Faculty of Medicine
King Abdulaziz University

2014-2015-2016
Community Related Research

Prepared by
Vice-Deanship for Postgraduate Studies and Research
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Abstract

Objectives: To analyze and evaluate the safety and cost-effectiveness of a gradually-implemented antimicrobial stewardship programs (ASP) in a tertiary care center.

Methods: Prospective data were collected from an ASP that was gradually introduced between April 2012 and December 2013 in 6 hospital departments, over successive periods of 3 months each. A multidisciplinary team supervised antibiotic use and regulated pharmacy dispensations of a list of restricted antimicrobials (RAs). Indicators were prospectively monitored and included hospital mortality as the safety indicator; incidence of multi-drug resistance (MDR) infections as the effectiveness indicator, RA cost savings as the cost-effectiveness indicator and RA consumption indicated the process implementation.

Results: Between 2012 and 2014, dispensations of RAs decreased by 67% and prescriptions by 75%; no increase in mortality rate was observed. Microbiologically, there was a decreasing trend of incidence across all monitored infections, but this was only significant for Acinetobacter baumannii (p=0.007). Cost analysis showed a decrease in expenditure for RAs, with an average monthly saving of up to 326,020USD.

Conclusions: Stepwise implementation of ASPs is a safe and cost-effective strategy for improving antibiotic prescribing practice and to reduce multi-drug resistance.
A systematic review of the prevalence and risk factors of irritable bowel syndrome among medical students

Background/Aims: Irritable bowel syndrome (IBS) represents a great challenge to public health, particularly among medical students. The aim of the study was to determine the global prevalence and risk factors of IBS among medical students.

Materials and Methods: Data were obtained through searches in PubMed, Ovid, the Cochrane database, Embase, Google scholar, Institute for Scientific Information (ISI) "Web of Science," and Medline from 1990 to June 2015. The search terms included "Irritable Bowel Syndrome" and "Medical students" and "prevalence, risk factors". More than 100 articles were reviewed, scrutinized, and critically appraised for the eligibility criteria, and the relevant articles were selected.

Results: Sixteen studies were identified, and the prevalence of IBS among medical students ranged from 9.3% to 35.5%. The relatively high prevalence among medical students may be attributed to their special stressful learning environment. Some studies found that female gender, family history of IBS, psychiatric stress, anxiety, depression, infections, dietary factors, and sleep disorders were associated with IBS.

Conclusion: A relatively high prevalence of IBS was prevalent among medical students. Annual screening of IBS and introduction of stress management courses are recommended.
Abstract

Background: The presence of large number of pilgrims during Hajj in Makkah region increases the risk of respiratory diseases. In this study, we aimed to assess the bacteriology of acute rhinosinusitis (ARS) during Hajj season and to demonstrate the antimicrobial susceptibility patterns that should guide the clinicians towards more appropriate antibiotic use.

Methods: Patients with ARS presenting during Hajj season of 2014 were prospectively enrolled. According to EPOS2012 criteria. Sampling of sinus secretions was performed from the middle meatus adjacent to the maxillary sinus ostium via endoscopic guidance. Over all, the study has covered all ENT, emergency and outpatient departments in Hajj.

Results: Two hundred and twenty six patients with ARS were enrolled in the study. Pathogenic bacteria were identified in 93 (41.2%) patients. Of the 93 patients with bacterial ARS, Staphylococcus aureus was isolated in 46 (49.5%) patients, out of which 13 (28.3%) were methicillin-resistant Staphylococcus aureus (MRSA). The second most common group of bacterial isolates was Enterobacteriaceae such as Escherichia coli, and various Klebsiella species. Antibiotic sensitivity showed that methicillin-sensitive Staphylococcus aureus (MSSA) was also sensitive to cephalosporins, quinolones and clindamycin, while exhibiting relatively less sensitivity rates to amoxicillin-clavulanic acid and macrolides.

Conclusion: Our study demonstrates the importance of assessing the bacteriology of ARS to help implement guidelines for proper treatment and prevention protocols during Hajj season.
Abstract

Objectives: To identify the prevalent organisms associated with respiratory tract infections according to age groups. To identify the most common antibiotics prescribed among pediatric age groups.

Methods: A retrospective cohort study conducted on patients aged 0-18 years, admitted to the inpatient department (IPD) diagnosed with respiratory tract infection between Jan 1 2009 to Jan 31 2015 in King Abdulaziz University Hospital (KAUH). Demographic information, diagnosis, date of admission, laboratory investigations, and treatment were collected from patients’ electronic and paper records then analyzed. Exclusion criteria were based on congenital defects, chronic diseases, and compromised immunity.

Results: 122 patients with respiratory tract infections were selected for the study (73 males and 49 females). 45.9% of which were infants-toddlers (n=56). The most common diagnosis was pneumonia unspecific (n=32), followed by acute tonsillitis (n=24) and otitis media (n=22). 52 microorganisms were isolated from clinical samples, 14% being Pseudomonas aeruginosa and 13% Streptococcus pneumoniae. 171 antimicrobials were prescribed during the study period. Penicillins were the most frequent (n=78), followed by Cephalosporins (n=45) and Macrolides (n=22). 6.897% resistance was detected among 87 files with culture and sensitivity tests, 30% of which were positively cultured, ranking resistance with 20%.

Conclusions: Despite the results showing minimal resistance, antibiotic resistant organisms remain a global concern that needs to be addressed to prevent the spread of antimicrobial resistant infections.
Research Title: Anxiety due to dental procedures and treatment among adult patients attending outpatient clinics in King Abdulaziz University Hospital, Jeddah, Saudi Arabia

Journal: The Journal of Medical Research
Publisher: The Journal of Medical Research
Volume / Issue: 2/2
Pages: 35-40
ISSN: 2395-7565
Department: Family and Community Medicine
Authors: Nahla Khamis Ibrahim, Maha Al-Jdani, Noor Al-Aamoudi, Samaher Sukkar
Correspondence Email: n/a

Abstract

Background: Anxiety is an emotion experienced by most of individuals at some time during their life. Oral health is an essential component of the overall public health, while dental anxiety can lead to deterioration of such health. The purpose of the study was to determine the prevalence and predictors of dental anxiety among patients attending outpatient clinics of King Abdulaziz University Hospital (KAUH), Jeddah.

Methods: A cross-sectional study was conducted among a sample of 231 adult patients who attended the outpatient clinics of KAUH, Jeddah, during the year 2013/2014. A standardized interviewing questionnaire was used and contained Corah’s Dental Anxiety Scale (DAS) was included.

Results: The prevalence dental anxiety among participants was 50.6%. Females obtained a significantly higher mean DAS compared to males (Student's t-test = 3.78, p < 0.001). Dental anxiety was also higher among younger participants. Multiple linear regression model revealed that predictors of dental anxiety were the previous cancellation of dental appointment (t-test =2.998, p < 0.001, B = 2.998), followed by memorizing poor dental practice, gender and age. The highest percentage of severe anxiety was related to dental extraction (46.0%). Sweaty hands (56.1 %), fast breathing (21.5 %) & increased heart rates (13.6 %) were the commonest reported somatic manifestations accompanying visiting dentists.

Conclusions: Dental anxiety represents a common problem among Saudi adults attending KAUH. Dental anxiety was predicted by cancellation of dental appointment(s), memorization of poor dental practice, gender and age. Enhancing awareness of the community about oral health and how to avoid dental anxiety through educational campaigns is recommended.
King Abdulaziz University, Faculty of Medicine  
2014-2015-2016 Community Related Research

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<th>Research Title:</th>
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**Abstract**

Background: Cigarettes smoking and obesity are major public health problems and leading causes of preventable morbidity and mortality worldwide. The aim of this study was to investigate the relationship between cigarettes smoking and body weight status among Northern Saudi subjects.

Methods: Data were collected during cross-sectional survey which included 5,000 Saudi selected from 30 primary health care centers (PHCs) in Hail Region.

Results: The overall prevalence of obesity in Hail was 36.9%. The prevalence of cigarettes smoking was 10.2%. In those who are current smokers, obesity was present in 24.9%, normal weight in 30.9% and overweight in 7.4%. In those who are ex-smokers, obesity was present in 45.0%, normal weight in 20.3% and overweight in 31.3%. In those who never smoked, obesity was present in 27.6%, normal weight in 32.8% and overweight in 37.3%.

Conclusion: Obesity was most prevalent among ex-smokers and least prevalent among current smokers. It is clear that from the analyses, the group of current smokers were less likely to be obese in comparison with never smokers and ex-smokers were more likely to be obese than both current smokers and never smokers.
Research Title: Awareness of Diabetic Retinopathy among Diabetic Patients in King Abdulaziz University Hospital, Jeddah, Saudi Arabia

Journal: Annals of International Medical and Dental Research
Publisher: Society for Health Care & Research Development
Volume / Issue: 2/6
Pages: 42-45
ISSN: 2395-2814
Department: Ophthalmology
Authors: Reem A Alasiri, Ahmed G Bafaraj
Correspondence Email: n/a

Abstract

Background: Diabetic retinopathy is a serious complication of DM, it occurs due to poor control of DM and lack of knowledge on the complications of DM. Among many approaches, strong awareness of retinopathy by diabetic patients could help in the early detection, management and prevention of this complication. Aim: this study was conducted to assess the awareness of diabetic retinopathy among diabetics in Saudi Arabia.

Methods: A hospital-based, cross sectional study was conducted using a pre-tested questionnaire. All diabetic patients seen at the diabetes clinic in King Abdulaziz University Hospital were recruited. Questionnaire was distributed on all participants. The questionnaire contained questions to determine awareness of retinopathy and its risk factors. Data obtained was analyzed using the statistical package for social sciences (SPSS) 16.0.

Results: A total of 357 diabetic patients were involved with a mean age of 50 years. 61% of patients were aware of DR. Only 38% were aware that annual retinal examinations are required and 70% were not aware what the treatment for DR is. And only 50% of all the respondents went for eye checkups.

