalence of Carpal Tunnel Syndrome Among Dentists Working in Riyadh, Saudi Arabia: A Cross-Sectional Study

Faisal Alhusain, Mashael Almohrij, Fadwa Althukeir, Alanoud Alshater, Bassam Alghamdi, Emad Musaudi, Aisha Basudan

#### **Content: Introduction:**

Approximately 3–6% of the general population have carpal tunnel syndrome (CTS). CTS is more prevalent among people with occupations that involve repetitive and forceful maneuvers. The aim of this study was to measure the prevalence of CTS among dentists working in Riyadh, its effects on clinical practice, and to identify the factors associated with this syndrome, thus allowing intervention measures to be planned and implemented.

#### **Setting and Participants:**

This cross-sectional study was conducted in Riyadh, SA, and used random cluster sampling. At the time of the study, there were 575 dental clinics in the city, most of them private clinics, located across the 15 administrative areas of Riyadh.

Five private clinics from each area (75 dental clinics in total) were randomly selected. All five government-run hospitals and medical cities with dental clinics were also included in the study. A total of 223 dentists were sampled (134 males and 89 females) by using a previously validated questionnaire (The Boston carpal tunnel questionnaire).

#### **Results:**

The prevalence of CTS-related symptoms among dentists working in Riyadh was 10%. Female dentists had a significantly greater risk of having CTS symptoms than male dentists (OR 2.13; 95% CI 1.09–4.17). Obese dentists were also more likely to complain of CTS symptoms than dentists within normal weight limits (OR 3.66; 95% CI 1.55–8.64).

Left hand dominance was strongly associated with CTS symptoms, with an estimated OR of 6.28 (95% CI 1.24-31.90).

However, there was no relationship between CTS symptoms and age, marital status, history of smoking, exercise, dental specialty, occupation period, or having other educational degrees.

#### **Conclusion:**

Ten percent of dentists working in Riyadh had experienced severe symptoms related to CTS. Several risk factors for CTS have been identified. Future research could explore the reasons behind these risk factors to identify and implement prevention measures.

# Epidemiological Profile of the Bronchial Carcinoma has Small Cells within the Service of Medical Oncology has DIDOUCHE Mourad Constantine Algeria

K. Djebbes, R.Djouabi, N.Yousfi, Pr.A. Bensalem

#### **Content: Introduction:**

The small cell lung cancer (CBPC) is a rare tumor and aggressive, strongly associated with smoking and the majority of cases are presented as at the outset disseminated. The CBPC IS PARTICULARLY CHEMO sensitive and the combination of a derivative of platinum and etoposide has emerged as the standard of chemotherapy. We report in this work, six cases of small cell lung cancer treated at our level during the year 2016-17.

#### **Methods and Materials:**

It is a retrospective study, on patients with a small cell lung cancer (CBPC), collected within the service of Medical Oncology, during the year 2016-17. Six cases (6) cases have been studied whose parameters have been: the age, sex, consumption of tobacco and alcohol, stage of the disease (locally advanced, metastatic), type of treatment received (type of protocol, average number of cure).

#### **Results**

On the 6 cases studied, the average age of discovery was 63 years (44-82); 83.33% (n=5) of the Cases were men and only one woman in 16.66% (n=1)of cases. The concept of positive tobacco was represented among all male patients; in 83.33% (n=5), and alcohol use by 33.33% (n=2) of the cases. In 66.66% (n=4), the disease was metastatic, at the level of the: liver, lung, adrenal and brain in 16.66% (n=1) cases for each. And in 33.33% (n=2), the disease was locally advanced. The treatment received was: in 66.66% (n=4) of the cases on the basis of cisplatin/Etoposide;and only one patient received carboplatin/Etoposide follow-up of the Temozolamide(16.66%). An average of 3 cures was made (1-7).4 patients died 66.66% of the cases and the other 2 are in the course of the evaluation 33.33%.

#### **Conclusion:**

The CBPC remains a tumor in the prognosis of the darkest, while the track toward new and effective treatments is littered with failures and disappointments. However, research efforts are underway in which new chemotherapeutic agents as well as several targeted molecular therapies are evaluated. The hope is thus to achieve a day the "Holy Grail" of the treatment of the CBPC, i.e. the consolidation on the long term of an initial response promising.

#### Key words

CBPC, poor prognosis, chimiosensible.

#### The Incidence Rate of Indwelling Central **Venous Catheter Bloodstream Infection in Cancer Patients at King Khalid University** Hospital (KKUH) from 2009-2014

Khaled Alsaleh, Mohammed BinAskar, Maen Alherbish, Suliman Alobaid, Sakhar Albader, Abdulelah Alhabib, **Abdulhamid Alghamdi** 

#### **Content: Introduction:**

Central Venous Catheter (CVC) is a widely used management tool that is used in the care of hospitalized patients, especially cancer patients for delivering nutrients, chemotherapies and other therapeutic agents as well as getting body fluid samples and blood transfusion/draw.

However, it can lead to a variety of complications ranging from simple thrombophlebitis up to severe sepsis and death. We're conducting this study hoping to calculate the incidence on CABSI among cancer patients in King Khaled University Hospital (KKUH) and the most important contributing factors to this problem as long as such kind of important information is lacked in our area.

#### Objectives:

1-To determine the incidence of bloodstream infection caused by central venous catheter among cancer patients in King Khaled University Hospital from 2009 – 2014.

2-To identify the most important determinants and contributing factors of central venous catheter (CVC) associated infection.]

#### **Methods:**

A retrospective cohort study of total 271 cancer patients (≥12 years old), conducted at King Khaled University Hospital by referring to patients' medical files. Data were collected and analyzed by Chi-square test in order to find a significant association between different types of variables and the presence of catheter associated bloodstream infection (CABSI) among those patients.

#### **Results:**

Catheter associated bloodstream infection among those patients was found to be 21%, factors that were found to be associated with the presences of infection include type of cancer (were leukemia and lymphoma patients were most affected (P-value = 0.001), presence of comorbidities (P-value <0.001) and vein in which the catheter was inserted (0.045). On the other hand, age, sex, side of catheter insertions and type of catheter showed no significant association with the presence of infection.

#### **Conclusion:**

Central venous catheter should only be used for appropriate indications and should be removed as soon as they are no longer needed. Prospective studies with larger sample sizes are required to determine most frequent type of bacteria affecting those individuals.

#### **Prevalence of Metabolic Syndrome and Its Related Factors Among Adults**

#### Khaled Abdullah A Hassan

#### **Content: Background:**

This study was designed to estimate the prevalence of metabolic syndrome and its determinants, as well as baseline information about the related factors among the adult population.

#### Method:

A cross sectional study of 252 participants has been conducted in February 2017 at King Abdulaziz Hospital and Oncology Center. A structured questionnaire was administered, collecting information on personal medical history as well as socio-demographic and behavioral characteristics. Anthropometrics, blood pressure, and venous blood samples were obtained. Metabolic syndrome was defined according to the International Diabetes Federation (IDF) criteria.

The prevalence of metabolic syndrome was 32% according to the IDF. In addition to WC is the best predictor for metabolic syndrome in the Saudi population.

#### **Conclusion:**

This study showed that Metabolic Syndrome is highly prevalent in Jeddah, Saudi Arabia. Also there is a high prevalence of hypertension, obesity and diabetes. Therefore, to reduce the risk of cardiovascular events, screening for and early detection of risk factors for Metabolic Syndrome are suggested.

#### **Keywords:**

Metabolic Syndrome, Adults

#### A Novel Approach in the Management of **Primary Spontaneous Pneumothorax**

#### Bayader Ali Alkhliwi, Yasser Maher Aljehani

#### Content:

Primary spontaneous pneumothorax is considered a common thoracic surgical entity. It demonstrates the shift in management considering the influx of new concepts and technologies over the last decades. The essential elements of management were draining the pneumothorax and under general anesthesia to address the apical pathology and address the recurrence issue by pleurodesis whether chemically or mechanically or even pleurectomy.

We report a case of primary spontaneous pneumothorax which was managed by rather controversial way if considering the previous era understanding. Utilizing the awake, non-intubated, uni-portal wedge resection and no pleurectomy or pleurodesis was our approach. We adopted this approach since it is safe and many reports demonstrated its efficacy. The result was satisfactory with less operative time, less pain and less hospital stay with patient satisfaction in regards to cosmetics since the incision is 1 cm in

# Audit of Hypertension Among The Patient Attending Employee's Clinic In Tertiary Care Center, From 1st January to 1st July 2016, Riyadh, Saudi Arabia

Sultan Ahmed AlMallki, Jamaan Al Shahrani, Faisal Al Shamikh, Alaa Al Shaia

#### **Content: Introduction:**

Raised blood pressure affects 1.13 billion people worldwide. It is a primary issue in public health internationally that can lead to high mortality and morbidity rate. Most of the cases do not show symptoms and go unrecognized and therefore untreated resulting in many serious complications. Clinical audit is important to evaluate and improve the quality of care and the clinical processes in the management of hypertension in order to reduce the complication and risk factors. The aim of the study is to assess the completeness of patients' files toward management of Hypertension according to guidelines.

#### **Method:**

All hypertension patients attending employee's clinic aged from 20 to 65 years from 1st jan-1st July (2016) included in this study. Hypertension patient coming with emergency situation and preeclampsia patients are excluded from the study. 781 patients' files from 1 January to1 July have been reviewed. 438 patient's files matched the inclusion criteria, which represent 56%. Data collected through Checklist contains the following variables: Age, sex, BMI, nationality, Type of medication, outcome measures such as: Monitoring blood pressure before starting drug therapy, target organ damage assessed, CVD risk factors assessed, side effects of antihypertensive assessed, dietary advice given, Electrocardiogram (ECG), Echocardiogram (Echo), target blood pressure achieved, appropriate referral, documentation of smoking history, and last read of blood pressure.

Laboratory results were also recorded such as: T. Cholesterol, LDL, HDL, Triglyceride, last serum creatinine, last serum urea, and last serum potassium. Data entered and analysed using SPSS version 22. Descriptive statistics has been done for all variables. In quantitative variable: standard deviation and mean. In qualitative variable: number, & percentage. Bivariate analysis: chi-square used to find association between two qualitative variables, which are gender, and age groups. P-Value is less than 0.05 throughout the study.

#### Results

A total of 438 hypertensive patients' files attending employee's clinic at KFMC from January to July in 2016 were recorded. The demographic characteristic 57.1% were aged from 50-65 years old with a mean age of 51 years old.68.9% were females and only 31.1% were males. 54.1% were Saudi patients and 45.9 were Non-Saudi. 50.7% patients were obese and 35.3% were overweight with a mean BMI of 31.

The distribution of hypertensive patients by gender 36.5% patients were female aged from 50-65 years old and only 2.1% were male aged from 20-34 years old. The most commonly used anti-hypertensive medication was calcium channel blocker followed by Angiotensin receptor blockers (ARBs) and only 8% use other medication such as alpha-2 receptors agonist, peripheral adrenergic inhibitors, and blood vessel dilators. 91.3% of the

patients were assessed for cardiovascular diseases and only 3.4% patients were getting Echocardiogram. Surprisingly, only 5.3% of the patients' file contained documentation of smoking history. About third of the patients have uncontrolled hypertension when being lastly measured and 7.3% patients' blood pressure were not recorded.

#### **Conclusion:**

The study found there is a gap between the guidelines and the real clinical practice that need to be addressed. The most uncompleted data were in ECO, smoking history and Potassium test.

#### **Recommendation:**

Increase awareness of physicians and the other medical staff toward the importance of following the guidelines. Further researches can be done to identify the reasons for not following the guidelines.

# Study of Knowledge of Students about Ziska Virus Fever Infection, Taif University, Saudi Arabia

### Etemad A.A. El-Shereef, Wateen Assad Hammad and Haneen Assad Hammad

#### **Content: Introduction and Research Problem:**

Zika virus is a member of the virus family Flaviviridae transmitted by Aedes mosquitoes. Its name comes from the Zika Forest of Uganda, where the virus was first isolated in 1947. The probability of introduction of virus to the Overseas Countries has increased. This study was conducted to assess knowledge among female medical and preparatory year students (health track) in Taif university, girls section about the Zika virus infection particularly because no researches was done previously regarding knowledge about Zika in Taif City.

#### **Research Methodology:**

This is a cross sectional study, done in Faculty of Medicine, Tail University, girls section. Quota sample of students of medical college and preparatory year of health track section were included. A questionnaire prepared by the researcher containing questions about their knowledge of Zika virus infection. Descriptive statistics and analytic statistics using Chi Square and T- test for the association were applied. Total knowledge score was calculated as one mark for correct answer and zero for incorrect one.

#### **Main Results:**

One hundred and thirty four of medical students and one-hundred and eleven of preparatory year students participated in the study. Total mean score of knowledge was low; 3.56  $\pm$  2.96. It was significantly higher among medical students (3.92  $\pm$  2.97) as compared to preparatory year students (3.14  $\pm$  2.97); P= 0.039.

#### **Conclusion and Recommendations:**

The study revealed low level of knowledge about Zika virus infection and recommended the necessity of implementation of health education sessions to the students.

# The Association Between Non-Traumatic Tooth Loss and Cardiovascular Disease in a Sample of US Adults

### Hamad Qabha, Mohammed Almasri, Mohammed Aldebasi, Zevallos JC

#### **Content: Background and Objective:**

Cardiovascular disease (CVD), remains the leading cause of death in the US. In 2014, the number of deaths due to CVD was 747,451. Oral disease (OD) is a chronic systemic inflammation that frequently causes tooth loss due to the breakdown of periodontal tissue. However, there is lack of consent on the causal association of OD and CVD. The aim of this research is to study the association between non traumatic tooth loss and cardiovascular disease in a sample of US adults.

#### **Methods:**

We conducted a secondary data analysis of the 2014 Behavioral Risk Factor Surveillance System (BRFSS), which uses telephone surveys to obtain state-representative samples of non-institutionalized adults aged ≥18 years living in the US. The independent variable was tooth loss and the dependent variable was the presence of CVD which includes heart attack, angina and/ or strokes.

We included all respondents residing in the US and territories aged 40-79 years. Multivariable logistic regression was utilized to obtain odds ratio (OR) and 99% confidence interval (CI) for the association of tooth loss and CVD after adjustment for potential confounders. A p-value <0.01 was considered statically significant.

#### Results:

The study sample included 316,588 participants. The highest percentages of participants were 50 and 59 years old (32%) and 52% were females. Overall, 8% (n=25,365) were edentulous and 13% (n=40,690) had CVD. The proportion of CVD among participants who were also edentulous was 28% compared with those with CVD who did not have missing teeth 7% (p=0.001).

Participants who reported 1-5 missing teeth, 6 or more teeth but not all, or were edentulous were more likely to develop CVD (OR=1.2, 95% CI= 1.1-1.3; OR=1.7, 95% CI= 1.5-1.8; OR=1.8, CI= 1.7-2.0, respectively) after adjusting for gender, age, race, education, income, BMI, health insurance coverage, exercise, smoking, heavy alcohol intake, dental visits, and diabetes.

#### **Conclusion:**

There is an independent association between the number of non-traumatic tooth loss and CVD among US residents aged 40-79 years. Findings of this study lend to support the recommendation of adequate oral health care in this age group.

# Women Leadership Authenticity in the Academic Setting in Saudi Arabia

Saad M. Al-Moamary; Hannan M. Al-Kadri, Hani M. Tamim; Mohamed S. Al-Moamary

#### **Content: Aim:**

To study authentic leadership characteristics of women graduating from a master in medical education (MME) and those holding leadership positions in the academic setting.

#### **Methods:**

Cross-sectional study that was conducted in three campuses at a health sciences university in Saudi Arabia. The instrument used was the self-administrated authentic leadership questionnaire (ALQ).

#### **Results:**

The study sample represented 71 graduates from the MME program and 75 academic leaders. Women represented 42.3% of the MME graduates with an average age of 41.0 (±5.5). There were 14 (46.7%) women at positions of deans, associate deans or assistant deans when compared with men whom represented 34.1% (p= 0.412). Fourteen (46.7%) women were found to be more holder of PhD (p= 0.0006). There were no significant differences between women and men in the four ALQ domains. Twenty (26.7%) women were academic leaders with an average age of 47.3 (±9.6). Twelve (60%) leaders were women and from 'professions other than medicine' (p= 0.067). Seventeen (85%) women were appointed in the middle management level compared to 43 (78.2%) men (p=0.267). Though women scored higher in all the ALQ domains, none of these reached statistical significance.

#### **Conclusion:**

Women received their opportunity to be enrolled in the MME program and were not significantly different in their authenticity of academic leadership skills from men. As academic leaders, women represented only one quarter with more appointments in the middle management and showed tendency toward better authenticity of leadership skills.

Caffeine Consumption Levels and Knowledge Among Adults in the United Arab Emirates: Insights from a Nationwide Survey

Ziad Mahmoud El Menawy, Mohammad Bakri Alaa, Yazan Ghazi Al Shaikh, Anas Mohammad Hashem, Obaida M. Mukhles Adi & Ihab Aal-yaseen

#### **Content: Introduction:**

Caffeine is widely used as a cognitive, physical & psychomotor booster. Recent studies have suggested worrying trends of overconsumption of caffeine, accompanied by higher risk for multiple diseases including diabetes mellitus type 2. The aim of this study is to assess caffeine consumption levels among the United Arab Emirates (UAE) adult population, as well as the population general knowledge and attitude regarding its health implications.

#### **Methods:**

A cross-sectional study was conducted from July to August 2016 on 403 randomly chosen people from 5 emirates in the UAE. Self-administered questionnaires were distributed through a non-probability sampling method. The number of participants selected from each emirate was proportionate to the population size of each city.

#### **Results:**

The mean total caffeine consumed per day was 316.7 mg. More than 98.5% of the study participants were caffeine consumers, with 31% reported being addicted to caffeine. The mean level of knowledge about caffeine was less than 33%, indicating poor knowledge background regarding caffeine effects on health and well-being. Younger participants (P=0.008) and those who work in healthcare & education (P<0.001) were significantly more knowledgeable.

#### **Conclusion:**

Caffeine consumption is very prevalent among UAE population which ranks high among other countries. There is a lack of accurate knowledge regarding the effects of caffeine on health and well-being. Healthy consumption behaviors need to be promoted through a better awareness and transparent environment. Labelling caffeinated products with fact sheets and enhancing educational programs through social media and others may improve safe caffeine consumption behaviors.

# Cervical Spine Injury Associated with Traumatic Brain Injury: Prevalence, Etiology, and Injury Characteristics

### Abdullah Alzahrani, Faisal Boker, Mohammed Alshehri, Azzah Aljabarti

#### **Content: Background:**

Traumatic brain injury (TBI) is a major public health problem, and has been documented to be linked with significant morbidity and mortality in all age groups. This type of trauma is commonly associated with other injuries such as cervical spine injury (CSI) which critically affects TBI patients, interfering with airway management techniques, selection of proper radiological studies, and the management approach of both the TBI and the CSI.

The reported incidence of CSI in patients with head trauma, regardless of the age ranges from 5 to 10% that rises with the severity of head injury measured by Glasgow Coma Scale (GCS).

Moreover, few risk factors have been addressed in patients sustained both TBI and CSI including etiology, characteristics and locations of CSI, and other associated injuries. Identifying such risk factors will be particularly useful in early diagnosis and management of such trauma, which may be difficult to recognize due to an altered state of consciousness, and the overall critical nature of the trauma. Failure to detect unstable CSI during initial evaluation may worsen the neurological consequences as being reported.

This study aims to assess the prevalence, etiology, and characteristics of CSI in patients who sustained TBI. Also, we will investigate other associated injuries in patients experienced combined TBI and CSI, and their effects on patients' mortality and course of hospitalization.

#### **Methods and Material:**

The study was conducted in the health information management (HIM) department. The charts of all adult (>14 years old) patients with TBI presenting to the emergency department (ED) at King

Abdulaziz Medical City in Jeddah or referred from other hospital over a four years period (January 2013 to December 2016) were reviewed.

#### **Statistical Analysis Used:**

The prevalence of cervical spine injury and the associated injuries were calculated for the entire group of patients. To compare the baseline characteristics between patients with and those without cervical spine injury, we used the Chi-square test and Fisher's Exact test for categorical variables and Student's t-test for continuous variables. Odds ratios and P-values were calculated with 95% confidence intervals. All calculations were performed with the use of SPSS software, version 23.0 (SPSS).

#### Results

220 patients with traumatic brain injury were included in the study. Most of the patients were young adult (median age 29 years). In 185 of the 220 patients (84.1%), a diagnosis of cervical spine injury was ruled out on the basis of the clinical presentation and computed tomography scans reports. in the remaining 35 patients, cervical spine injury was confirmed with the prevalence of 15.9%.

#### **Conclusion:**

The rate of cervical spine injury was highest among young adult (men greater than women) who sustained motor vehicle related injury, and usually associated with thoracic, thoracolumbar trauma and abdominal injury that only explained by mechanism of injury.

#### **Risk of Myocardial Infarction with Gout**

#### Hamid Mohammed H. Alghamdi

#### **Content: Introduction:**

A high occurrence of myocardial localized necrosis among patients with gout has been recommended by a few observational examinations. We played out a meta-investigation to assess the relationship amongst gout and the danger of myocardial dead tissue.

#### **Materials and Methods:**

The PubMed and Embase databases were looked from initiation to March 2017 for partner thinks about that assessing the relationship amongst gout and the danger of myocardial dead tissue. Outline gauges were determined utilizing an irregular impacts show and detailed as relative dangers (RRs) with 95% certainty interims (CIs).

#### **Results:**

Five investigations including 7,949,560 members with a sum of 1000 MI occasions were incorporated. In general, gout was related with an expanded danger of myocardial dead tissue (p < 0.001), and the affiliation alluded to non-lethal myocardial localized necrosis (p < 0.001) however, not deadly myocardial dead tissue (p = 0.174).

The expanded hazard was seen in both women (p = 0.003) and men (p < 0.001). Stratified examination uncovered a slow increment in myocardial localized necrosis chance with a more youthful period of gout onset.

#### **Conclusion:**

The autonomous hazard connection amongst hyperuricemia and intense MI is affirmed. Gouty joint inflammation is related with an abundance danger of intense MI, and this is not clarified by its outstanding connections with renal capacity, metabolic disorder, diuretic utilize, and conventional cardiovascular hazard components.

#### **Keywords:**

Myocardial Infarction; Gout; Hyperuricemia

# **Direct Analysis of Lipids From Blood Using Maldi Mass Spectrometry**

Talal Al-Nahas, Roberto Castangia, Omar Belgacem, Gerald Stubiger and Waleed Al-Shaqha

#### **Content: Introduction:**

Lipids are essential biological pathways being involved in metabolism, signaling and energy storing. However, abnormal lipid levels such as cholesterol play a crucial role in heart diseases and type 2 diabetes. Knowing the cholesterol levels is therefore essential in monitoring the metabolic functions of the individual and preventing chronic and lethal diseases.

#### **Objectives:**

The aim of our investigation is to evaluate the potential of Maldi Mass Spectrometry as a fast and reliable method for the direct screening of patients.

#### **Materials & Methods:**

An aliquot consisting of 15-20 uL of human blood was collected from a finger. Lipids were extracted from blood either by direct extraction, or after a preliminary centrifugation and plasma separation. An Axima Performance MALDI-ToF-ToF (Shimadzu, Manchester, UK) equipped with a 337nm nitrogen laser was used in the analysis. Measurements were performed in reflectron positive mode using an acceleration voltage of 20kV. Red phosphorus was used as the calibrant.

#### **Results:**

A method for direct lipid blood analysis was developed and described as follows. 10 uL of blood were mixed 1:1v/v with a solution of CH3OH/CHCl3 (1:1v/v). The solution was vortexed and left to separate for 10 minutes. 6 uL of solution were recovered. After we obtain the blood and preform the solution, 10 uL of blood were spun down for 4 min/30k R.C.F and 4uL of plasma recovered.