Conclusion: Although a large proportion of diabetics in Saudi Arabia are aware that diabetes can affect their eyes, there is however little or no knowledge of its risk factors and prevention. There is therefore a need for increasing this awareness in order to decrease the number of cases of blindness resulting from DR in Saudi Arabia.
Abstract

Introduction: Vitamin D deficiency considered to be the most common nutritional deficiency and one of the most common undiagnosed medical conditions in the world. It appears to be a widespread global problem prevalent in all age groups, with a reported prevalence of 30-80% in children and adults. This significant decrease in vitamin D level worldwide in different age groups shows lack of awareness about vitamin D importance and its resources.

The aim of our study: To assess awareness, perception, and understanding of vitamin D deficiency among families living in Jeddah/Saudi Arabia. Determining the resources of information about vitamin D deficiency in our society.

Methods: A cross-sectional retrospective study was conducted in ambulatory and pediatric clinic at KAUH and many malls in Jeddah - Saudi Arabia. Data were obtained from a questioner designed to collect information about vitamin D. The study population was formed of 1752 parents of children aged from 2 to 18, and dividing them to 746 highly educated, 491 low educated.

Results: It was found that the highly educated parents got the right answers in most of the questions. However, both high and low education parents had the media as their source of information. However, the majority have heard about vitamin D, 82.9% fail to identify the best time for sun exposure and 65.5% recognize inability to go outside due to work or weather issues as common cause of vitamin D deficiency.

Recommendations: Improving health education to exposing to sunlight and consume vitamin D medication may be an effective step toward preventing vitamin D inadequacy.
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<th>Awareness regarding childhood asthma in Saudi Arabia</th>
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<td>Correspondence Email:</td>
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**Abstract**

**OBJECTIVE:** Assessing the knowledge and awareness of the Saudi society about bronchial asthma in children.

**METHODS:** Structured questionnaires were randomly distributed to 1039 Saudi Arabians in May 2014 at Jeddah, Riyadh, and Dammam.

**RESULTS:** The awareness of bronchial asthma questions showed that 67% of total sample thought that it could be a fatal disease, and only 13.2% thought that there is a difference between bronchial asthma and chest allergies in children. 86.1% thought that the symptoms of bronchial asthma include dyspnea and nocturnal cough, and 45.7% thought that fever, a runny nose and throat inflammation are not symptoms. 60.2% thought that infectious respiratory diseases may increase bronchial asthma progression. In addition, 40% thought that the use of antibiotics doesn't help in diminishing bronchial asthma complications, and some thought that the patient can stop medication after an acute asthma attack. 34.1% thought that inhaled medication for asthma doesn't cause addiction. Very highly significant results are shown between bronchial asthma knowledge and age, the level of education, marital status, and if the individual knows a person who suffers from bronchial asthma ($P < 0.001$). There are positive correlations between bronchial asthma knowledge and age, marital status, and level of education ($r = 0.152, 0.150, 0.197$), respectively.

**CONCLUSION:** The study demonstrated that bronchial asthma knowledge in the Saudi Arabian population is insufficient, and efforts should be carried out to spread bronchial asthma management.
**Abstract**

Cell phones are commonly used in healthcare settings for rapid communication within hospitals. Concerns have been increased about the use of these devices in hospitals, as they can be used everywhere, even in toilets. Therefore, they can be vehicles for transmitting pathogens to patients. This study aimed to examine the presence of pathogenic bacteria on the surfaces of cell phones that are used frequently by preclinical medical students. This cross-sectional study identified both pathogenic and nonpathogenic bacteria on cell phones of 105 medical students at King Abdulaziz University, Jeddah, Saudi Arabia, using standard microbiological methods. Out of 105 cell phones screened, 101 (96.2%) were contaminated with bacteria. Coagulase-negative staphylococci were the most abundant isolates (68%). Seventeen (16.2%) cell phones were found to harbor Staphylococcus aureus. Gram-positive bacilli were isolated from 20 (19%) samples. Viridans streptococci and Pantoea species were also isolated but at lower levels. Our findings indicate that cell phones can act as reservoirs of both pathogenic and nonpathogenic organisms. Therefore, full guidelines about restricting the use of cell phones in clinical environments, hand hygiene, and frequent decontamination of mobile devices are recommended at an early stage in medical schools, to limit the risk of cross-contamination and healthcare-associated infections caused by cell phones.
**Research Title:** Brominated and organophosphate flame retardants in indoor dust of Jeddah, Kingdom of Saudi Arabia: Implications for human exposure

**Journal:** Science of The Total Environment  
**Publisher:** Elsevier B.V.  
**Volume / Issue:** 569-570/1  
**Pages:** 269-277  
**ISSN:** 0048-9697

**Department:** Family and Community Medicine  
**Authors:** Nadeem Ali, Syed Ali Musstjab Akber Shah Eqani, Iqbal Mohammad Ibrahim Ismail, Govindan Malarvannan, Mohammad W Kadi, Hussain Mohammed Salem Albar, Mohammad Rehan, Adrian Covaci

**Correspondence Email:** nbahadar@kau.edu.sa

### Abstract

Different flame retardants (FRs) namely polybrominated diphenyl ethers (PBDEs), emerging brominated/chlorinated flame retardants (Br/Cl FRs), and organophosphate FRs (OPFRs) were analyzed in cars, air conditioner (AC) filters and floor dust of different households from Jeddah, Kingdom of Saudi Arabia (KSA). To the best of our knowledge, this is first study in literature reporting emerging Br/Cl FRs and OPFRs in AC filter dust and also first to report on their occurrence in dust from KSA. Chlorinated alkyl phosphate, penta-BDEs, BDE-209, and decabromodiphenylethane (DBDPE) were the major chemicals in dust samples from all microenvironments. ΣOPFRs occurred at median concentrations (ng/g dust) of 15,400, 10,500, and 3750 in AC filter, car and house floor dust, respectively. For all analyzed chemicals, relatively lower levels were observed in floor dust than car and AC filter dust. The profiles of FRs in car dust were different from AC filter and floor dust, which reflected their wider application as FR and plasticizer in variety of household and commercial products. For toddlers, assuming high dust intake and 95th percentile concentrations, the computed exposure estimation for BDE-99 was higher than RfD values.
Objective: The objective of this study is to review the maternal and neonatal morbidity and mortality associated with six or more caesarean section (CS).

Methods: We conducted a retrospective chart review, at King Abdulaziz University Hospital (KAUH) in Jeddah, for all patients admitted between 2000 through 2010 and identified five patients having more than six CS deliveries.

Results: Deliveries occurred in the ranges of 31-38 weeks, from which four cases required emergency CS. There were two cases in the series with a placenta previa. There was a single case of uterine dehiscence. Only one case required a blood transfusion and was complicated with a placenta accreta, bladder injury, urinary tract infection, and prolonged maternal hospital stay with neonatal intensive care unit (NICU) admission. All cases had moderate to severe adhesion intra-operatively. Operative time was long in all cases with a range 55-106min. One of the five cases had a postoperative wound infection. Finally, none of the current series showed fetal or maternal mortalities.

Conclusions: The long-term complications associated with CS should be discussed with patients in the first and subsequent pregnancies. This case series highlighted the outcomes in these unique cases of higher order caesareans.
Abstract

Background: Osteoporosis in children has various underlying causes related to hereditary or secondary to different diseases like: hematological diseases, gastrointestinal diseases, renal diseases, endocrine diseases, drug-induced and immobilization.

Objective: To investigate the causes of osteoporosis in pediatrics age group presented to pediatric clinic in King Abdulaziz University Hospital.

Methods: One hundred thirty one children and adolescents with osteoporosis, visiting pediatric clinic at King Abdulaziz University Hospital (KAUH), Jeddah, Saudi Arabia from 2003 to 2015. Seventy five patients had primary osteoporosis which represents 57.3% of the studied sample of the population. Secondary osteoporosis was found in Fifty six patients which represents 42.7% of the sample of the population. Various underlying causes of primary and secondary of osteoporosis were evaluated by reviewing medical records file.

Results: The mean age group is 11.43 years. Primary osteoporosis specifically osteogenesis imperfect accounts for 57.3% of the cases. Among the secondary cases, hematological diseases, gastrointestinal diseases, endocrine diseases, Renal disease, immobilization, chronic use of steroid, were the most common accounting for 9.2%, 9.2%, 6.9%, 6.1%, 6.1%, 5.4% of the cases respectively.

Conclusion: Osteogenesis imperfecta is the most common cause of children osteoporosis at KAUH, Jeddah, Saudi Arabia. While secondary osteoporosis is still to be considered and screened for.
Research Title: Characteristics of Pediatric Crohn's Disease in Saudi Children: A Multicenter National Study

Journal: GASTROENTEROLOGY RESEARCH AND PRACTICE
Publisher: HINDAWI PUBLISHING CORP
Volume / Issue: n/a
Pages: 7403129

ISSN: 1687-630X

Department: Pediatrics

Authors: Omar I Saadah, Mohammad El Mouzan, Mohammad Al Mofarreh, Ali Al Mehaidib, Mohammad Al Edreesi, Mohammed Hasosah, Abdulrahman Al-Hussaini, Khalid AlSaleem

Correspondence Email: osaadah@kau.edu.sa

Abstract

Background and Aims: Crohn's disease (CD) is an evolving disease in KSA. Little is known about its characteristics in the Saudi population. The aims of this study were to describe the characteristics of Saudi children with CD and to determine whether the characteristics of CD in KSA are different from those seen in Western countries.

Methods: In this study, children younger than eighteen years of age diagnosed with CD between January 2003 and December 2012 were included.

Results: Of 330 patients identified, 186 (56.4%) were males. The median age at diagnosis was 15.8 years. A positive family history for IBD in first-degree relatives occurred in 13.6% of patients. The most common symptoms were abdominal pain (84.2%), weight loss (75.2%), and diarrhea (71.8%). The main disease location was ileocolonic (42.1%) and the main disease behavior was nonstricturing and nonpenetrating (63.6%). Perianal involvement was seen in 60 (18.2%) patients. Laboratory findings revealed anemia in 57.9% of patients, low albumin in 34.5%, and high CRP in 39.4%.

Conclusions: Saudi children with CD have lower frequency of first-degree relatives with IBD, lower prevalence of early onset disease, longer diagnostic delay, higher prevalence of growth failure, and greater frequency of stricturing and penetrating disease behavior compared to Western patients.
Research Title: Co-Infection Assessment in HBV, HCV, and HIV Patients in Western Saudi Arabia

Journal: Journal of Medical Virology
Publisher: WILEY PERIODICALS, INC.
Volume / Issue: 88/0
Pages: 1545-1551
ISSN: 1096-9071
Department: Medical Microbiology and Parasitology
Authors: Jamil A Al-Mughales
Correspondence Email: almughales@hotmail.com

Abstract

To estimate the prevalence of diagnosed and undiagnosed coinfections among HIV, HBV, and HCV infected patients. Retrospective analysis of laboratory records for HIV, HBV, and HCV patients presenting at the HIV outpatient clinic. Serological data including hepatitis B surface antigen (HBsAg), hepatitis B e-antigen (HBeAg), hepatitis B e-antibody (anti-HBe), antibodies to HIV and HCV, anti-toxoplasmosis IgG and IgM antibodies, and anti-syphilis antibodies (VDRL) were collected. We obtained data for 628 (218 HCV, 268 HBV, and 142 HIV) patients. Male-to-female ratios were 1:1 for HCV, 3:4 for HBV, and 5:3 for HIV. Age means (SD) were 54.24 (16.40), 44.53 (18.83), and 40.39 (15.92) years for HCV, HBV, and HIV, respectively. In HIV group, the prevalence of HBV and HCV coinfections was 8.5% and 2.8%, respectively. In HBV group, the prevalence of HCV and HIV coinfections was 1.1% and 1.5%, respectively. In HCV group, HIV or HBV coinfections occurred at the same frequency (1.4%). An absence of screening for coinfections was detected in 7.0–48.5% patients as per the group and the infectious agent; which represents an estimated proportion of 20 out of 1,000 patients with an undiagnosed coinfection. Despite a relatively low prevalence of coinfections, a significant proportion of cases remain undiagnosed because of a lack of systematic screening.
Abstract

Objectives: To evaluate the impact of body mass index (BMI) on limitation of physical activity and the associated effect on behavioral, school, and social problems among obese children in Western Saudi Arabia.

Methods: A cross-sectional obesity survey was conducted in Jeddah, Saudi Arabia. Data were collected between August 2014 and February 2015 from 281 obese children aged between 2-18 (girls: 130, boys: 151). Participants were selected randomly to represent different economic status, level of education, and family structure.

Results: The mean age of participants was 10.5 years for girls and 10.6 years for boys. Higher BMI was associated with physical activity problems in walking (50.6%), running (55.8%), and exercise (44.3%), with school problems in attention (37.4%) and follow-up duties fade (31.3%), and with social problems in doing things other children could do (42.8%), playing with others (46%), and continuing play (33.4%). There was no significant relationship between BMI and emotional problems and school attendance.

Conclusion: Higher BMI significantly increased physical limitation, problems maintaining attention in school, and social problems among obese children. However, emotional problems and school attendance did not show a significant correlation with BMI.
Abstract

The objective of the study was to determine the level of Knowledge, Attitude and Practice (KAP) of patients attended dental clinics at King Abdulaziz University Hospital (KAUH) regarding cross infections and infection control in dentistry. A cross-sectional study was conducted among 225 patients who attended the dental clinics of KAUH, Jeddah, Saudi Arabia, 2014. A standardized, confidential, anonymous, interviewing questionnaire was used. Knowledge about dental infections was assessed by 12 MCQs. The attitudes were assessed through answering seven statements on a three-point Likert scale. Patients' self reported practices were also evaluated. Descriptive and inferential statistics were done. Results of the study revealed that 39.5%, 38.7% and 21.8% of the participants obtained poor, fair and satisfactory level of knowledge about infections and infection control in dentistry, respectively. Social media was the commonest source of information about dental infection. Participant's educational level was significantly associated with the level of knowledge about dental infection. Patients had positive attitudes towards infection control in dentistry. Regarding self-reported practice, only few participants would ask dentists about sterilization of dental instruments (9.3%), wearing face mask (13.3%) and gloves (16.4%) if they don't do so. In conclusion, our participants had good attitudes towards infection control in dentistry. However, their knowledge and practice need improvements. Conduction of educational programs is needed through social media, mass media, schools and public places. These programs involve both patients and providers.
Research Title: Desiccation survival of Acinetobacter spp. in infant formula

Journal: FOOD CONTROL
Publisher: ELSEVIER SCI LTD
Volume / Issue: 68
Pages: 162-166
ISSN: 1873-7129
Department: Medical Microbiology and Parasitology
Authors: Noha A Juma, Georgina Manning, Stephen J Forsythe

Correspondence Email: jumanoha@gmail.com

Abstract

Acinetobacter spp. are included under category B in the FAO-WHO list of organisms of concern for neonatal health following the consumption of powdered infant formula. However, the ability of Acinetobacter spp. to maintain their viability in desiccated infant formula over a storage period consistent with the shelf-life of commercially available powdered infant formula (2 years) has not been demonstrated. In this study, 9 clinical and food isolates of Acinetobacter baumannii, A. calcoaceticus, and Acinetobacter genomosp. 3 were desiccated in infant formula and then reconstituted at designated time points. Bacterial viability was followed for a maximum period of 24 months or until the strain became undetectable (<5 x 10(2) cfu/ml). For comparative purposes, one Enterobacter hormaechei and two Enterobacter cloacae strains were also monitored for their desiccation survival. The seven clinical and food strains remained cultivable for the whole duration of the study and showed biphasic survival curves. The initial drop in viable count was up to 3.5 log(10) cfu/ml within 18 h of desiccation exposure. By the end of the study, the reduction in viability was between 3.6 and 4.8 logio cfu/ml. In contrast the A. baumanii and A. calcoaceticus species type strains only persisted for 6 and 9 months, respectively, possibly due to laboratory adaptation. The E. cloacae and E. hormaechei strains were undetectable after 12 and 17 months, respectively. The persistence of Acinetobacter spp. strains in desiccated powdered infant formula, supports the FAO-WHO designation of this organism as a risk to neonatal health.
Abstract

Objectives: The relationship between diabetes mellitus and stroke in the Arab countries is underreported. In this review, we investigate the prevalence of diabetes mellitus among patients with stroke in the Arab world.

Methods: We searched published literature to identify studies reporting on patients with stroke from the Arab countries. Eligible articles were reviewed to extract data on the frequency of diabetes among their samples and on the details of disease diagnostic criteria, control status and stroke subtypes.

Results: We identified 29 studies reporting on a total of 10,242 patients. The estimated prevalence of diabetes among the ischaemic stroke population of these studies was 37.5%. None of the studies described the prevalence of diabetes among haemorrhagic patients with stroke. The criteria for diagnosing diabetes were not always described. Studies from the Gulf countries tended to report a higher prevalence of diabetes mellitus than studies from other Arab-world countries.

Conclusions: There is insufficient reporting regarding the status of diabetes mellitus and its complications. The majority of studies suggest a remarkable variability in its prevalence. We hope that this review will draw attention to this prevalent health problem and prompt a better estimation of the impact of diabetes mellitus on the vascular health of our nations.
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<th>Research Title:</th>
<th>Diagnostic Utility of Total IgE in Foods, Inhalant, and Multiple Allergies in Saudi Arabia</th>
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<td>Journal:</td>
<td>JOURNAL OF IMMUNOLOGY RESEARCH</td>
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<td>Publisher:</td>
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<td>Department:</td>
<td>Medical Microbiology and Parasitology</td>
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<td>Jamil A Al-Mughales</td>
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<td>Correspondence Email:</td>
<td><a href="mailto:almughales@hotmail.com">almughales@hotmail.com</a></td>
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**Abstract**

Objective: To assess the diagnostic significance of total IgE in foods, inhalant, and multiple allergies.

Methods: Retrospective review of the laboratory records of patients who presented with clinical suspicion of food or inhalant allergy between January 2013 and December 2014. Total IgE level was defined as positive for a value > 195 kU/L; and diagnosis was confirmed by the detection of specific IgE (golden standard) for at least one food or inhalant allergen and at least two allergens in multiple allergies.

Results: A total of 1893 (male ratio = 0.68, mean age = 39.0 +/- 19.2 years) patients were included. Total IgE had comparable sensitivity (55.8% versus 59.6%) and specificity (83.9% versus 84.4%) in food versus inhalant allergy, respectively, but a superior PPV in inhalant allergy (79.1% versus 54.4%). ROC curve analysis showed a better diagnostic value in inhalant allergies (AUC = 0.817 (95% CI = 0.796-0.837) versus 0.770 (95% CI = 0.707-0.833)). In multiple allergies, total IgE had a relatively good sensitivity (78.6%), while negative IgE testing (< 195 kU/L) predicted the absence of multiple allergies with 91.5% certitude.

Conclusion: Total IgE assay is not efficient as a diagnostic test for foods, inhalant, or multiple allergies. The best strategy should refer to specific IgE testing guided by a comprehensive atopic history.
Research Title: Does Val/Val genotype of GSTP1 enzyme affects susceptibility to colorectal cancer in Saudi Arabia?

Journal: NEUROENDOCRINOLOGY LETTERS
Publisher: MAGHIRA & MAAS PUBLICATIONS
Volume / Issue: 37/1
Pages: 46-52
ISSN: 0172-780X
Department: Pathology
Authors: Mohamad Nidal Khabaz, Jaudah Ahmed Al-Maghrabi, Taoufik Nedjadi, Mamdooh Abdullah Gari, Marwan Bakarman, Zohair Jamil Gazzaz, Adel Mohammad Ibrahim

Correspondence Email: mnkhabaz@kau.edu.sa

Abstract

OBJECTIVES: Glutathione S-transferase pi (GSTP1) is a candidate enzyme that may be involved in colorectal cancer susceptibility. Polymorphism of GSTP1 gene may cause changes in expression or structure which lead to alteration in the efficiency of catalytic function of the enzyme variants, i.e., deficient detoxification of carcinogens and consequently influences colorectal cancer development. The present report examined the possible impact of GSTP1 (Ile105Val) polymorphism and the risk of colorectal cancer.