The plasma was then diluted 1:2v/v with the CH3OH-CHCl3 solution. Stirring and extraction were carried out as above. 4 uL from the organic phase were collected and subjected to MALDI analysis. THAP (2',4',6'-Trihydroxyacetophenone) (10 mg/mL) was dissolved in 7:3v/v CH3OH/H2O (50 mM ammonium citrate) and used as the matrix. Samples were mixed 1:1v/v with the matrix solution and 1uL spotted on the MALDI target.

#### **Conclusion:**

By using only 10 uL of blood, it was possible to obtain a fingerprint of plasma lipids for diagnostic assessment.

### Weaning: Knowledge And Practices Among Mothers in Sharjah

Abdel Rahman Omara, Basma Demian, deema Al Junaibi, Hafsaa Al Hamadany, Mustafa Al Husseini, zainah Al Dulaijan.

#### **Content: Introduction:**

"Weaning is the process by which a baby slowly gets used to eating family or adult foods and relies less and less on breast milk". (WHO, 2002). The body uses all the storage of important nutrients by the age of 6 months thus the breast milk will not meet the complete requirements of the babies. (The British Dietetic Association, 2013).

#### **Objective:**

Since papers regarding this problem are scant and outdated in this region of the world, we aimed to study the knowledge of mothers and how they approached the weaning process.

#### **Methods:**

The research was conducted using a cross sectional study design. Non-probability convenient sampling was used to calculate a sample size of 424 participants. Data was collected by interviewing mothers, who have children 3 years old or younger and were available at MCH centers and public places, using questionnaires developed by the researchers.

SPSS 22 program used to enter data and results were summarized to percentages and charts. Mother's practices during weaning were compared to the WHO guidelines to assess their adherence.

#### Results:

Out of the 424 participants; 63.92% were housewives, 34.20% were workers, 44.89% answered the definition correctly, 91.7% believed that breast milk shouldn't be stooped at the beginning of weaning, 50.7% started weaning at 4-6 months, 54.1% of first time mothers answered correctly about the time of starting weaning where as 42% of mother who have more than 1 child answered it correctly. Regarding the WHO weaning guidelines; 23.1% answered 6 of 10 correctly and 23.8% got 7 of 10 correctly.

#### Conclusion

Mothers in this study were lacking the knowledge about the correct weaning definition. Introducing the correct type of food at the right time was improper too.

We encourage the local health care systems to consider holding more awareness programs for mothers to increase awareness.

Assessment of Health-Related Quality of Life Among Parents of Children with Autism Spectrum Disorder: A Cross-Sectional Study in Saudi Arabia

Abdulaziz S. Islam, Ashry G. Mohamed, Mouaiad A. Ghabban, Faris M. Alharbi, Turky H. Almigbal, Mohammed A. Batais

#### **Content: Objectives:**

Our study aims to determine the quality of life (QoL) among parents of children with Autism Spectrum Disorder and to compare the QoL of parents of autistic children with parents of healthy children.

#### **Methods:**

This was a cross-sectional comparative study targeting a sample of 50 parents of autistic children who have registered in the Charitable Society of Autism Families Organization and Mother of Faisal Autism Center as well as a sample of 50 parents of healthy children who have attended healthcare facilities in Riyadh, Saudi Arabia. We used a valid and reliable Arabic version of the World Health Organization QoL Assessment-BREF (WHOQOL-BREF) questionnaire. The data were analyzed with descriptive statistics, independent t-tests, and ANOVA.

#### Results:

Fathers responded higher for each group: 70% in the autistic group and 92% in the healthy children group. Parents of healthy children who received higher education had a statistically significant higher mean QoL scores (114.58±15.05) in the environmental health domain than parents of autistic children (105.67±18.61). The residential area of parents was also a significant determinant of QoL scores.

#### **Conclusion:**

This study showed that taking care of an autistic child could impact the parents' QoL. Also, our findings may help more organizations support the parents of autistic children and enhance their QoL.

#### Non-Communicable Diseases: Knowledge, Attitudes, and Practices of Risk Factors Among Secondary School Students in Sharjah

Al-Ali A., Al-Wandi A., Dali R., Al-Karaghouli Y.

#### **Content: Introduction:**

Non-communicable diseases (NCDs) kill 40 million each year, equivalent to 70% of all deaths globally. The risk of developing lifestyle diseases looms larger among the younger population. Therefore, this study aims to determine the level of knowledge, attitudes, and practices of the risk factors of lifestyle induced chronic diseases (non-communicable diseases) among secondary school students in Sharjah city.

#### **Methods:**

A total of 591 school children, from grades 10 to 12, formed the study sample, using the multistage stratified cluster sampling method. Four governmental schools were chosen, for each gender. Data was collected through a pretested, close-ended questionnaire consisting of five sections; demographics, physical activity, diet, smoking and sleeping patterns. Frequencies and descriptive statistics were used to analyze data through SPSS 23.

#### **Results:**

A total of 591 students participated. For the knowledge, 73.90% believed that the risk factors of NCDs are preventable but concerning the causes of NCDs, the students demonstrated a low

level of knowledge as they weren't aware of the main causative factors of NCDs. Regarding practices, 58.2~% were physically inactive, females being less active than males. More than 2/3 of students didn't fulfill the recommended daily intake of fruits and vegetables (75.9%), and 77.08% drink less than 7 cups of water a day (recommended intake is 8-11 daily). 8% reported to be smokers with cigarettes being the most encountered tobacco product. Concerning attitudes, 80.2~% of inactive participants were willing to improve their physical activity and 14.09~% were willing to smoke a cigarette if offered.

#### **Conclusion:**

Our study has demonstrated a low level of knowledge and practices yet, positive attitudes towards risk factors of chronic diseases. We recommend implementation of thorough awareness campaigns through school health education programs about the risk factors of non-communicable diseases.

#### Prevalence and Clinical Characteristics of Headache Among Medical, Pharmacy, and Health Sciences Students in the University of Sharjah

### Omar Azrak, Mariam Al Ali, Mina Taher, Mai Al Khouly, Munther Kilani

#### **Content: Background:**

Headache is the most common neurological disorder, especially among university students. It shows significant effects on their academic, social, and personal lives.

#### **Objectives:**

Our objectives in this study are to determine the prevalence, clinical characteristics, impact and management strategies among students of Medicine, Pharmacy and Health Sciences colleges at the University of Sharjah.

#### **Methods:**

Self-administered structured questionnaires were distributed among 471 students. Data was analyzed by SPSS-22 using inferential statistics tests, including Chi-square and odds ratio. MIDAS was adopted, with some modifications, for measuring headache impact.

#### **Results:**

Prevalence of headache was 84.9% (95%CI, ±0.0323%) over the last six months. Comparing Medicine to Pharmacy, medical students were 2.9 times (90.3%) more likely to experience headache (P=0.001). There was a significant correlation between headache and wearing corrective eye lenses (P=0.033) as 87.9% of students who use corrective eye lenses reported having headaches. Majority reported having one headache episode per month (35%), for less than an hour (46.5%), during the afternoon (39.5%), described it as tightness (46.1%), frontal (35.5%), worsened since enrolment in university (66.8%), moderate in severity (51.6%), with dizziness (31.8%), with no warning signs before episode (62%). Few students (3.3%) reported that headache had significant impact on missing university. However, headaches minimally decreased productivity in university among 62.3% of students. Stress/tension and too little sleep were the most

reported factors that predisposed headache episodes, 84.4% and 83.1% respectively. Sleep was the main strategy of management followed by majority of students (72.5%), while few sought health professionals (5.8%).

#### **Conclusion:**

A majority of undergraduates suffer from headaches, which affects their academic and daily performances. Therefore, it's recommended that more attention should be drawn toward this issue, with better guidance on how to manage it more efficiently.

# **Level of Knowledge and Practices of Antibiotic Resistance Among Adults in the UAE**

Aqruq O., Alhazeem D., Almheiri S., Alshamkhany M., Negm R., Alqaydi F.

#### **Content: Background:**

Antibiotics are one of the most frequently used therapeutic class of drugs. However, the overuse and misuse of the antibiotics has led to the development and out-of-control rise of antibiotic resistant bacteria. The aim of this study is to describe the knowledge and practices related to antibiotic resistance among the public since this topic has been studied to a limited extent in the UAE.

#### **Methods:**

A cross-sectional study based on a self-administered questionnaire was conducted among the adults of Sharjah at random gathering spots and shopping centers. The sample compromised individuals aged between 20-50 years old.

#### Results

A total of 400 adults participated in the study, 53.3% were males, 61.5% were Arabs, 55.5% were between 20-29 years old, 28.7% were between 30-39, 9.3% were between 40-49, and 6.5% were above 50. 54.5% believed that antibiotics can treat common cold and flu. 64.1% had heard about the term antibiotic resistance.

62.1% knew that antibiotics doesn't work on all bacteria. 29.9% knew that antibiotic resistance can be prevented and the majority (79.5%) of them believed that antibiotic resistance can be prevented by following medical advice. 73.7% said that antibiotics are less likely to be effective if used frequently.

74.7% showed proper practice of using antibiotics. 71.8% got their antibiotics after consulting their doctor. We also found out a correlation between age and practices, people above the age of 50 had better practices.

#### **Conclusion:**

The majority of the population showed above average knowledge regarding antibiotic resistance and average practices of antibiotic utilization, yet they believe that antibiotic resistance is a serious health issue facing our country.

Further educational interventions are necessary and should be implemented to increase the understanding of antibiotic resistance and correct their attitude toward antibiotic use.

### Measuring The Quality of Social Life of the Surgeon Kingdom of Saudi Arabia

Yasir Al Shareef, Mohannad Dawary, Abdulaziz Aldheshe, Adel Alkenani, Hamdan Alshehri, Mohammed Binnwejim, Ibrahim Masoudi, Abdullah Almutawwif

#### **Content: Introduction:**

Stress, fatigue, burnout work or dissatisfaction, negatively disturbs the surgeons social life which in turn affect health-care systems and patient care adversely. However slight is known about quality of social life among different surgical specialty in Saudi Arabia. In our cross sectional study we investigated the quality of life based on specialty and its relation to personal social and financial factors.

#### Methods:

This study and waiver of informed consent were approved by the imam university institutional review board; Researchers used a descriptive qualitative type of study in this study; Since they aim to gather in-depth information about the Surgeon Social Life. A cross sectional study was conducted between April 2016 and November 2016 using an English language, self-administered anonymous questionnaire. A total of 1300 questionnaires were distributed, to the Surgeon, which included seniors, residents, as well as academic and non-academic; Study group of surgeons were chosen randomly from the General Hospital grouped as (Primary, Secondary & Tertiary) included any surgeons in target areas in KSA Riyadh (Central area), Jeddah (West area), & Dammam (Eastern area) Out of the 1300 questionnaires distributed, 1136 were received back, at a response rate of 87.4%. The questionnaires were then weighted and data were cleaned, the researcher ended with (1125) questionnaire at an entry rate of 86.5% out of the total distributed to computer analysis with SPSS.

#### Results

1,125 was the number of the responders to the 1300 questionnaires distributed. According to job level, 460 of the respondents are resident doctors (40.9%) or physicians (38.6Â%). The respondents holding the title of specialist physicians are 292 (26%), while 373 were consultants which represent 33.2% of the whole sample. According to occupation region, only 1.4% lives in Abha (South area) and 1.5% lives in Hail (North area), while the three other categories; Riyadh (Central area), Jeddah (West area), Dammam (Eastern area) are approximately balanced with ratios 32.9%, 33.2% and 30.9 respectively. Regarding Surgeons specialty, the majority were general surgeons (GS) with 34.4 percentage, 17.7% were Orthopedics, 6.1% cardiac surgeons, 3.4% vascular surgeon, 3.6% pediatric surgeons, 2% plastic surgeons, 5.3% urology surgeons, 13% were OB/GYN specialists, 6.4% were ENT surgeons, 6.1% were neurological surgeons, and 1.9% were ophthalmologist surgeons.