METHODS: Samples of paraffin embedded tissues from 83 patients with colorectal cancer as well as thirty five non-cancerous colon tissues were collected from the archive of the pathology department at King Abdulaziz University in Saudi Arabia. All cancer and control samples were subjected to DNA extraction then amplification. DNA genetic analyzer from Applied Biosystems was used to sequence the product of amplification for genotypes determination.

RESULTS: None of the genotypes of GSTP1 was associated with the risk of colorectal cancer development. There were no statistical differences in the frequencies of GSTP1 genotypes between colorectal cancer cases and controls.

CONCLUSION: The incidence of (Val/Val) genotype in colorectal cancer cases was three folds higher than controls. This finding is not statistically significant, but it could be of clinical consequence that it may increase the risk of colorectal cancer in Saudi Arabia.
The increase in the cardiovascular disease (CVD)-associated mortality rate in the Middle East (ME) is among the highest in the world.

The aim of this article is to review the current prevalence of dyslipidaemia and known gaps in its management in the ME region, and to propose initiatives to address the burden of dyslipidaemia.

Published literature on the epidemiology of dyslipidaemia in the ME region was presented and discussed at an expert meeting that provided the basis of this review article.

The high prevalence of metabolic syndrome, diabetes, familial hypercholesterolaemia (FH) and consanguineous marriages, in the ME region, results in a pattern of dyslipidaemia (low high-density lipoprotein cholesterol and high triglycerides) that is different from many other regions of the world. Early prevention and control of dyslipidaemia is of paramount importance to reduce the risk of developing CVD.

Education of the public and healthcare professionals and developing preventive programs, FH registries and regional guidelines on dyslipidaemia are the keys to dyslipidaemia management in the ME region.
Research Title: Effect of the Family Food Environment and Dietary Behaviors on Obese Children and Adolescents

Journal: JOURNAL OF DIABETES & METABOLISM
Publisher: Wiley-Blackwell
Volume / Issue: 7/3
Pages: Article No.: UNSP 661
ISSN: 2155-6156

Department: Pediatrics
Authors: Abdulmoein Eid Al-Agha, Nouf Mohammed AL-Nosani
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Abstract

Introduction: The prevalence of overweight and obesity among the children are increasing in the last two decades in Kingdom of Saudi Arabia. However, there are limited studies regarding dietary behaviour on children and adolescents with obesity.

Materials and methods: A cross-sectional study data collected over six months August 2014-February 2015. Sample size was 293 children and adolescents (4-16 years old age) randomly selected from the ambulatory clinic in King Abdulaziz University Hospital. Data analysed by using statistical package for social science (SPSS), version 16.

Results: There was a significant relation between eating outside the home and Body Mass Index and ratio of center circumference to hip, (p = 0.018). The data shows that children who eat while they watch television have higher Body Mass Index score than who were not (p = 0.036, r = 0.143). Moreover, there were also association of children dietary behaviour and Body Mass Index scores of children. Children who drink soft drinks (p = 0.023, r = 0.141) and not doing exercises (p = 0.01, r = 0.347 and p = 0.008, r = -0.167 have high Body Mass Index respectively). On the other hand, we found that kids who eat with their families have lower weight while height was controlled (p = 0.012, r = -0.335).

Conclusion and recommendations: Findings, along with the results of the present study, suggest that the availability of obesity-promoting foods in an adolescent's home and eating behaviour promotes the consumption of these foods/fluids and increase the risk of obesity for both sexes. Therefore we recommended that to regulate the availability of unhealthy food/fluids may reduce adolescent BMI change as well we advise to decrease fast food and soft drinks consumption.
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<th>Research Title:</th>
<th>Effectiveness of Colorectal Cancer Counseling on Patients and their Relatives in Saudi Arabia, single Institution</th>
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<td>Journal:</td>
<td>Medical Science</td>
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<td>Publisher:</td>
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<td>Department:</td>
<td>Radiology, Internal Medicine</td>
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<td>Authors:</td>
<td>S Alkhayyat, A Abusanad, R Alwassiah, M Attar, D Allali, M AlJehani, M Khoja, S Alraddadi, A Aljahdali, S Alshammari, General Note</td>
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<td>Correspondence Email:</td>
<td><a href="mailto:Salkhayyat@kau.edu.sa">Salkhayyat@kau.edu.sa</a></td>
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**Abstract**

Background: Colorectal cancer (CRC) is a common cancer. Relatives of CRC patients are at a higher risk for developing CRC. Although screening rates remains low, early screening shows decrease in mortality of CRC.

Objective: To determine the impact of physician counseling on raising the awareness of CRC patients and their relatives about the importance of early CRC screening.

Method: A Cross-sectional study was performed on CRC patients and their relatives with a sample size of 104 patients and 30 patient's relatives. Data was collected through a telephone – interview and using a validated questionnaire, visits to the oncology division and the surgical department.

Results: 104 CRC patients and 30 relatives were included. 22 patients (21.2%) received counseling by the physician and 82 patients (78.8%) were not. 25 patients (24%) counseled their relatives. 67% of CRC patients did think it is important to counsel their relatives and 40% of the relatives did not think it is important to proceed with CRC screening.

Conclusion: This study demonstrates the role of physician counseling in patient awareness of the risk of CRC among their relatives. Therefore, improving physician’s counseling skills is greatly needed in our community to improve the early detection of CRC among the relatives of CRC patient in Saudi Arabia.
OBJECTIVE: The aim of the study was to evaluate the pediatric emergency department (PED) in a main teaching hospital.

METHOD: Retrospective review of all children presented to PED at King Abdulaziz University Hospital from September to November 2014 was performed. We classified priority into the following 5 stages: 1, need resuscitation; 2, emergent; 3, urgent; 4, less urgent; and 5, nonurgent.

RESULTS: A total of 2567 children (58.9% boys) attended PED for 3 months. Toddler age group was the highest. Respiratory complaints were the commonest (36%), followed by gastrointestinal complaints (20%). The majority were classified as priority 3 (52.3%) and priority 4 (30.7%). The admission rate was 12.3% and the mean (range) length of stay (LOS) was 5.85 (0.2-25) hours. Saudi nationals were less likely to wait for 5 hours or longer, less likely to be admitted, but more likely to leave PED without being evaluated. There was a negative correlation between higher priorities and time from triage to PED. There was a positive correlation between the higher priorities and LOS.

CONCLUSIONS: Most children who were seen in PED were priority 3 and therefore needed to be seen. However, a considerable percentage of priority 4 and 5 could have been seen in ambulatory clinics. Most lower priorities were Saudi nationals who were most likely to leave without being seen. Prolonged LOS, overcrowding, and high percentage of admission are the main challenges.
Objectives: Nonsyndromic orofacial cleft (NSOFC) etiology is multifactorial and heterogeneous. This study aimed to identify environmental risk factors related to NSOFC in the Western Region of Saudi Arabia.

Methods: A case-control study carried out in seven hospitals in two main cities (Jeddah and Maddina) over 2 years on parents of 112 infants with NSOFC (infants were also examined) and 138 infant controls, matched for age (<18 months), gender, and location, completed a questionnaire on 3-month pregestation and first trimester events.

Results: There was significantly increased NSOFC risk with twin pregnancies (P=.01, odds ratio [OR] = 9.5, 95% confidence interval [CI]: 1.15 to 78.4), maternal antibiotic use (P=.021, OR = 2.71, 95% CI: 1.11 to 6.62), antiemetic medication (P=.005, OR = 2.85, 95% CI: 1.3 to 6), severe morning sickness (P=.006, OR = 3.6, 95% CI: 1.34 to 9.65), illness (P=.009, OR = 2.19, 95% CI: 1.17 to 4.08), common cold/flu (P=.003, OR = 3.32, 95% CI: 1.48 to 7.58), Jorak smoking (P=.004, OR = 14.07, 95% CI: 1.55 to 128.1), and passive smoking (P=.05, OR = 2.05, 95% CI: 1.05 to 4.01). Reduced NSOFC risk was found with calcium supplementation (P=.02, OR = 0.32, 95% CI: 0.11 to 0.88), incense use (P=.03, OR = 0.58, 95% CI: 0.34 to 0.98), and maternal drinking water, with Zamzam water (which contains a high concentration of minerals) showing a significant protective effect compared with tap water (P=.01, 95% CI: 0.06 to 0.6) and bottled water (P=.02, 95% CI: 0.03 to 0.57).

Conclusion: Twin births, maternal antibiotic use, antiemetic medication, severe morning sickness, common cold/flu, Jorak smoking, and passive smoking were associated with infants born with NSOFC. Calcium supplementation, incense use, and Zamzam water reduced the risk of NSOFC, raising the possibility of community preventive programs.
Research Title: Epidemiology and clinical consequences of occupational exposure to blood and other body fluids in a university hospital in Saudi Arabia

Journal: Saudi Medical Journal
Publisher: Saudi Medical Journal
Volume / Issue: 37/7
Pages: 783
ISSN: 0379-5284
Department: Internal Medicine
Authors: Shireen A Samargandy, Lujain M Bukhari, Shaza A Samargandy, Rawiah S Bahlas, Eman K Aldigs, Maha M Alawi, Nabeela A Al-Abdullah, Tariq A Madani
Correspondence Email: tmadani@kau.edu.sa

Abstract

Objectives: To describe the epidemiological characteristics, clinical impact, and adequacy of post-exposure management of occupational exposure to blood and body fluids (BBFs).

Methods: Retrospective chart review of individuals reporting exposure to BBFs from 2007 to 2013 at King Abdulaziz University Hospital, Jeddah, Kingdom of Saudi Arabia.

Results: The total number of exposures reported was 326 exposures, of which 302 (92.6%) exposures were percutaneous, 21 (6.5%), mucocutaneous, and 3 (0.9%), bites. Nursing staff/students had the highest rate of exposure (149, or 45.6%), followed by physicians (57, or 17.5%). Surgeons were found to have a significantly higher risk for sharp injuries compared with other physicians (26.3%, or 15 exposures, p<0.005). Most (216, or 67%) percutaneous injuries were caused by hollow-bore needles. Majority of exposures (124, or 42.6%) occurred after using the needle/sharp item and before disposal. Two-thirds (219, or 67%) of exposed individuals were immune to hepatitis B at the time of exposure. With appropriate post-exposure management, none of exposed individuals seroconverted to HIV, hepatitis B or C virus infections.

Conclusion: Occupational exposure to BBFs remains a concern among healthcare workers. Educational programs targeting high-risk groups entailing reinforcement of prevention and adherence to post-exposure management guidelines are needed.
**Research Title:** Establishment of reference intervals of clinical chemistry analytes for the adult population in Saudi Arabia: a study conducted as a part of the IFCC global study on reference values

**Journal:** CLINICAL CHEMISTRY AND LABORATORY MEDICINE
**Publisher:** WALTER DE GRUYTER GMBH
**Volume / Issue:** 54/5
**Pages:** 843-855
**ISSN:** 1437-4331

**Department:** Clinical Biochemistry

**Authors:** Anwar Borai, Kiyoshi Ichihara, Abdulaziz Al Masaud, Waleed Tamimi, Suhad Bahijri, David Armbuster, Ali Bawazeer, Mustafa Nawajha, Nawaf Otaibi, Haitham Khalil, Reo Kawano, Ibrahim Kaddam, Mohamed Abdelaal

**Correspondence Email:** boraiaa@ngha.med.sa

**Abstract**

Background: This study is a part of the IFCC-global study to derive reference intervals (RIs) for 28 chemistry analytes in Saudis.

Method: Healthy individuals (n = 826) aged >= 18 years were recruited using the global study protocol. All specimens were measured using an Architect analyzer. RIs were derived by both parametric and non-parametric methods for comparative purpose. The need for secondary exclusion of reference values based on latent abnormal values exclusion (LAVE) method was examined. The magnitude of variation attributable to gender, ages and regions was calculated by the standard deviation ratio (SDR). Sources of variations: age, BMI, physical exercise and smoking levels were investigated by using the multiple regression analysis.

Results: SDRs for gender, age and regional differences were significant for 14, 8 and 2 analytes, respectively. BMI-related changes in test results were noted conspicuously for CRP. For some metabolic related parameters the ranges of RIs by non-parametric method were wider than by the parametric method and RIs derived using the LAVE method were significantly different than those without it. RIs were derived with and without gender partition (BMI, drugs and supplements were considered).

Conclusions: RIs applicable to Saudis were established for the majority of chemistry analytes, whereas gender, regional and age RI partitioning was required for some analytes. The elevated upper limits of metabolic analytes reflects the existence of high prevalence of metabolic syndrome in Saudi population.
### Abstract

**Aim:** To present the authors' experience with assisted reproductive technology (ART) at King Abdulaziz University Hospital in Jeddah, Saudi Arabia.

**Materials and Methods:** Retrospective analysis of data collected from the charts of 264 women who were undergoing their first cycle of ART between September 2013 and March 2014. All the women were treated with gonadotropin-releasing hormone (GnRH) antagonist protocol. For all patients, the documented data included age, infertility type, cause, and hormone profile. Number of follicles >10 mm, endometrial thickness, number of oocytes retrieved, number of fertilized ova, and number of embryos produced, as well as the number transferred, day of transfer, cancellation rate, and treatment administered for luteal phase support (oral and vaginal progesterone) treatment type, and outcome were recorded. The data was analyzed using the Statistical Package for the Social Sciences.

**Results:** The authors included women aged 21 to 39 years (mean standard deviation, 32.28 +/- 5.51). Patients suffered from primary infertility in 69.7% of the cases; approximately 30% of the women had secondary infertility. Eighty of the 264 patients (30.3%) conceived; however, only 56 women (21.2%) had a live birth. The overall cancellation rate in the patients was 12.1%. The following reasons were documented for cases of failure: no oocytes, 16 (6.1%); no sperm, eight (3.0%); and no embryo, eight (3.0%).

**Conclusion:** The success rate of ART at the present institution falls within the range reported in the medical literature. However, further studies should be conducted to investigate the course and outcome of ART in patients who undergo treatment in this institution.
Research Title: Extracurricular leadership development programme to prepare future Saudi physicians as leaders

Journal: JOURNAL OF THE PAKISTAN MEDICAL ASSOCIATION
Publisher: PAKISTAN MEDICAL ASSOC
Volume / Issue: 66/6
Pages: 688-693

ISSN: 0030-9982

Department: Medical Education, Hematology

Authors: Nasra Naeim Ayuob, Faten Mohamed Al Sayes, Basem Salama El Deek

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Abstract

Objective: To describe and evaluate an innovative approach for developing leadership skills in a cohort of medical students through an extracurricular programme.

Methods: The study was conducted at King Abdulaziz University, Jeddah, Saudi Arabia, from April to June of the academic year 2014-15, and comprised medical students from all batches. Mixed-method design was used to evaluate the leadership development programme. Pre- and post-tests were conducted to assess students' learning and their satisfaction was evaluated at the end of the programme. Focus groups were conducted to assess the programme's impact on participants' behaviour. Data analysis was done using SPSS 16.

Results: Of the 55 participants, 45(82%) responded to the evaluation survey. Of them, 29(65%) reported intended changes in their leadership practices immediately after the programme, with 8(28%) of them reporting more than one change. The mean students' satisfaction with the overall performance of the speakers and programme organisation was high at 4.12 +/- 0.91 and 4.54 +/- 0.89, respectively.

Conclusion: Early experience of the leadership development programme produced positive results. An intense programme analysis is required to fully understand this significant organisational need.
The enzyme glutathione S-transferase Mu 1 (GSTM1) is encoded by the GSTM1 gene. Polymorphisms in GSTM1 affect the detoxifying function of the enzyme variants. This forms the basis of the debate about the impact of the GSTM1 null/present genotype on colorectal carcinoma risk. We tested the potential influence of GSTM1 polymorphisms on the development of colorectal cancer. DNA extracted from 83 samples taken from patients that were previously diagnosed as having colorectal carcinoma and from 35 control subjects who did not have colorectal carcinoma were amplified. GSTM1 genotypes were determined by DNA sequencing. The current study revealed that the majority (69/83, 83%) of colorectal cancer cases harbored the null genotype (GSTM1*0/*0), and the remaining 14 (17%) cases harbored either the GSTM1wt/wt or the GSTM1wt/*0 genotype. In contrast, among the control cases, 23 (65%) had the null genotype (GSTM1*0/*0) and 12 (35%) had either the GSTM1wt/wt or the GSTM1wt/*0 genotype. The current report emphasizes the impact of the GSTM1 null genotype on the increased risk of colorectal carcinoma in Saudi Arabia.
Research Title: Gut microbiome and dietary patterns in different Saudi populations and monkeys

Journal: Scientific reports
Publisher: Nature Publishing Group
Volume / Issue: 6
Pages: Article No.: 32191
ISSN: 2045-2322
Department: Medical Microbiology and Parasitology
Authors: Emmanouil Angelakis, Muhammad Yasir, Dipankar Bachar, Esam I Azhar, Jean-Christophe Lagier, Fehmida Bibi, Asif A Jiman-Fatani, Maha Alawi, Marwan A Bakarman, Catherine Robert, Didier Raoult

Correspondence Email: Didier.raoult@gmail.com

Abstract

Host genetics, environment, lifestyle and proximity between hosts strongly influence the composition of the gut microbiome. To investigate the association of dietary variables with the gut microbiota, we used 16S rDNA sequencing to test the fecal microbiome of Bedouins and urban Saudis and we compared it to the gut microbiome of baboons living in close contact with Bedouins and eating their leftovers. We also analyzed fermented dairy products commonly consumed by Bedouins in order to investigate their impact on the gut microbiome of this population. We found that the gut microbiomes of westernized urban Saudis had significantly lower richness and biodiversity than the traditional Bedouin population. The gut microbiomes of baboons were more similar to that of Bedouins compared to urban Saudis, probably due the dietary overlap between baboons and Bedouins. Moreover, we found clusters that were compositionally similar to clusters identified in humans and baboons, characterized by differences in Acinetobacter, Turicibacter and Collinsella. The fermented food presented significantly more bacteria genera common to the gut microbiome of Bedouins compared to urban Saudis. These results support the hypothesis that dietary habits influence the composition of the gut microbiome.
Abstract

Background: Healthcare-associated infection accounts for more deaths. There are millions spent annually as a direct cost, yet these infections are frequently preventable through hand hygiene. Although the hand hygiene is a relatively simple procedure, health care workers’ compliance remains a major pitfall and a complex phenomenon that is not easily changed. To our knowledge, there are no published researches on hand hygiene knowledge and compliance changes after an intervention in King Fahd Armed Forces Hospital.

Aim: The current research investigated hand hygiene knowledge and compliance among HCWs for the period of six months. Methods: A three-phase intervention study was conducted among all health care workers at King Fahd Armed Forces Hospital, using WHO structured self-administered questionnaire and Observation checklist, during the period from September 2014 to May 2015.

Results: four hundred and eighty health care workers were invited and completed the study, with a response rate of 100%. Females constituted 78.3% of the population. More than half of HCWs (51.9%) were married. 85.2% of the HCWs were non-Saudi and two third with nursing background. Gender, department, baseline knowledge, and knowledge following three months of intervention were significantly associated with hand hygiene compliance.