Considering the free time the surgeons have per day, 57.9% have from 1 to 3hrs per day, 34% have from 4 to 6 hours, while 5.8% have 7 to 9 hours, and 2.4% have more than 9 hours free time per day. Ophthalamolgists were the most satisfied surgeons upon all specialties with zero percent not satisfied, followed by plastic surgeons, vascular surgeons, urology surgeons, ENT surgeons and pediatricians. On the other hand, general surgery and obstetrics/gynecology are the least satisified specilaties among all respondents with 67.7% of the whole not-satisfied respondents.

#### **Conclusion:**

Physicians participating in the study have had an approximately good quality of life, with statistical significance in all domains. Quality of life can be affected by demographic characteristics such as age, gender and income. Also the number of shifts is correlated negatively with the quality of life where the higher the number of shifts, the worse the physician's quality of life. Thus working less is not the answer in medicine, because there is so much to learn and so much experience needed to do a merely competent job.

#### **Recommendation:**

It would be informative and strongly helpful if further researches can be done to in sub-specialties.

# Use of Social Media and Other Electronic Media in Health Education and Health Promotion (Pilot Study)

#### Abdullah Sulaiman Alshammari

#### **Content:**

Background: Social media is becoming progressively used for improving health literacy and health promotion.

**Objectives:** this study aimed to find out the magnitude of use of social media among people of Saudi Arabia and how far they were used to send health education messages.

#### **Methods:**

this study was a cross sectional study was conducted on convenient sample of participants using survey monkey software. The collected surveys over one month were entered into PC computer using SPSS software. Results: it was found that the majority of participants used one sort of social media or another. Also it was found that Instagram, WhatsApp and SMS were the most preferred media. There were age and gender differences. More than 50% of the participants received health promotion messages and they thought that it was a good idea.

#### **Methods:**

A Cross sectional study was conducted on convenient sample of participants using survey monkey software. The collected surveys over one month were entered into pc computer using SPSS software. Results: it was found that the majority of participants uses one sort of social media or another. Also it was found that Instagram, WhatsApp and SMS were the most preferred media. There were age and gender differences. More than 50% of the participants received health promotion messages and they thought it was a good idea.

#### **Conclusion:**

it's a good opportunity to use these preferred social media to send health education messages to the target population.

#### **Keywords:**

Electronic Media, Social Media, Health Education, Health Promotion.

Severity and Pattern of Injury Among Motorcycle Crashes at King Abdulaziz Medical City, A Level One Trauma Center in Saudi Arabia

Yasser BinMuneif, Abdulmohsen Al-Zamil, Abdullah Alahmari, Abdullah Al shafi, Ahmad Alsaif, Ibrahim Albabtain, Suliman AlGhanam

#### **Content: Background:**

MVC is the third leading cause of death in Saudi Arabia. Motorcycle riders are considered more vulnerable and there are no previous studies that examined the epidemiology of their injuries and outcomes. Therefore, we aim to use a trauma registry to describe patients' profile and outcomes.

#### **Methods:**

This study is an observational cross-sectional study of all patients in the trauma registry who were admitted following a motorcycle collision. Between January 2001 and July 2017, 572 patients were included.

#### Results:

Of the overall sample, the majority were males (85.3%), and 3% of patients died. Young adults (age 18 to 35) represented over half of the total sample. Over 8% of patients sustained lower limb amputations. 183 patients had alteration to consciousness level (31.9%). Injury to extremity (75.2%, 65%) was the most common in both conscious and altered conscious patients. About 40% of patients sustained head injuries.

#### **Conclusion:**

This study highlights the significant burden of motorcycle injuries on population health. The prevalence of amputations due to motorcycle injures is striking. Further prevention programs are warranted to improve traffic safety and reduce disabilities.

#### Breast Self-Examination Practice and Awareness of Breast Cancer Symptoms Among Women in Al-Madinah Al-Munawara

Souad Fadhlalmawla, Amirah Basha, Rawan Alhoraibi, Mona Alsayed,Abrar Alhubayshi, Jana Altaifi, Afnan Alharbi, Magda Youssef

#### **Content: Background:**

Breast cancer ranked first among females in Saudi Arabia of all newly diagnosed female cancers.

#### **Objective**

To determine knowledge, attitude and practice towards Breast Self-Examination (BSE) among female community in Al Madinah Al-Munawara and to measure the level of awareness about breast cancer risk factors and symptoms.

#### **Methods:**

Cross-sectional descriptive study was carried out among 1546 women in Al-Madinah Al-Munawara city which was selected randomly from public places by using self-administered validated

comprehensive questionnaire. Informed consent was conducted among study participants, only those who signed an informed consent form enrolled in the study.

#### Result:

The study indicated that about half of the participants (57.4%) had ever heard of BSE while 10.6% did not hear about it and (32%) did not know it exactly. Only (21.5%) of them performed it regularly and only (40.2%) of respondents mentioned that BSE should be performed once a month. Age is significantly associated with awareness of BSE (p=0.031).

The commonest source of information about BSE was the university study programs (20.9%) followed by TV and mass media (15.6%). The knowledge about the common risk factors for breast cancer was low such as early menarche (17.9%), late menopause (20.1%) and null parity (19.5%).

Only (57.1%), (58.2%) , (50.8%) and (63.1%) knew that nutrition, family history, breast direct radiation exposure and smoking respectively were the risk factors for breast cancer. Regarding to breast cancer symptoms, (40.2%) of the respondents mentioned that breast skin redness, nipple pulling (49.4%), and dimpling of the breast (49.0%) are breast cancer symptoms.

#### **Conclusion:**

There was low knowledge to BSE, risk factors and symptoms of breast cancer among women in Al-Madinah Al-Munawara that means more educational interventions are needed specially among old age population and it is important to rise the knowledge of female community about breast self-examination and limiting the incidence of breast cancer by early diagnosis.

#### **Key words:**

Breast self-examination, Breast cancer symptoms, Risk factors.

## **Etiologies and Management of Postural Tachycardia Syndrome in Children**

Nasser Salem M Alanazi, Ahmed Salem M Alanazi, Khalid Hashim J Alanazi, Hamad Mohammed Al-Selaimy

#### **Content:**

Postural tachycardia syndrome (POTS) is a chronic condition with frequent symptoms of orthostatic intolerance or with sympathetic activation and excessive tachycardia while standing, without significant hypotension. The aim of this review was to discuss the pathogenesis and to outline the diagnosis and treatment guidelines. We conducted a literature review of articles published up to 2017, in following databases; PubMed, and Embase investigating postural tachycardia syndrome in children.

We restricted our search to only English published articles with human subjects concerning children under 16 years. POTS is a disorder of the autonomic nervous system that could create considerable disability amongst previously healthy people. Patients with POTS show a HR rise of  $\geq$  30 bpm within 10 min of standing (or greater in kids), are typically hyperadrenergic, and tend to

have a reduced blood volume. The pathophysiology of POTS is complex and the result of a variety of separate systems producing a common pattern of signs. The specific pathogenesis of POTS has yet not been completely clear. A variety of uncommon factors might be involved in the pathogenesis. Selecting the correct therapy according to the detailed pathogenesis could absolutely enhance the efficiency of medicine. Treatments targeting the hypovolemia and the excess sympathetic nervous system activation may assist eliminate symptoms.

# The Role of Selenium as an Antioxidant in Protecting Against Free Radical Damage in Renal Cell Carcinoma

Ziad Mahmoud El Menawy, Haya Mohamed Khamis, Hussein Mohammed Resen, Mina Mohammed Taher & Taqwa Atef Ibrahim

#### **Content: Background:**

Antioxidants are said to have a major role in preventing cancerous growth, and Selenium, being one of the vital trace element, plays a crucial role in the oxidation-reduction system. However, the high toxicity of selenium might also limit this process, hence the role of selenium in this process is controversial.

#### Aim:

To explore the effects of Selenium as an antioxidant on renal cell carcinoma cell lines (RCC).

#### **Methods:**

RCC cell lines under strict culture conditions were divided into two groups: control (group A) and experimental groups. Experimental groups were Selenium treated (group B), exposed to oxidative stress induced with H2O2 (group C), and oxidative stress induced with H2O2 followed by Selenium treatment (group D) and selenium treatment followed by oxidative stress induced by H2O2 (group E). Changes in the cell growth and its survival were evaluated in each group after 72 hours. Evaluation of the ROS was done using Cellular Reactive Oxygen Species Detection Assay Kit (Abcam; ab186029), and cell viability was measured using MTT reagent (Sigma; 11465007001).

#### Results

The generation of the ROS was significantly high in groups C (125.4%  $\pm$  14.6), D (132.9%  $\pm$  16.6) and E (135.3%  $\pm$  22.1) when compared to group A (100%  $\pm$  14) and B (91.7%  $\pm$  14.6). Moreover, the RCC cell viability was (98.7%  $\pm$  10.8) in group B compared to C, D and E (80.8%  $\pm$  5.4, 79.7%  $\pm$  5.9 and 74.8%  $\pm$  8.8; respectively).

Moreover, an association was observed between viability of cells and ROS generation. The higher the ROS generation (group C, D and E), the lower was its viability. Likewise, the lower ROS generation (group B), the more viable were the cells.

#### **Conclusion:**

The decreased generation of ROS in selenium treated group coupled with increased viability of cancer cells indicates the negative prognostic effect of selenium on RCC cells.

# Comparison Between Shaving and Waxing in Matter of Short-Term and Long-Term Hair Effects on Hair Shaft Caliber and Hair Density

#### Almubki T., Alsobaie N., Algarni A.

#### **Content: Introduction:**

Body hair removal, in particular axillary hair removal is a common practice among people influenced by different cultural and religious believes. Hair removal best method is an old debate in matter of effectiveness, convenience, pain, cost, and re-growth time. Shaving and waxing are common forms of hair removal. Shaving removes part of hair shaft while hair root is intact. In contrast, Waxing removes hair shaft from hair follicle. Furthermore, there is a general believe that shaving make the entire hair coarser and darker.

#### **Objectives:**

This study aims to test the ability of hair waxing to produce less and thinner hair as compared to hair shaving.

#### **Materials and Methods:**

This is a prospective, controlled and single center study. We have 10 subjects, aged 18-55 years who agreed to follow the study protocol during the period from May 2014 till they completed 20 weeks of the study at Derma Clinic in Riyadh, Saudi Arabia. Folliscope system with micro-camera and photographic pictures used at baseline, first and final evaluation assessment for both axilla.

#### **Results:**

In this study, we have shown that hair waxing produced thinner hair measured by single hair calibre in comparison to hair shaving in all study subjects. Although, one subject (SW-09) showed hair shaving produced thinner hair. Similarly, hair waxing results in less hair number measured by hair density comparing with hair shaving. On the contrary, one subject (SW-09) showed hair waxing produced darker hair. Furthermore, hair waxing produced hair with lesser calibre comparing with hair shaving in all study subjects in regard to long term effect. While, hair shaving showed to produced less hair in most of subjects in long term effects.

#### **Conclusion:**

Hair waxing may produce less and thinner hair in short term. However, the long term effect of hair waxing seems to be clear in reducing hair calibre not density.

#### Critical Thinking Ability for Respiratory Ward Staff from King Abdulaziz Medical City (KAMC), Riyadh, Kingdom of Saudi Arabia

Sara Mansour AlBishi, Ghadah Saleh AlMahyobi, Yassin Ismaiel, Wasn Ali Alshammari, Danah Othman AlFaris

#### **Content: Abstract**

Background: critical thinking is an important measure and required skill in the health care field. Measuring critical thinking will help in

enhancing and improving the decision making and problem solving of individuals at their jobs or training. Consequently, it is important to measure critical thinking ability of respiratory therapy ward staff in order to understand their strength and weakness which may require setting a development plans and goals. The aim of this study was to assess the critical thinking ability of respiratory ward staff from King Abdulaziz Medical City (KAMC), Riyadh, Kingdom of Saudi Arabia.

#### Method:

The data was collected by using the short-form of Watson Glaser critical thinking appraisal (W-GCTA) to assess the critical thinking ability of 56 respiratory therapy ward staff in (KAMC), Riyadh, Saudi Arabia. The questionnaire consists of 40 questions of 5 sections related to assumptions, arguments, deductions, inferences, and interpreting information. We gave around 30-40 minutes for the participants to complete the questionnaire.

#### Results

This study demonstrated that the score was in the average range, (46.225%). There was no considerable difference between the employees who had more years of experience or fewer years of experience.

#### **Conclusion:**

The average result may not indicate that the staff's critical thinking level is weak. It may be related to the length of the questionnaire, or because of their heavy load and long working hours. Additionally, it is recommended to add courses and lectures that focus on enhancing and improving critical thinking ability level in the respiratory therapy department in KAMC.

Furthermore, it is recommended to do more researches on this subject with other instruments to compare it with our result.

### **The Mechanical Properties of Bones from Wistar Rat**

### Husain Chafqa, Abdel-Hamid Ismail Mourad, Sahar Mohsin

#### **Content:**

Mechanical testing has been regarded as the gold standard to investigate the effects of various pathologies on the structure-function properties of the skeleton. Wistar rats are commonly used as an experimental animal model to study biomechanical properties for such studies. The aim of the current study was to determine the mechanical properties of normal rat bones from an appendicular and axial skeleton. Bones can be compared to a composite material which undergoes a variety of forces such as compression, tension, and shear. In this study, we determined the flexural strength of long bones from 10 Wistar rats using MTS Universal Testing Machine.

Three-point bending test was carried out for whole bone specimens using the 100kN load cell. All tests were conducted at room temperature and under 0.2 mm/min overhead speed. We determined the ultimate load/force and maximum flexural strength for rat's femur, tibia, humerus, radius, and ulna. Results of the study show an average maximum flexural strength of 103.  $\pm$  25, 151  $\pm$ 

41,  $275 \pm 62$ ,  $93 \pm 44$ ,  $81 \pm 51$  MPa for femur, tibia, radius, ulna, and humerus respectively. The data obtained will be helpful in assessing the mechanical properties of bones in different pathologies and will also help in understanding the mechanism and management of fractures and design of orthopaedic appliances.

# The Awareness of Scoliosis among Saudis in Riyadh, Saudi Arabia

Prof. Abdulmonem AlSiddiky, Abdulaziz M. AlSudairi, Hisham M. Ghabbani, Meshal A. AlOhali, Sara A. AlSiddiqi, Fahad S. Alkahtani

#### **Content: Introduction:**

Scoliosis is a condition that causes the spine to curve sideways. It is considered as the most common spinal deformity in children and adolescents. Presentation and symptoms of the disease range depending on the degree of deviation, it could be as minor as an incidental finding at screening, or as major as respiratory symptoms. The prevalence of scoliosis ranges from 0.47%-5.2% worldwide. A disease of such impact needs to be studied further to implement screening programs and promote knowledge of great importance. Regarding any disease, it is essential to evaluate the population and patients' knowledge and awareness regarding the diseases. We aim to identify the awareness of the Saudi Population towards scoliosis in Riyadh, Saudi Arabia.

#### **Methods:**

We Preformed a qualitative, observational, cross-sectional conducted in various parts of Riyadh, Saudi Arabia. Our sample size was 604 of the general Saudi population, anyone below 18 and scoliosis patients was excluded from our study. Self-Administered paper-based questionnaires were distributed, which obtained basic data regarding awareness, knowledge, traditional beliefs, treatment practices, and other issues.

#### Reculte

The Response rate was 95.2%, a total of 575 participants. Regarding scoliosis definition, 222 (38.6%) stated that they did not know and 212 (36.8%) answered correctly. When correlating deferent demographic data with the awareness, a significant association between age and general knowledge (p ely).

#### **Conclusion:**

In conclusion, our results have revealed that an employed or retired person who is above 40 years and holding a university degree is the most likely to identify scoliosis through correctly stating its causes, risk factors, diagnosis and appropriate medical intervention.

### Thyroid Dysfunction in Obese Children And Adolescents

Mosleh Jabari, Abdulmajeed M. Bin Dahmash, Firas B. Alotaibi, Mohammed Aldebasi, Saleh H. Al-Oyouny, Tariq R. Alanazi, Talal Abu Amara, Youssef Al-Begamy, Hassan Al-Shehri, Abdullah Al-Faris and Mohammed Al-Sayed

#### **Content: Background:**

Pathophysiology of obesity is still under investigation because of its deprival understanding. Several studies assessed the significance of hormonal changes associated with obesity; in this study we will determine the association of obesity and thyroid complications among obese Saudi children and adolescents.

#### Aim:

To reveal the effects of obesity on thyroid function in Saudi obese children and adolescents.

#### **Material and Methods:**

A retrospective cohort study has been conducted on a total of 183 participants. Patient group included pre-obese and obese children and adolescents (102 patient). While control group included normal individuals within the age-range that of patients' group (81 participants). Relation of TSH and fT4 with BMI was investigated.

#### Result

There was a significant difference in the mean and median levels of TSH as obese children showed higher mean levels of TSH compared to the control group (95% C.I of the mean difference= 0.8 to 2.1). When data was stratified by gender, mean TSH were higher in males and female obese children (P < 0.001).

#### **Conclusion:**

Obesity is associated with an elevation of TSH serum levels with normal fT4 serum levels.

### Long Term Outcomes of Down Syndrome Patients with Cardiac Anomaly

Muhammad Alkabbani, Abdullah Nawash, Alanazi, Qais Saad Alrashidi

#### **Content: Background:**

Down syndrome (DS) is a set of cognitive and physical symptoms that result from having an extra chromosome 21 or an extra piece of that chromosome incidence in Saudi Arabia of 1 in 554 live births. Our study assesses the different health outcomes among pediatric DS patients with and without cardiac anomalies and identifies significant predictors of mortality in the sample.

#### **Methodology:**

258 DS patient aged from 0-16 years old retrospectively collected from KAMC heart center medical records, patient data such as congenital heart disease, surgical repair of the cardiac anomaly, hospital and Intensive care unit length of stay and other comorbidities were obtained using data collection sheet.

#### Results:

85.6% are alive, and 83.3% has cardiac anomaly, the most common anomaly in our sample AVSD (38.8%), Kaplan Meier survival curve showed a significant difference in mortality rate between DS patient who had surgical repair of the heart anomaly in comparison to the DS patient who did not have surgical correction of the heart anomaly, however, survival of DS patients with or without cardiac anomaly were not statistically significant, In a stepwise cox regression, ICU (p=0.001), Pulmonary hypertension (p=0.01), infections (p=0.02) and unrepaired cardiac anomaly (pnd 5.5% of subjects, respectively.

In our study we will study different variables and its effect on the mortality of DS patients, and we will examine the significance of presence of cardiac anomaly when linked to our target variables, variables like, cause of death, length of stay (LOS) at the critical care unit and co-morbidities are major parts of this study. Our study answers the following questions: (1) Is there any relationship between the three age groups in the study and the proportion of expired DS patient with cardiac anamoly, (2) Does our proposed predictors of mortality play any role in the mortality of down syndrome patients, (3) Does surgical repair of cardiac anomalies affects their survival in each age group of patients. In other study, children with DS who underwent repair of congenital heart disease were more likely to survive to discharge than children without DS, regardless of underlying factors and morbidities, our predictors of survival made this discrepancy understandable.

### Foreign Bodies Unintendedly Left in Inguinal Canal!

Amer Hashim Al Ani, Ehab Totah, Moaed Lumbar, Monther Abu Reden, Mohammad Bakri Hammami, Obaida M. Mukhles Adi

#### **Content: Introduction:**

The inguinal canal is a 3.75 cm passage in the anterior abdominal wall, which seems too small to miss a foreign body in it. Foreign bodies can reach the inguinal canal in different ways; ingested through the lumen, left in the canal by surgeon, or through the abdominal wall. Foreign bodies may migrate from another area of the peritoneal cavity such as gall stones spilled free during laparoscopic surgery. The gastrointestinal tract is the most common route by which the Foreign bodies can reach the inguinal canal. Foreign bodies may include fish, chicken bones, tooth picks, needles, safety pins, piece of wood, glass, sponge, gauze & others.

#### **Patients & Methods:**

We present her Two male patients, their ages were 49 & 70 years. The first patient (With history of CVA, & on regular Aspirin ingestion) was presented to the ER as a case of intestinal obstruction due to suspicious strangulated inguinal hernia. The second one ( A known case of chronic renal failure on hemodialysis, with history of chronic scrotal sinus on the same side of the inguinal hernia for the last 4 months) was presented to the clinic as a case of recurrent inguinal hernia. The first underwent an emergency surgery, while the second underwent an elective surgery.

#### **Result:**

exploration of the 1st inguinal hernia reveals a balloon of a Foley's catheter inside a diverticulum of urinary bladder, which was a part of sliding inguinal hernia. the cause of intestinal obstruction was diagnosed as superior mesenteric artery occlusion during the same session laparotomy, exploration of the 2nd inguinal hernia revealed missed surgical gauze left during the previous hernia repair.

#### **Conclusion:**

Although Foreign bodies in the inguinal canal are rare entities, one must always put them in the differential diagnosis of recurrent or strangulated inguinal canal hernias.

# **Evaluation of the Effect of Congenital Adrenal Hyperplasia on Growth Parameters in Children Diagnosed with CAH**

#### Mashael AlZanbagi, Asmaa Adel Milyani, Abdulmoein Eid Al-Agha

#### **Content: Objectives:**

To evaluate of the effect of Congenital Adrenal Hyperplasia on growth

#### **Methods:**

This is a descriptive retrospective study over the period of 10 years. Data analysis was using Statistical Package for Social Science.

#### Results

90 subjects, 61 of which were female and the other 29 male. 19 (25.7%) were suffering from short stature. Children who were compliance to medication had a normal height significant relation, p-value= 0.013. 13 (19.1%) are Obese (equal or greater than 95th). 3 (13.6%) had of obese kids suffering from hypothyroidism.

#### **Conclusion:**

Tailored treatment plan is an essential part of the management. Good follow up and compliance is an important factor. As well as, close monitoring and treatment which can affect the height, weight, health status, and quality of life for the patient.

#### Time Management and Its Relationship with the Academic Performance of Medical, Dental and Pharmacy Students in University Of Sharjah, UAE

Ziad El Menawy, Ahmad Ismayl, Malak Rwaished, Rayan Khairy, Noor Abdulraheem & Bushra Aleghfeli

#### **Content: Background:**

Acquiring time management skills plays an important role for students to be successful during their university education and in real life.

#### Aim:

Is there a relationship between time management and academic performance of medical, dental and pharmacy students?

#### **Methods**

Descriptive cross-sectional study in which 390 students from Medicine, Dentistry and Pharmacy colleges were enrolled by simple random sampling. Self-administered time management questionnaire developed by Britton and Tesser were distributed, each having a 5-point scale consisting of the responses always (5), often (4), sometimes (3), rarely (2), and never (1).

In addition, 5 close ended questions were added regarding demographics and academic achievement which was self-reported. The total score of the rime management questionnaire ranged from 18 to 90 in which higher values corresponded to better time management practices.

#### **Results:**

Out of 390 questionnaires distributed, 107 (27.4%) were males and 283 (72.6%) were females. Most of students 71.5% (n= 279) possessed a time management score at the moderate level, however, the majority also believed there's place for improvement. A significant difference (p=0.006) was noted between medicine and pharmacy students in their time management overall scores. A significant (p=0.028) nearly perfect positive correlation (r= 0.99) between the overall time management score and the GPA of each student was noted.

#### **Conclusion:**

To conclude, the result showed that time management is a significant predictor of academic achievement. Therefore, raising awareness regarding time management should be taken into consideration for future generations due to its importance.

#### Traffic Congestion & Long Driving Hours: Impact On Stress, Emotional and Physical Health Among Drivers in Sharjah

Abdulla Alalool, Basil AlHashaikeh, Haya Khamis, Rawan Majdalawi, Reham Ainawi

#### **Content: Background:**

Over the past ten years, the UAE has been titled 'The most congested country in the Middle East'; and Sharjah, the third largest city in the UAE, is particularly known for its rush-hours; with its residents constantly spending long commuting hours in slow-moving, bumper-to-bumper traffic. The physical, emotional, and overall health impacts of traffic congestion and long driving hours have become a principle driving-related concern; and this is mainly due to the explicit increase in car ownership rates as well as automobile dependency, both locally in the UAE, and globally.