Conclusions: Hand hygiene improvement is affordable, and effective in healthcare setting, and a prolonged approach of education intervention and continuous observation results in improving hand hygiene knowledge and compliance.
**Abstract**

Background: To assess the effectiveness of wet cupping (Hijama) as a treatment of female factor infertility. The primary outcome measured was pregnancy rates after Hijama. The secondary outcome measured was the effect on the reproductive hormonal profile before and after Hijama.

Methods: A pilot clinical study was conducted for the use of Hijama as treatment for female infertility at King Abdulaziz University Hospital from September 2013 to May 2015. Inclusion criteria included: patients with female factor infertility between 20-50 years of age. Exclusion criteria were women who were menopausal, male factor infertility and pregnancy. Informed consent was obtained from all patients. Upon inclusion in the study, an interview with the participant was done. Blood tests were done at the initial visit which included a complete blood count and hormonal profile (FSH, LH, Estradiol, Progesterone, TSH) if not done already. Patients had repeated Hijama each month if pregnancy did not occur.

Results: Out of 59 women, 31 (52.5%) had primary infertility and 28 (47.5%) had secondary infertility. The duration of infertility ranged from 1 to 22 years. In 40 women (67.8%), the partner had a normal semen analysis and 19 (32.2%) had oligospermia. 12 women had an abnormal hystosalpingiogram (20.3%) with two women with complete bilateral tubal blockage. 36 women (61%) had a normal hormonal profile (FSH, LH, TSH, Prolactin). 12 patients (20.3%) became pregnant after hijama; 7 patients had only one or two sessions of Hijama and one patient had 7 sessions. Factors that were found to affect pregnancy rate included: patient with no dysmenorrhea (p 0.034), secondary infertility diagnosis (p 0.005) and history of OCP use (P 0.04). There were significant changes of the hormonal profile before and after Hijama.

Conclusions: Hijama might be beneficial in infertile women to achieve a pregnancy. Further studies are needed to confirm the findings from this study.
Abstract

Background: Irritable bowel syndrome (IBS) is a highly prevalent gastrointestinal disorder that can cause disability and economic burden. Nurses are a vital part of the medical team and their well-being is an important issue. Yet, few studies have been done concerning IBS among nurses.

Objectives: To determine the prevalence, severity, and predictors of IBS among nurses working at King Abdulaziz University Hospital, Jeddah, Saudi Arabia.

Materials and methods: A cross-sectional study was conducted among 229 nurses who fulfilled the eligibility criteria. They were selected by stratified random sampling during 2014-2015. A validated, confidential, self-administered data collection sheet was used for collection of personal and sociodemographic data. Rome III Criteria, IBS Severity Scoring System (IBS-SSS), Hospital Anxiety and Depression Scale (HADS), and Pittsburgh Sleep Quality Index (PSQI) were included. Both descriptive and inferential statistics were done. A multiple logistic regression analysis was done to determine the predictors of IBS.

Results: The prevalence of IBS among nurses was 14.4%, and IBS-Mixed type was the commonest variety (54.5%). Positive family history of IBS, working in outpatient clinics, having day shift, poor sleep quality, and high anxiety and depression scale scores were significantly associated with IBS. After controlling for confounding factors in regression analysis, the predictors of IBS were food hypersensitivity (aOR = 4.52; 95% CI: 1.80 - 11.33), morbid anxiety (aOR = 4.34; 95% CI: 1.49-12.67), and positive family history of IBS (aOR = 3.38; 95% CI: 1.12-13.23).

Conclusion: The prevalence of IBS was 14.4%. Food hypersensitivity, morbid anxiety, and family history were the predictors of IBS. Screening and management of IBS, food hypersensitivity, and psychological problems among nurses are recommended.
Abstract

Although empathy is considered one of the essential attributes of professionalism for medical students, the empathy level of the Saudi medical students was not assessed till now while it was assessed worldwide. This study aimed to determine the level of empathy among medical students in different study years at Faculty of Medicine (FOM), King Abdulaziz University (KAU), Jeddah, and to explore in depth the factors that affect it. This comparative cross sectional study used a translated Arabic version of the Jefferson Scale of Physician Empathy student version (JSPE-SV). It was distributed to all medical students in different study years at KAU during the academic year 2014-2015 and the response rate was 58.3 %. Data were collected and analyzed using the statistical package of Social sciences (SPSS) version 22. The mean empathy score was 106.55±19.16 and it was higher, but nonsignificant, in females than males. It increases along with the study year and its level among the 6th year students was significantly higher (p=0.004) than that of the 2nd year. Intact marital status of parents (p=0.012), satisfactory relationship with mother and father (p=0.009, p=0.012), having a patient in the family (p=0.002) were significantly associated with higher empathy level. Student’s empathy level was relatively low but it was increasing throughout the study years denoting the positive impact of the medical curriculum. More highlights on the patients physician relationship all through the medical curriculum is needed to emphasize and promote empathy of the student.
Research Title: Knowledge and Awareness of Colorectal Cancer among Undergraduate Students at King Abdulaziz University, Jeddah, Saudi Arabia: a Survey-Based Study

Publisher: APOCP
Volume / Issue: 17/5
Pages: 2479-2483
ISSN: 1513-7368
Department: Surgery, Internal Medicine, Clinical Biochemistry
Authors: M Imran, Z Sayedalamin, SS Alsulami, M Atta, M Baig
Correspondence Email: minmuhammad@kau.edu.sa

Abstract

Background: This study explored the knowledge and awareness about colorectal cancer (CRC) among undergraduate students of one of the leading universities in Saudi Arabia, along with the mode of information access.

Materials and Methods: The present cross-sectional study was conducted at the King Abdulaziz University, Jeddah, Saudi Arabia, among students of different faculties. The study questionnaire, containing 28 items, was adapted from surveys identified in the relevant literature. The CRC awareness questionnaire consisted of an awareness section (early CRC signs and symptoms, and risk factors) and a knowledge section. The data were analyzed using the SPSS version 21.0.

Results: A total of 525 undergraduate students participated in the study. The majority were females (63.0%) and approximately half (56.8%) were medical students. The majority of the students (82.3%) were aware of CRC, and 68% thought that CRC is a preventable disease. Regarding colorectal cancer screening tests, only one-third of students (33%) had actual knowledge, while the majority of the students (77.0%) thought that there are tests which help in early detection. Only 4% of the participants had a family history of CRC. The majority of the participants (84%) thought that CRC is a disease that can be cured. Almost 50-60% participants had good awareness level regarding risk factors, and signs and symptoms. Regarding knowledge, participant responses varied for family history (52%), age (59%), chronic infection of the colon (72%), obesity and lack of exercise (66%). More than one-third of the students had received information material regarding CRC from their curriculum followed by social media (20.4%), and nearly 40% from other sources such as TV, hospital and mass media. Female participants had significantly better awareness in a few questions regarding CRC awareness as compared to their male counterparts. There was a significant difference observed between medical and non-medical students (<0.001) in overall score of awareness and knowledge about CRC while no significant difference found in gender-wise comparison.

Conclusions: Knowledge and awareness of students about CRC were not up to the mark. Medical students and female students had better knowledge in a few areas, but the overall situation is dismal.
Abstract

Background: One of the major health problems is inappropriate use of antibiotics that may be affected by several factors. The improper use of antibiotic may cause a serious problem of emerging multidrug resistance organisms (MDRO) without the public realizing it.

Objectives: The study was carried out to assess knowledge, attitude and practice towards antibiotic use among patients and relatives attending to King Abdulaziz University Hospital, Jeddah, Saudi Arabia, and to investigate the factors that associated with knowledge, attitude and practice towards antibiotic use. Methods: A cross sectional survey was conducted at King Abdulaziz University Hospital in the outpatient clinics.

Results: four hundred and seventy nine participants completed the study, with mean age 37.24±12.17, 75.78% were married, 39.87% were holding a bachelor degree, and 27.14% have insurance coverage. Three quarters of the participants were earning less than 10,000 SR and around 46% of the participants reported to have co-morbidities. Participants consuming antibiotics in the past year knew the type of antibiotic and consult their physician for medication had a higher mean knowledge towards the use of antibiotics. Females, Saudis, married, living with families of five members or less, with an income more than ten thousand S.R and administer antibiotics properly by physician prescription have a positive attitude towards antibiotic use.

Conclusion: knowledge towards antibiotic use was greatly affected by marital status, educational level and antibiotic used in the past year.
Research Title: Knowledge, attitudes, and behaviors of dentists regarding child physical abuse in Jeddah, Saudi Arabia

| Journal: | Child Abuse & Neglect |
| Publisher: | Elsevier |
| Volume / Issue: | 54 |
| Pages: | 43-46 |
| ISSN: | 0145-2134 |

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Abstract

A large proportion of child physical abuse cases go undocumented and unreported. Dentists can play an important role in identifying and reporting these cases, but little has been reported about this issue in Saudi Arabia. The aims of the study were to (1) assess dentists’ knowledge of child physical abuse, (2) assess dentists’ attitudes towards child physical abuse, and (3) assess the behaviors of dentists in identifying and reporting child physical abuse. A cross-sectional survey of pediatric dentists, pediatric dentistry residents, and dental interns practicing at all of the dental schools in Jeddah, Saudi Arabia was conducted using an anonymous, self-administered questionnaire. The participants in current study demonstrated insufficient knowledge of the signs and symptoms of child physical abuse, actions that should be taken in suspected cases, circumstances in which to report such cases, and the legal authorities to which they should be reported. The attitudes of participants towards detecting and reporting cases were generally positive. Only 11% of the participants had suspected a case of child abuse, and only 3% of them reported it. Lack of knowledge about referral procedures and fear of anger from family members were the main causes of underreporting. In conclusion, this study showed that dentists have insufficient knowledge about child physical abuse but positive attitudes towards their role in detecting and reporting it. This topic should be covered and emphasized in dental schools’ curricula, and healthcare and academic institutes must have a clear protocol to be followed if a case of abuse is suspected.
## Abstract