#### Aim:

The purpose of this study was to detect the emotional and physical health effects associated with driving in congested traffic, and long driving hours among Sharjah residents.

#### Methods

A descriptive, cross-sectional study was conducted, and Self-administered questionnaires were distributed containing 39 questions of 3 sections: Demographics, driving attitudes, and impacts of traffic; aiming to target a total of 450 participants. Likert scale was used in assessing driving attitudes & behaviors.

The sample was chosen based on convenience among Sharjah residents, specifically drivers (>18 years of age) holding a driver's permit. Percentages, means, and Chi square tests were obtained through data analysis using SPSS 22.

Bar charts demonstrating our results were created using Excel. p value of fer more profound health effects due to driving as compared to females; this could be attributed to the fact that males drive significantly more, as well as the fact that males are more likely to be working; which was also found to be directly correlated with greater affected health.

#### **Limitations & Recommendations:**

All health effects reported were subjective, as participants were not assessed clinically. This recommends further studies to look into the health effects in a closer manner to prove their direct association with driving behaviors; this will hopefully emphasize the requirement for a strongly needed time of change in the city's traffic system, and closely related road regulations & protocols.

#### Factors Affecting the Conversion of Laparoscopic Cholecystectomy to Open Cholecystectomy at a Tertiary Care Facility in Saudi Arabia

Thamer Nouh, Faris A. Alanazi, Abdulellah S. Abunayan, Abdallah F. Alsaadoun, Mohamed A Alsehly, Mohammed A. Almana

#### **Content: Background:**

Cholecystectomy is one of the most commonly performed abdominal surgical procedures, and there is no doubt that after the introduction of laparoscopic cholecystectomy by professor Erich Muhe on September 12, 19851, it has become the gold standard in the treatment of symptomatic gallbladder disease,

replacing the older open surgery. Nonetheless, conversion from laparoscopic to open cholecystectomy is sometimes necessary to ensure the success of the operation. Some studies showed that certain factors could be associated with the increased risk of conversion from laparoscopic to open cholecystectomy.

#### **Methods:**

A quantitative, observational cross-sectional study design was conducted at King Khalid University Hospital, Riyadh, Saudi Arabia. In the period between January 2014 to the end of December 2015 to measure the prevalence of conversion from laparoscopic cholecystectomy to open cholxecystectomy and to determine the associated factors that contribute to the conversion.

#### **Results:**

We identified a total of 583 patients who had laparoscopic cholecystectomy at KKUH in the study period. Of the 583 patients, 9 (1.5%) required conversion to open cholecystectomy, 7 (77.8%) of whom were males. The converted group was older compared to the laparoscopic group with a mean age of (57.11  $\pm$  16.43 versus 40.25  $\pm$  14.68, P = 0.003) and the mean BMI was lower (26.867  $\pm$  3.66 versus 31.49  $\pm$  7.349 kg/m2, P= 0.034).

Total bilirubin and direct bilirubin was significantly higher in patients who required conversion (57.5  $\pm$ 73.4 versus 15.6  $\pm$  32.9, p = 0.002) (47.7689  $\pm$  68.61 versus 8.8073  $\pm$  26.02, p = 0.004) respectively as was Alkaline phosphatase (359  $\pm$  423 versus 128.28  $\pm$  95, p = 0.018).

Diabetes Mellitus also showed a strong relation for conversion to open (66.7% versus 15.9%, p = 0.001). Unclear anatomy, thick gallbladder wall, bleeding, bile spillage and stone spillage, showed no significant relation to conversion to open. Adhesions, however, were a significant cause for conversion to open (88.9% versus 22.7%, p < 0.0001).

#### **Conclusion:**

Recognizing these factors for conversion to open surgery would greatly help provide better planning for the patients and help them understand their chances of conversion. Patients with higher risk of conversion should be well informed about the surgery and the possibility of conversion. Implementing a scoring system would be beneficial for high-risk patients to predict their chances of conversion from laparoscopic cholecystectomy to open cholecystectomy.

### Heat Strokes: Knowledge and Preventative Practices Amongst the Public of UAE

T., ElZini, H., Shahin, M., Baraa, H., Richard, A., Sulaiman

#### **Content: Introduction:**

Heat stroke is a serious condition caused by overheating of the body and is associated with excess mortality and morbidity, as its complications include vital organ damage and death. Heat strokes are predictable and preventable, thus sufficient public awareness regarding the knowledge and practices of heat strokes are essential in hot and humid country such as UAE.

This study aimed to assess the knowledge and preventive practices amongst the public in UAE regarding general awareness (knowledge, prevention and management) of heat strokes.

#### Methodology:

This cross-sectional study was carried out using structured questionnaires through interviews between adult (above 18 years of age) participants of the public selected randomly and the researchers. The questionnaire contained 38 different questions of different domains that included knowledge and practices. SPSS was used for analysis. Each correct answer equaled to one point and the point system was used to calculate total scores.

The null hypothesis was rejected by a P score of <5%, which was considered as statistically significant. The average of the total score was taken as the cut off point for good and poor knowledge (KPM)

#### **Results:**

A number of statistical significant correlations were found between demographics (such as age, nationality, place of residence and source of knowledge) and their scores. Best practices and knowledge scores were achieved by participants who selected medical professionals as their source of knowledge.

Arab nationalities had the best practices score and local nationalities had the least. Abu Dhabi performed best out of all the other cities included. Overall, the total number of participants achieving above average score on knowledge and practices of heat strokes remains to be suboptimal.

#### **Conclusion:**

To conclude, our results showed that a huge proportion of the population in the UAE did not have the sufficient knowledge about heat strokes, prevention of heat strokes and its management.

## Post-Operative Pain: Mechanisms and Management

### Habib Khalifah Al-Radhi, Alaa Ahmed Akef, Hamad Mohammed Al Selaimy

#### **Content: Background:**

Proper postoperative pain management, which can be advanced using a multimodal approach, results in pain relief with minimal side effects. Newer recovery protocols, along with minimally invasive surgeries add to the better management of postoperative complication. Many factors play a role in failure of proper postoperative pain management, which mainly include insufficient education, fear of complications associated with analgesic drugs, poor pain assessment and inadequate staffing.

#### Methodology:

We conducted this review using a comprehensive search of MEDLINE, PubMed, and EMBASE from January 1987 toMarch 2017. The following search terms were used: post-operative pain mechanism, post-operative pain management, non-opioid pain management

#### Aim of the Work:

In this study we aimed to understand the mechanism and the management of post-operative pain, along with shining some light upon the recent advances.

#### **Conclusion:**

Various combinations and modalities of pain management exist, and their use depends largely on the case, the patients, and their perception of pain. Enhanced recovery protocols have significantly improved perioperative and postoperative pain management, making the decrease in opioids need a priority.

Survey on Awareness and Attitudes of Secondary School Students Regarding Plastic Pollution: Implications for Environmental Education & Public Health in Sharjah City, UAE

Mohammad Bakri Alaa , Eman Qasem Mohammad , Anas Mohammad Hashem, Mina Al-Khafaji, Fatima Algahtani, Shaikha Alzaabi, Nihar Dash

#### **Content: Introduction:**

Since the industrial revolution in 1800s, plastic pollution is becoming a global reality. This study aims to assess knowledge and attitude about plastic pollution among secondary school students in Sharjah city, United Arab Emirates.

#### **Methods:**

A cross-sectional study was conducted among 400 students in 6 different secondary schools in Sharjah city. Self-administered questionnaires were distributed through probability stratified random sampling method between February to April 2016.

#### **Results**

Majority of population understands how harmful plastic wastes

are to the environment (85.5%). However, the students' mean knowledge score was 53%, with females (P=0.01), grade 11 & 12 (P=0.024), & students whose mothers were more educated (P=0.014) being more knowledgeable and inclined towards proenvironmental behavior. Yet, all students showed tendency to be involved in the fighting against this dilemma.

#### **Conclusion:**

Strategies which address deficiencies, provide incentives for change and assures governmental supports along with environmental education are needed to bridge the information gap and enhances opportunities to adopt pro-environmental behaviors.

# In Vitro Antitumor Action of Micromeria Fruticose L Druce Subsp. Serpyllifolia: An Insight Into the Management of Breast Cancer

#### Lutfi Kawaf, Amena Abbara, Eman Yaghmour, Alaa Mehair

#### **Content: Background:**

Despite great advancement of breast cancer treatment, it remains the second leading cause of cancer death among women. Drug discovery from the plants' secondary metabolites and their derivatives played a vital role in cancer treatment over the last half-century. Micromeria fruticose is a medicinal herb used widely in many Mediterranean countries for its traditionally known health benefits. Both its's oil and extract were reported to have marked antitumor activities against Mammary Carcinoma F7 (MCF7) and Human Colon Tumor cells (HCT).

#### **Objectives:**

This study aimed to evaluate the antitumor potentiality and underlying mechanism of M. fruticose ethanolic extract and three of its fractions namely: butanol, n-hexane, and chloroform against breast cancer MCF-7 cell-line.

#### **Methodology:**

Cytotoxicity and cell viability were detected by sulforhodamine B (SRB) assay of the extract and three of its fractions on MCF-7 cell line. Apoptosis induction was assessed by Annexin V binding assay. Caspase activities were assayed with Caspase-7 and Caspase-9 kits.

#### **Results:**

The ethanolic extract along with the three fractions inhibited the cell viability of MCF-7 in a concentration-dependent manner. IC50's were measured and they were 54.3, 54.9, 215.5 and 164  $\mu$ g/ml at 48 hrs for the ethanolic extract, butanol, n-hexan and chloroform fractions respectively. Induction of apoptosis was also time-and dose-dependent for the cancer cell line studied.

#### **Conclusion:**

These findings provide a basis for further studies on the isolation, characterization, and mechanistic evaluation of the bioactive compounds responsible for the antiproliferative activity of the plant extract

#### Assessment of the Long-term Outcomes of Vesicoureteral Reflux

Alzanbagi MA, Altayyari SA, Aman AN, ALsawadi HE, Albogami RA, Bakhsh AM, Jar AN, Alsharif SA, Alkassimi SA, Alghamdi SH, Safdar OS, Alsayad Ah

#### **Content: Objective:**

Assess the outcome in patients diagnosed with vesicoureteral reflux diagnosed in the antenatal or postnatal period. Analyze the factors that lead to worse prognosis

#### Methods:

A retrospective cohort study on VUR cases at King Abdulaziz University Hospital from January 2011 to July 2017. The diagnosis was based on voiding cystourethrogram findings.

#### **Results:**

Among the 103 patients assessed, 74 (71.8%) were males. 63(63.6%) were diagnosed in the first year of their life. No significant association in the distribution of VUR outcomes by gender or age at diagnosis.

15.6% of VUR cases diagnosed after the first year of life were not resolved, 20.8% were resolved after surgery, and 10.4% turned into a chronic kidney disease. Grade 5 VUR reduced significantly from 54.2% before surgery to only 12.2% after surgery, p-value<0.05.

#### Conclusion

Our data indicate that the presence and degree of preoperative hydronephrosis are closely related to VUR grade. Furthermore, antireflux surgery resulted in a high-resolution rate of hydronephrosis. Persistent postoperative hydronephrosis did not require any intervention.

#### Predictors of Recycling Behavior: A Survey-Based Study in the City of Sharjah, UAE

Suhaib Al Haj Ali, Lutfi Kawaf, Islam Masadeh, Zeina Saffarini, Reem Abdullah, Ali Zibdeh

#### **Content: Background:**

Sharjah, the United Arab Emirates' (UAE) third largest city, is also the third highest waste producer (9.9% of ≈26 million in 2012). Over \$1 billion has been invested into recycling programs aiming to achieve zero landfill waste by 100% recycling and conversion. Aside from providing infrastructure, assessment of people's knowledge, attitudes, and practices (KAP) is needed for an effective municipal solid waste (MSW) management.

#### **Objectives**

This paper aims to examine the levels of KAP in Sharjah community, since, to our knowledge, little has been conducted on this matter.

#### Methods:

A cross-sectional study, targeting a minimum of 400 subjects, was conducted in public venues in Sharjah emirate. Convenient sampling was used to select Sharjah residents 18-55 years old.

A pilot-tested, self-administered questionnaire was distributed. Participants' responses were analyzed using SPSS 22, where appropriate statistical tests were applied.

#### **Results:**

The respondents' mean age was 28.0 years (+/- 9.4), and 56.5% were females. Knowledge level was 51.8% (+/- 18.1); students reported the highest (53.7%, p = 0.007). 58.0% knew what recycling is, 22.9% knew all the benefits of recycling, and 31.2% and 65.4% knew how to correctly prepare and separate items, respectively. Respondents showed a mean attitude of 92.6% (+/- 16.5) towards recycling; 51.1% and 46.8% would recycle more if there was a financial reward or penalty, respectively. 70.4% (n=307) reported that they recycle; 16.0% always do.

Paper was the most recycled item (77.9%). 74.5% separate items by type, and 26.5% correctly prepare them. Logistic regression model indicates that knowledge and attitude were the only significant predictors of practicing recycling (OR = 1.013 and 1.014, respectively), keeping demographics constant.

#### **Conclusion:**

Although Sharjah residents have positive attitudes towards recycling, their knowledge is relatively lacking, leaving room for improvement. Recycling practices were generally mediocre, requiring innovative methods, such as a reward system, to encourage higher and more correct practice.

#### Factors Influencing Patients in Choosing Their Treating Physicians in Private Sector in Saudi Arabia

Abdullah AlBarrak, Khalood Aljohi, Mohammed AlAnazi, Abdulilah Albriek, Mohammed AlAteeq

#### **Content:**

Choosing the treating physician by the patient is expected to increase level of satisfaction, enhance compliance to management plan and improve health care outcome. The patient's perspectives in choosing their treating physicians are variable. Previous international studies in this area revealed several important factors that not only based on medical condition or active health issue but even before a health need arises.

Our aims are to identify factors that may influence patients in choosing a treating physician in the private sector in Saudi Arabia, and to identify the possible association of studied factors with the demographics of the participants. This is a cross-sectional study used online questionnaires distributed through social media targeting adult Arabic speaking participants aging 18 years and above of both genders living in Saudi Arabia.

Non- Probability convenient sampling was used and the total number of participants reached 1582. The questionnaire was divided into five sections; demographic data, personal factors of the physician, professional factors of the physician, health center/hospital factors, ways patients use to reach to their preferred physician. Likert scale was used to represent the participants choices where 1 represents (not important at all or not used)

and 5 represents (very important or frequently used). The most influencing factor related to physician personal features was fame as reported by participants either very important (31.7%) or quite important (23.8%), followed by physician appearance where 28.6% of participants consider it very important and 21.1% consider it quite important. In regard to physician professional features, the most influencing factor was found to be the past experience of the patient or his relative with the physician as stated very important by 66.5% of participants followed by physician title (general practitioner, specialist or consultant) (63.1%) and the subspecialization of the physician (57.71%).

Regarding the hospital factors, most influencing factor was the availability of near appointment as reported very important by (59.2%) of participants, followed by affordability of fees (50.0%) and access to hospital (46.8%). Concerning ways patients use to reach to preferred physician: "Asking a relative or friend" was reported as either frequently used by 35.4% or commonly used by 27.05% of participants followed by "Ask another physician I know" which was reported as frequently used by 25.22% or commonly used by 21.43% of participants.

The study revealed statistically significant differences between male and female participants in considering several factors like physician age, nationality, appearance, title, academic title and sub-specialization in addition to hospital fame and accessibility. Our study findings are comparable with similar international studies with more female participants in our study concerned about physician gender. Past experience of the patient with the physician beside the physician professional profile, mainly physician title and sub specialization are significantly influencing the choice of a physician in private sector in Saudi Arabia.

# Self-Reported Prevalence of Endometriosis and Its Symptoms in the United Arab Emirates (UAE)

Moamar Al-Jefout, Shamsa Alawar, Zuhur Balayah, Alia AlHareb, Fatima Al Ameri, Maitha Alhosani, Hajar Al Naqbi,

#### **Content: Background:**

The true prevalence and risk factors for endometriosis among women in UAE are unknown. Objectives: To estimate the prevalence of endometriosis among women in UAE aged 18 to 55 years, risk factors and related health problems. Material and methods: A questionnaire-based cross-sectional study. Information about reproductive events and gynecological problems including endometriosis was obtained. Results: Among participants (n=3572) confirmed endometriosis diagnosis was reported by 55 women

Hence, the estimated prevalence of endometriosis was 1.5 % (55/3572). Endometriosis was more prevalent among age 20-29 years (with endometriosis - 59.6% vs 38.2% in control group, P value (21) vs 7.2% (252), ps surgery was also strongly associated with endometriosis diagnosis (21.8% (12) vs 0.7% (23), pand prolonged periods, dysmenorrhea, chronic pelvic pain, dysuria and infertility are associated with endometriosis.

#### Optogenetics In 3d - Combining Genetic Engineering with Tissue Engineering for Future Cell Applications

#### Khalid BinGhali, Mohammed Algahtani, Vinoj Gorge

#### **Content:**

CRISPR-associated catalytically inactive dCas9 fused to an effector domain (dCas9-E) has developed recently as a powerful tool to modulate endogenous transcription and to interrogate mechanisms in cell signalling. The latest evolution of dCas9-E, called dLITE (dCas9 Light Inducible Transcriptional Effectors), is an optogenetic two hybrid system modified in Keele, integrating the genetic engineering capacity of CRISPR with transcriptional modulation to switch a gene 'ON' or 'OFF', only in response to noninvasive blue light. In our experiments, we tested the efficiency of this system with an eGFP (enhanced Green Fluorescence Protein) reporter to prove sensitivity of the light (470nm wavelength, pulsed at 0.7Hz frequency) to modulate GFP fluorescence in HEK293 cells (Human embryonic kidney cells).

Furthermore, using this reporter, we assessed the spatiotemporal characteristics of light induction using a custom-designed high throughput (96 well) LED-based optogenetic platform and observed that 24h exposure to pulsed light was sufficient to produce ~5 fold induction in GFP fluorescence, compared to unexposed cells. The combination of CRISPR genetic engineering with tissue engineering is a relatively novel concept for biomedical research and we proceeded to test this concept by using 3D transfection of HEK cells in combination with gelatine. This was achieved by adding the modular components of the dLITE system to HEK cells, sequentially in a gelatine biomatrix.

While encapsulation of cells with dLITE in gelatine (also called as reverse transfection) or with cells being pre-seeded and then transfected (invasion/forward transfection) produced modest fluorescence in a range of gelatine concentrations (0.1-2.0%) post 24 hours light exposure, it was the combination of encapsulation with invasion strategy in 0.1% gelatine that produced highest transfection efficiency as determined by imaging. This result, for the first time, gives support to the theory of sequential gene induction, which currently relies on growth factors/small molecules but that can now be potentially replaced by CRISPR optogenetics, making this technique economical and attractive for stem cell and biomedical applications.

# Case Report of Orbital Immature Teratoma: A Rare Entity with Diagnostic Challenges

### Alobaidan, OS, Hind Manaa Alkatan, Hala Kfoury, Yasser H. Al-Faky

#### **Content:**

Childhood orbital teratomas are congenital lesions that presents most often at birth with progressive, severe unilateral proptosis. Orbital teratomas might either originate primarily in the orbit or secondarily as an intracranial extension from another nearby location. Due to the rarity of such tumors, the diagnosis is often missed with delay in the patient's management. We are presenting

a unique case of right orbital immature teratoma with extensive growth in a full-term newly born baby boy, who was initially seen at a local hospital in Al-Qassim region then referred to King Abdulaziz University Hospital (KAUH) in Riyadh for further management as a case of lymphangioma. The patient underwent left eye examination under anesthesia and debulking of the right orbital lesion. The histopathological examination showed an immature teratoma. The case is described with clinical images, histopathological confirmation of the diagnosis and review of similar reported cases in the literature.

# Case Report: Intestinal Obstruction Following Metamucil Bulk Forming Laxative Intake

Mohammed O Nassif, Nora Trabulsi, Amal M. Bally, Mohammad Almatrafi, Dr.Mohammed O. Nassif, Nora Trabulsi, Amal M. Bally, Mohammad Almatrafi

#### **Content:**

Pharmaco-bezoars AKA (foreign bodies) formation is a rare severe adverse effect of bulk laxatives. It can cause GI tract obstructions that usually occurs when it's administered with insufficient fluids. Metamucil induced bezoars should be highly suspected in patients with gastric hypomotility disorders, psychiatric illnesses, prior abdominal or bariatric surgery, or improper intake of medication. Their diagnosis is quite challenging and surgical exploration remains the best treatment of choice to ensure the viability of the small bowel tissue and relieve the obstruction. In this case report we present a 63 Year old gentleman with end stage renal disease (ESRD) on regular dialysis presenting with a picture of intestinal obstruction after taking Metamucil for the first time with insufficient amount of water.

Middle East Respiratory Syndrome Coronavirus (MERS-Cov): Interhuman Transmission, Vaccine Development, and Treatment Methods

Bandar Alosaimi, Maaweya Elaeed, Salma Rashed Alrasheed, Reem Mansour Almutairi, Miteb Eid Alosaimi, Meshal Fares Alessa, Meshal Ali Alessa

#### **Content: Abstract**

Coronaviruses (CoVs) has emerged as a new pathogen that affects a wide range of species including humans, animals, and birds. The infection spreads when Middle East Respiratory Syndrome Coronavirus (MERS-CoV) spike (S) protein binds to the cellular receptor dipeptidyl peptidase 4 (DPP4) in the S1 subunit through the receptor binding domain (RBD). The infection is likely to be transmitted by droplets or contact through aerosol under certain conditions. Other modes of transmission includes; poor usage of mask, hand hygiene, and inadequate knowledge. The severity of this infection occurs among the patients with comorbidities and chronic diseases, such as diabetes, hypertension, cardiac disease, obesity, chronic respiratory disease, end-stage renal

disease, and cancer. The treatment of this infection includes a combination of antimicrobial therapy along with the supportive measures; however, there is no specific antiviral therapy for treating the patients of MERS-CoV infection. The N proteins are likely to possess highest antigenic source and vaccine that elicit neutralizing antibody and cellular immunity against MERS-CoV. The results showed that monoclonal antibodies, anti-viral peptide, and protease inhibitors are specific therapies for MERS-CoV infection.

#### **Keywords:**

Middle East respiratory syndrome coronavirus (MERS-CoV), Transmission, Treatment, Vaccines

#### **Comprehensive Review of Heart Failure**

Mohammed Abdulaziz Kattan, Abdulrahman Humied Alotaibi, Abdulrahman Abdullah Alzahrani, Faisal Adel Alsuqati, Ahmed Mohammed Althubaiti, Ahmed Faisal Siraj, Torky Ahmed Arab, Ahmed Mohammed Althubaiti, Atheer Abdulrahman Ghous

#### Content

This review was aimed to focuses on the main principles of heart failure, causes, consequences, mortality, symptoms, and diagnosis of HF. We attempted to also review the incidence of HF worldwide as well as the classification of HF. Comprehensive literature review was conducted using MEDLINE, CINAHL, PubMed, PsycINFO, and Cochrane Library to identify publications Up to May,2017. Method used several Keywords as; "heart failure" "Classification" "diagnosis" "Mortality".

We restricted our search to only English published articles with human subjects. HF is, and will continue to be, a substantial problem on health-care systems and societies. Although age-adjusted occurrence has actually typically not been discovered to have actually increased recently, the occurrence of HF will likely continue to increase offered the significant aging of the population, enhanced survival with HF.

The diagnosis of HF requires careful evaluation of each patient. Diagnostic screening is extremely influenced by the quality of the preliminary assessment and the recognition of comorbid conditions. Classifying a patient's cardiomyopathy will assist guide treatment and lend prognostic value as new and standard treatments are used.

# Purification of Natural Anti-Cancer Compounds from Acalypha

#### Suliman A Alnamlah, Abdulrahman Alomair, Firas Alotaibi

#### Content

About 60% of conventional drugs are derived from natural compounds, some of the most effective pharmaceuticals (e.g. aspirin, quinine and various antibiotics) originate from plants or microbes, and large numbers of potentially valuable natural substances remain to be discovered.