Liver disease is a leading cause for morbidity and mortality among males and females. Due to several sex hormonal differences between females and males, manifestations and outcomes of liver diseases are different between male and females and several previous reports had addressed these differences. Reports on liver disease among Saudis are sporadic mostly addressing one or two forms of liver disease separately with limited attention to the sex difference in liver disease. This paper is addressing common liver disease among Saudis, stressing on the gender difference in liver disease.
| Research Title: | “Lysinibacillus saudimassiliensis” sp. nov. a new bacterial species isolated from air samples in the urban environment of Makkah, Saudi Arabia |
| Journal: | New Microbes New Infect |
| Publisher: | Elsevier |
| Volume / Issue: | 16 |
| Pages: | 25-27 |
| ISSN: | 2052-2975 |
| Department: | Medical Microbiology and Parasitology |
| Authors: | A. Papadioti, E.I. Azhar, F. Bibi, A. Jiman-Fatani, S.M. Aboushoushah, M. Yasir, D. Raoult, E. Angelakis |
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**Abstract**

We report here the main characteristics of ‘Lysinibacillus saudimassiliensis’ strain 13S34_airτ (CSUR = P1222), a new species of the Lysinibacillus genus that was isolated from air samples in the city environment of Makkah, Saudi Arabia, during the pilgrim period of Hajj 2012.
Abstract

Taking care of children with autism spectrum disorders is not uncommon in emergency departments as they visit hospital for acute medical and psychiatric conditions. The current prevalence and increasing incidence of autism spectrum disorders will increase the demand for hospital and outpatient services for these children, necessitating education of health care professionals and system adaptations. This paper describes a patient with autism spectrum disorder who had some challenging behavior in the emergency department when he presented with anaphylaxis and discusses management strategies that would help in caring for children with autism spectrum disorders.
## Abstract

The haemovigilance system is an adverse event monitoring system established at the beginning of the last decade (1990s) in Europe. It then became a crucial part in quality system of blood transfusion in developed countries. However, there have been difficulties in taking farther steps in the direction of haemovigilance in developing countries up until now. In each country, a proposal of clear simple plan should be submitted to an official national body responsible of transfusion services in the country to get approval and support. The proposal should include aim and objective of having such system. The aim was to prevent the risk and/or to reduce the severity of adverse events, a written policy and standard to be followed, working group or committee to be responsible for the process of implementation, funds to cover system requirement and the running cost of the system. The decision must be taken to apply the haemovigilance system as voluntary or mandatory process according to the need of the country. At national level, the ministry of health (MOH) or the National Blood Authority (NBA) should ensure that bidirectional traceability is maintained from donor to patient and vice versa. In addition, they should ensure that mechanisms are in place for data collection, monitoring, analysis, reporting, evaluation and assessment. Haemovigilance should be part of quality management systems of blood centres and healthcare institutions and should result in improved policies, procedures and practices in the blood transfusion chain.
**Research Title:** Metabolic Phenotype of Obesity in a Saudi Population  

**Journal:** Journal of Proteome Research  

**Publisher:** ACS Publications  

**Volume / Issue:** 10.1021/acs.jproteome.6b00710  

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### Abstract

Metabolic phenotyping of obese populations can shed light on understanding environmental interactions underpinning obesogenesis. Obesity and its comorbidities are a major health and socioeconomic concern globally and are highly prevalent in the Middle East. We employed nuclear magnetic resonance spectroscopy to characterize the metabolic signature of urine and blood plasma for a cohort of obese \((n = 50)\) compared to non-obese \((n = 48)\) Saudi participants. The urinary metabolic phenotype of obesity was characterized by higher concentrations of N-acetyl glycoprotein fragments, bile acids, lysine, and methylamines and lower concentrations of tricarboxylic acid cycle intermediates, glycine, and gut microbial metabolites. The plasma metabolic phenotype of obesity was dominated by sugars, branched chain amino acids, and lipids, particularly unsaturated lipids, with lower levels of plasma phosphorylcholine and HDL. Serum hepatic enzymes, triglycerides, and cholesterol mapped to specific metabolic phenotypes, potentially indicating the dysregulation of multiple distinct obesity-related pathways. Differences between urine and plasma phenotypes of obesity for this Saudi population and that reported for Caucasian individuals indicate population disparities in pathways relating to ketogenesis (more apparent in the Saudi obese population), dysregulated liver function, and the gut microbiome. Mapping population-specific metabolic perturbations may hold promise in establishing population differences relevant to disease risk and stratification of individuals with respect to discovery of new therapeutic targets.
Research Title: microRNA analysis of gastric cancer patients from Saudi Arabian population

Journal: BMC Genomics
Publisher: BioMed Central
Volume / Issue: 17/9
Pages: 751
ISSN: 1471-2164
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Abstract

BACKGROUND: The role of small non-coding microRNAs (miRNAs) in several types of cancer has been evident. However, its expression studies have never been performed in gastric cancer (GC) patients from Saudi population. First time this study was conducted to identify miRNAs that are differentially expressed in GC patients compared with normal controls.

METHODS: We investigated the role of miRNAs in GC patients using formalin-fixed paraffin-embedded (FFPE) tissues of 34 samples from GC patients (early stage = 7 and late stage = 26) and 15 from normal control. We have used miRNA microarray analysis and validated the results by Real-time quantitative PCR (RT-qPCR).

RESULTS: We obtained data of 1082 expressed genes, from cancer tissues and noncancerous tissues (49 samples in total). Where 129 genes were up-regulated (P > 0.05) and 953 genes (P > 0.05) were down-regulated in 49 FFPE tissue samples. Only 33 miRNAs had significant expression in early and late-stage cancer tissues. After candidate miRNAs were selected, RT-qPCR further confirmed that four miRNAs (hsa-miR-200c-3p, hsa-miR-3613, hsa-miR-27b-3p, hsa-miR-4668-5p) were significantly aberrant in GC tissues compared to the normal gastric tissues.

CONCLUSIONS: In this study we provide miRNAs profile of GC where many miRNAs showed aberrant expression from normal tissues, suggesting their involvement in the development and progression of gastric cancer. In early and late-stage miR-200c-3p showed significant down regulation as compare to control samples. Many of miRNAs reported in our study showing up-regulation are new and not reported before may be due to population difference. In conclusion, our results suggest that miR-200c-3p had potential to use as diagnostic biomarker for distinguishing GC patients from normal individuals and can be used for diagnosis of cancer at early stage.
Mobile Phone Use and Risk of Adverse Health Impacts among Medical Students in Jeddah, Saudi Arabia

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Family and Community Medicine

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Background: Internationally, there is growing concern about the adverse health effects of mobile phone use by young people.

Aim: To determine the pattern of mobile phone use among medical students and determine the potential association between degree of use and self-reported health impacts.

Methods: A cross-sectional study was carried out on 472 medical students in King Abdulaziz University. Self-administered specially designed questionnaire was used to collect data regarding the following: Socio-demographic characteristics, pattern of phone use and self-reported health complaints.

Results: The students’ median duration of mobile phone use was 330 min/day and was significantly higher in females (P= 0.04). A positive significant correlation was observed between the health complaints score and the average daily duration of use (r =0.139, P=0.002). Adjusted multiple logistic regression analysis revealed that heavy mobile use was significantly associated with self-reported sleep disturbances, headache (AOR=4.76), fatigue (AOR=4.67), depression (AOR=2.63), nervousness (AOR=1.64), musculoskeletal pain (AOR=2.14) and visual problems (AOR=2.40).

Conclusion: mobile phone use occupies a significant part in the daily life of medical students. The heavy use of mobile phone in calling and non-calling activities was associated with a high level of subjective health complaints with dose dependent pattern. After controlling for other important predictors, heavy mobile use was associated with sleep disturbances, headache, depression, nervousness, eye and musculoskeletal problems. Excessive use of mobile phones should be avoided and social awareness increased through health education activities. In addition, employing a speaker-phone device for longer daily use and recommended parental procedures are taken to prevent young people being woken by their mobile phones.
Mothers' Knowledge Regarding The Hazards Xenoestrogens Pose To Young Females: A Cross-Sectional Study In Western Saudi Arabia

ROAD
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Pediatrics
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Background: Xenoestrogens are endocrine-disrupting chemicals capable of altering or interfering with the natural actions of endogenous hormones. However, there is currently a paucity of data regarding the public’s knowledge of the risks xenoestrogens pose, especially for young females, and regarding their knowledge of measures that can be taken to prevent such risks. This study aim to investigate mothers’ knowledge of the hazards associated with xenoestrogen exposure in young females in western Saudi Arabia.

Methods: This cross-sectional study was conducted at the pediatric ambulatory clinic at King Abdulaziz University Hospital, Jeddah, Saudi Arabia, between June and August 2016. We randomly selected mothers with at least one daughter aged 6–15 years. In total, 794 mothers participated. Data were gathered on the participant demographics, beliefs about xenoestrogens, and knowledge of xenoestrogen-containing products and related risks.

Results: The mean age of the participants was 38.4 ± 7.01 years. Most were of Saudi origin (n = 625, 78.7%). There were 378 (47.6%) mothers with a low/average level of education, whereas 416 (52.4%) were highly educated. Only 219 (27.6%) had received previous information regarding xenoestrogens; the remaining 575 (72.4%) had not. There was a significant association between the mothers’ education level and their knowledge of xenoestrogen hazards.

Conclusions: Our findings indicate that knowledge of xenoestrogens among mothers in Saudi Arabia is limited. Hence, programs and activities using social media, as well as educational campaigns, need to be established to increase awareness.
**Abstract**

Background: Stroke is a long-term condition. Estimation of stroke outcomes is lacking. Stroke is known as the most common cause of disability among adults. The measurement of Health-Related Quality of Life (HRQOL) is important to understand the actual status of the patients.

Aim: The aim of this study was to assess HRQOL among stroke patients and analyze clinical and functional factors that influence it.