#### **Ethnopharmacological Relevance:**

Acalypha is the fourth largest genus of the Euphorbiaceae family with approximately 450 –570 species. Several Acalypha species are used as medicinal plants in Africa and in the Mascarene Islands. However, the genus has not been proven yet in terms of medicinal intervention at the literature that we searched, but there is a large usage of this plant in terms of herpal medicine and it can treat various of diseases. So we aim that it will open a new perspective field for the pharmacological research.

# Factors Affecting the Hospital Stay Following Major Orthopedic Surgery of the Peripheral Nerve Techniques

Abdulelah Ali Hamed Alqahtani, Mohammed Yahya Hassan Alyami, Muteb Saad Alqhtanni, Hamad Mohammed Al Selaimy

#### Content:

This study aimed at determining the impact of regional anesthesia on hospital stay for selected orthopedic procedures compared with traditional pain control modalities as in an era of an increasing volume of orthopedic surgeries, pain modalities that can optimize patient care while minimizing hospital length of stay can have an impact on reducing hospital costs as well as increasing patient satisfaction and improving patient outcomes. Previous studies have shown the potential benefits of regional anesthesia over traditional intravenous (IV) narcotics in meeting these goals in selected orthopedic procedures.

# **Treatment of Iron Deficiency Anaemia in Patients with Inflammatory Bowel Disease**

#### **Abdulaziz Saad Alshamrani**

#### Abstract

In spite of the fact that anemia is the most widely recognized systemic sign of inflammatory bowel disease (IBD), among the expansive range of extraintestinal malady complexities experienced in IBD, including joint inflammation and osteopathy, it has for the most part gotten little thought. In any case, as far as recurrence, as well as to its potential impact on hospitalization rates and on the personal satisfaction and work, sickliness is, in fact, a huge and expensive intricacy of IBD.

Frailty is multifactorial in nature, the most predominant etiological structures being iron deficiency anemia (IDA) and anemia of a chronic disease. In a condition related to irritation, for example, IBD, the assurance of iron status utilizing normal biochemical parameters alone is insufficient. A more exact evaluation might be achieved utilizing new iron lists including reticulocyte hemoglobin content, the rate of hypochromic red cells or zinc protoporphyrin.

While oral iron supplementation has generally been a backbone of IDA treatment, it has likewise been connected to a broad gastrointestinal reactions and conceivable infection compounding. Be that as it may, numerous doctors are as yet hesitant to

administer iron intravenously, in spite of the wide accessibility of an assortment of new IV arrangements with enhanced safety profiles, and in spite of the proposals of worldwide master rules. We present a review of the pathophysiologic mechanisms of IDA in IBD, improved diagnostic and therapeutic strategies, efficacy, and safety of iron replacement in IBD.

# A Novel Technique Of Wound Closure In Opeh Fractures

#### **Ahmed Mosa Al Zahrany**

#### **Content: Abstract**

Open fractures result in significant morbidity and disability due to the high-energy nature of the injury that exposes the internal milieu to the external environment (1,2). This communication between the opened tissues and fracture hematoma can lead to infection and subsequent delayed union or nonunion (2,3). Discovery of an appropriate technique for closure of wounds in open fractures is still evolving despite some techniques having established efficacy. Currently, the trend in treating adequately prepared wounds that meet safety criteria is toward immediate closure of the wound (4).

This is because of a wide variety of situations faced during the management of open fracture wounds and the technical and logistical support available, especially in developing areas. Hence, it is necessary to develop a wound closure technique that is safe and suitable for use in a wide range of scenarios and is easy to perform both for the novice and the experienced surgeon. It is preferable to achieve early closure, except in those situations where delayed closure is required. We have developed a simple, reliable, early applicability, and easily reproducible wound closure technique, which we have used in our department. The technique is suitable for use in thoroughly debrided, cleaned wounds. This new technique is analogous to fracture management with the minimally invasive plate osteosynthesis (MIPO) technique, which comes between rigid fixation and conservative cast management, providing relative micromotion at the fracture site to enhance and guide fracture healing in a protected zone.

#### The incidence rate of Mediastinal pathology, Clinical features, and treatment Modalities, King Khalid University Hospital Experience.

Ghadah A. Alharbi, Raghad M. Barri, Salah M. Rahal, Waseem M. Hajjar.

#### **Background:**

The mediastinum is one of the important body cavities contain many vital organs. Despite the fact that mediastinal masses are relatively uncommon, their anatomic locations along side with the histologic variety make them very serious for the clinician to diagnose and treat them properly.

#### Methodology:

A retrospective study was conducted using the medical records of

patient who were referred to thoracic surgery unit in our institution between the year 2008-2016. We collected the demographic data including age and gender, clinical presentation, pathological location within the mediastinum, used diagnostic modality, histopathology report summary, used treatment modality, which clinic followed them up and post-operative complications if present.

#### **Results:**

The total number of patients was 102 patients. 52 female patients (50.98%) and 50 male patients (49.02%). The mean age was 34.40 years. Mass location: 55 in the anterior mediastinum (53.9%) (p value 0.018)\*, 43 in the middle mediastinum (42.16%), 4 in the posterior mediastinum (3.92%). Clinical presentation 37 patients with dyspnea (36.27%), 28 with dry cough (27.45%), 23 with fever and weight loss (22.55%), 18 with sweating (17.65%) (p value 0.002)\*. 27 patients were diagnosed by biopsy (26.5%), 17 patients were diagnosed by CT scan (16.7%).

15 patients were found to have hodgkin's lymphoma of nodular sclerosis subtype (14.7%) (p value 0.045)\*, 12 patients were found to have follicular thymic hyperplasia (11.8%) (p value 0.003). 28 patients were treated by chemotherapy (27.5%) (p value 0.003)\*, 20 patients were treated by thymectomy (19.6%) (p value 0.023)\*.

#### **Conclusion:**

Majority of patients with mediastinal pathologies were young females, most common location was the anterior mediastinum. Biopsy and CT scan were the common diagnostic methods, the two common diagnoses were hodgkin's lymphoma of the nodular sclerosis subtype and thymic follicular hyperplasia. The common used treatment approaches were chemotherapy and thymectomy. To the best of our knowledge, we could not find any similar studies conducted in the gulf area.

We hope that our findings will encourage fellow researchers to conducted similar studies all around our country, which we believe that eventually will help us in improving the healthcare we provide our patients with and their outcomes.

#### **COPD** with Elderly in Saudi Arabia

#### Amnah Shrefi

#### Introduction:

Chronic obstructive pulmonary disease (COPD) is characterised by airflow obstruction. The airflow obstruction is usually progressive, not fully reversible and does not change markedly over several months. The disease is predominantly caused by smoking.

Chronic obstructive pulmonary disease is associated with major morbidity and mortality such as cardiovascular disease, muscle wasting, type 2 diabetes, and asthma. Smoking cessation will probably have the most important effects on COPD as a public health problem in Europe and the world as it slows disease progression and lowers mortality.

#### Methods:

We conducted a questionnaire on COPD containing a set of questions in 2016. To find out the causes and spread of the disease,

many have agreed to participate in this questionnaire. Through the work of the questionnaire and put some questions and published in some hospitals to know the cases there. As published in some of the sites to answer the questions asked by which we came to the causes of the occurrence and the proportion of people suffering from this disease the causes of the occurrence and the proportion of people suffering from this disease.

#### **Result:**

Chronic obstructive pulmonary disease is the most common in people who smoke over the age of 40 and have a history of smoking, such as men who smoke a lot. Various factors may contribute to the development of chronic obstructive pulmonary disease, including exposure to smoke from certain substances such as incense, as well as prolonged exposure to air pollutants and dust, which may develop and cause disease later.

However, smoking has a share of the disease, but through the questionnaire it is clear that exposure to the exhaustion of other substances containing smoke other than cigarettes (passive smoking) may lead to the occurrence of this disease. 88.1% of those exposed to maybe affected later in the life. Chronic obstructive pulmonary disease in Saudi Arabia from 30% to 40%. So we need early detection of this disease for the elderly. Increase awareness among community members and then detect through clinical diagnosis and give some advice to seniors.

Recommend them to stay away from inhaling the killer substance. Early detection maybe a good option to avoid this disease and avoid its development through early detection. (10% to 20%) found that early detection and clinical trials favor the person and avoid the risk of chronic obstructive pulmonary disease later. Give tips for detection and avoid neglecting the examination.

#### **Conclusion:**

Overall, COPD is a clinically significant and growing challenge for patients and physicians alike. The results of emerging studies are likely to lead to improvements through awareness and the introduction of new models illustrating the management of patients with chronic obstructive pulmonary disease (COPD), which illustrates the severity of this disease and how to avoid it.

# The Effect of Chemical Materials Exposure used by Fine Artists on Developing Respiratory Symptoms Complaints

### Anfal Alfaraj, Sara Al-Askari, Kawther Alqassab, Yaqeen Nemer

#### **Background:**

Fine artists tend to use different chemical materials to create aesthetic arts. Paint is mainly composed of solvent, pigment and a binder. These materials are believed to be irritant factors to the respiratory system regardless of their form, to be brushed or sprayed.

#### **Objectives:**

The present study was conducted to identify whether chemical materials used by fine artists cause respiratory complications,

and to assess the relationship between duration of exposure and development of respiratory symptoms.

#### **Material and Methods:**

A cross-sectional study was conducted in Al-Qatif and Dammam cities of Saudi Arabia, among two art galleries. The present study was carried out on 80 fine artists. A questionnaire of respiratory symptoms (MRCQ) distributed among fine artists to assess the respiratory symptoms. Descriptive statistics were used to describe the basic features of the sample, and inferential test (Chi-square test) was applied by SPSS to analyze the data.

#### Results

Atotal of 80 subjects, in which n= 63 (78.8%) are females. (88.75%) are between age of (17-35 years), while (11.25%) are more than 35 years. The majority of the sample (58.8%) has exposure duration between 4-8 years, (15%) have been working for more than 20 years and the rest (26.2%) are between 9-20 exposure years. The study showed a significant difference in the prevalence of the respiratory symptoms such as phlegm (P>0.015), cough (p>0.04) and breathlessness (p<0.02) between fine artists used different types of chemical materials. There is a correlation between duration of exposure and respiratory symptoms (P=0.001) level in chest illnesses and phlegm at (p=0.008).

#### **Conclusion:**

Chemical materials exposure used by fine artists had negative effects on the respiratory tract. Longer exposure duration is associated with more complications. The results of the current study notify fine artists about the importance of using protective methods to prevent adverse respiratory effects.

# Glycemic Control in Diabetic Patients in Saudi Arabia: The Role of Knowledge and Self-Management - A Cross-Sectional Study

Saad AlShareef, Abdullah AlWabel, Mujahed AlKhathlan,Ahmed AlKhazi, Abdulaziz AlMaarik, Abdullah AlGarni, Abdullah Saeed AlGhamdi, Mohammed AlMutairi

#### **Content: Introduction:**

Diabetes mellitus (DM) is serious healthcare concern in Saudi Arabia, with the disease's prevalence in the country being one of the highest worldwide. This study examines various factors which affect outcomes of patients with DM; namely, medication adherence, diabetes knowledge, self-management behaviours, and glycemic control.

#### **Methods:**

This is a cross-sectional survey-based study. Participants were patients with a DM diagnosis at King Saud Medical City in Riyadh, Saudi Arabia.

#### **Results:**

Positive associations were found between medication adherence and diabetes knowledge; self-management behaviours (glucose management and healthcare use) and diabetes knowledge; self-management behaviours (dietary control) and fasting blood glucose levels; and age and blood glucose levels (both fasting and HgA1c). No associations were found between diabetes knowledge and glycemic control; or between self-management behaviours and HgA1c levels.

#### **Conclusion:**

Having good knowledge of diabetes is associated with medication adherence and healthcare self-management. Healthcare practitioners should consider educating DM patients an integral part of the treatment process.

#### **Keywords:**

diabetes mellitus, glycemic control, patient knowledge, self-management