Material and method: A cross-sectional study was applied to 65 stroke outpatients, 33 from Assiut University hospital, Assiut, Egypt and 32 from, King Abdulaziz University, Jeddah, Saudi Arabia. A questionnaire was used to complete related data and assessment of HRQOL was done by the use of Barthel index, SF36, and SSQOL by personal interview.

Result: No significant differences were detected between two studied groups in all characteristics. For all study sample, our patients had low mean scores in all SF36 domains, the lowest was for RE with 3.46 ± 9.1 and GH was the best mean (51.7 ± 12.99). As regards SSQOL, patients had low mean scores on the lowest subscale in productivity (6.72 ± 3.21), whereas the language was the least affected (15.86 ± 6.26). There was a significant difference between the means of PCS and SSQOL in post-stroke duration which was significantly higher in >24 months (37.21 ± 8.59 and p = 0.007and 141.57 ± 36.12 and p = 0.052 respectively) than in the shorter durations. The independent patients had significantly higher PCS and SSQOL mean scores than who need assistance and immobile ones (26.79 ± 5.09 and p≤ 0.0001 and 101.93 ± 22.16 and p≤ 0.0001 respectively). Age and mobility were significantly negative correlated with PCS, SSQOL, and Barthel scores while there was a significant positive correlation between ULVC and LLVC testing grades and PCS, MCS, SSQOL and Barthel index scores. In the linear regression model, duration, mobility and voluntary control of lower limbs were predictors for PCS of SF-36 (p = 0.045, 0.000 and 0.036 respectively). There were no significant predictors on MCS. On the other hand Mobility and voluntary control of lower limbs were significant predictors for SSQOL (p = 0.001 and 0.051 respectively).

Conclusion: Stroke patient had poor QOL. A need for post-stroke care programs for improving the physical, mental and social quality of life for those patients is mandatory.
Research Title: Multiple Introductions of Dengue 2 Virus Strains into Saudi Arabia from 1992 to 2014

Journal: Vector-Borne and Zoonotic Diseases
Publisher: MARY ANN LIEBERT
Volume / Issue: 16/6
Pages: 391-399
ISSN: 1557-7759
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Abstract

Introduction: Dengue is a significant arboviral infection that represents a major public health concern worldwide. The infection is endemic in most parts of South East Asia, sub-Saharan Africa, and Latin America. Among the four dengue virus (DENV) serotypes, DENV-2 has been reported to be the predominant serotype in Saudi Arabia since 1992. However, virological and epidemiological data of DENV-2 from Saudi Arabia are severely deficient and require further investigations.

Methods: Full genome sequencing of a recent DENV-2 isolate and phylogenetic analysis of all available DENV-2 sequences from Saudi Arabia.

Results: Based on full genome and envelope (E) gene sequence, we show that a recent isolate (DENV-2-Jeddah-2014) belongs to the Indian subcontinent lineage of the Cosmopolitan genotype with close similarity to recent strains from Pakistan. Interestingly, the E gene sequence of DENV-2-Jeddah-2014 isolate was slightly divergent from those previously identified in Saudi Arabia between 1992 and 2004 with three to nine amino acid (aa) substitutions. While our data show that the Cosmopolitan genotype is still circulating in Saudi Arabia, they highlight four distinct genetic groups suggesting at least four independent introductions into the Kingdom.

Conclusions: The close clustering of DENV-2 isolates reported from Saudi Arabia between 1992 and 2014 with strains from countries providing the highest numbers of pilgrims attending either Hajj or Umrah pilgrimages (Indonesia, Pakistan, India) clearly suggests a role for pilgrims or expatriates coming from DENV endemic countries in DENV-2 importation into Saudi Arabia. Accordingly, continuous monitoring of the circulation of DENVs in Saudi Arabia must be implemented to undertake effective control and management strategies in the Kingdom. Screening of the pilgrims coming to perform Hajj and Umrah might help prevent the introduction of new DENV strains, which is expected to increase the burden of the disease not only in Saudi Arabia but also in other countries.
Tuberculosis (TB) remains a major cause of morbidity and mortality worldwide. Continued surveillance of drug susceptibility help determining treatment regimen by anti-tuberculous drugs. Gene Xpert PCR sensitivity was compared to the liquid culture media by Versa TREK for detecting Mycobacterium tuberculosis complex (MTBC). Rates, patterns and types of anti-tuberculosis drug-resistance at King Abdulaziz University Hospital (KAUH), Jeddah, KSA were determined from January 2013 to June 2014. A total of 101 tuberculous patients were included, 43 Saudi tuberculous patients and 58 non-Saudi tuberculous patients. All resistances detected were primary resistances. PCR Sensitivities for detection of MTBC were 29.4%, 80%, 87.5%, 77.8% and 100% in AFB-negative samples and AFB +1,+2,+3 and +4 positive samples respectively. MTBC percentage detected by PCR was 88.1% in AFB-positive samples and 29.9% in AFB-negative ones. Versa Trek detection time was 15.01±7.32 days in AFB-positive samples and 26.63±6.7 days in AFB-negative ones. MTBC pyrazinamide resistance was (13.86%), followed by streptomycin (7.9%), rifampicin (3.96%) and isoniazid (3.96%). Mono-resistance percentages to pyrazinamide, rifampicin and isoniazid were 11.88%, 1.98% and 0.99% respectively. MDR-TB was 1.98% and anti-TB resistance percentage was 24.75%. There was no significant difference between Saudi and non-Saudi tuberculous patients regarding anti-tuberculous drugs resistance.
OBJECTIVE To determine which factors are associated with higher costs of urethroplasty procedure and whether these factors have been increasing over time. Identification of determinants of extreme costs may help reduce cost while maintaining quality.

MATERIALS AND METHODS We conducted a retrospective analysis using the 2001-2010 Healthcare Cost and Utilization Project-Nationwide Inpatient Sample (HCUP-NIS). The HCUP-NIS captures hospital charges which we converted to cost using the HCUP cost-to-charge ratio. Log cost linear regression with sensitivity analysis was used to determine variables associated with increased costs. Extreme cost was defined as the top 20th percentile of expenditure, analyzed with logistic regression, and expressed as odds ratios (OR).

RESULTS A total of 2298 urethroplasties were recorded in NIS over the study period. The median (interquartile range) calculated cost was $ 7321 ($5677-$10,000). Patients with multiple comorbid conditions were associated with extreme costs [OR 1.56, 95% confidence interval (CI) 1.19-2.04, P=.02] compared with patients with no comorbid disease. Inpatient complications raised the odds of extreme costs (OR 3.2, CI 2.14-4.75, P<.001). Graft urethroplasties were associated with extreme costs (OR 1.78, 95% CI 1.2-2.64, P=.005). Variations in patient age, race, hospital region, bed size, teaching status, payor type, and volume of urethroplasty cases were not associated with extremes of cost.

CONCLUSION Cost variation for perioperative inpatient urethroplasty procedures is dependent on preoperative patient comorbidities, postoperative complications, and surgical complexity related to graft usage. Procedural cost and cost variation are critical for understanding which aspects of care have the greatest impact on cost.
Research Title: Nutritional status of children with inflammatory bowel disease in Saudi Arabia

Journal: WORLD JOURNAL OF GASTROENTEROLOGY
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Department: Pediatrics

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Abstract

AIM: To assess the prevalence of nutritional disorders in children with inflammatory bowel disease (IBD) in Saudi Arabia.

METHODS: The data from a national cohort of children newly diagnosed with IBD between 2003 and 2012 were analyzed. The diagnosis of IBD and the differentiation between Crohn's disease (CD) and ulcerative colitis (UC) were confirmed by gastroenterologists according to the standard criteria. The body mass index (BMI) of each child [weight (kg)/height(2) (m)] was calculated at the time of diagnosis. The World Health Organization standards and references were used and the BMI for age > +1 and < -2 standard deviation score were used to define overweight and thinness, respectively. Age stratification analysis was performed to investigate any age-related variation in the prevalence of nutritional status between children < 10 years of age and older.

RESULTS: There were 374 children from 0.33 to 17 years of age, including 119 (32%) children with UC and 255 (68%) with CD. All of the children were Saudi nationals, and 68 (57%) of the UC and 150 (59%) of the CD children were males. A positive history of anorexia at the time of diagnosis was found in 30 (25%) patients with UC and 99 (39%) patients with CD. The prevalence of thinness was 31%, 35% and 24% in children with IBD, CD and UC, respectively, with a significantly higher prevalence of thinness in children with CD than in children with UC (P = 0.037) only in the age group of 10-17 years (P = 0.030). The prevalence of overweight was 16 %, 15% and 20 % in the children with IBD, CD and UC, respectively, indicating a higher prevalence in UC that was statistically significant only in the age group of 10-17 years (P = 0.020).

CONCLUSION: A high proportion of children with IBD presented with overweight instead of the classical underweight. Awareness of this finding is important for patient care.
PURPOSE: To study ocular morphology and visual function in relation to general growth in moderate-to-late preterm (MLP) children.

METHODS: Visual acuity (VA), refraction, optic disc parameters, biometric values and anthropometric measures were obtained from 50 eight-year-old MLP and 43 full-term children. Macular parameters were examined by optical coherence tomography. Serum insulin-like growth factor I (IGF-I) levels were analysed at birth and at assessment and delta IGF-I was calculated.

RESULTS: Total macular volume was significantly less in MLP than in controls (both eyes p < 0.01). Macular volume correlated with head circumference (HCF) at assessment [right eye (RE) p = 0.002, r = 0.67; left eyes (LE) p = 0.01, r = 0.54] and refraction (both eyes p < 0.05, r = 0.4) in the MLP children. Furthermore, central retinal thickness correlated significantly with delta IGF-I (RE p = 0.03, r = -0.51, LE p = 0.006, r = -0.59) and refraction (both eyes p < 0.01, r = 0.5) and optic disc areas correlated with weight and height at assessment (all p < 0.05, r = 0.4). Total axial length correlated with HCF at assessment (both eyes p < 0.01, r = 0.5) and VA logMAR (both eyes p < 0.02, r = -0.4).

CONCLUSIONS: Macular volume was significantly less in MLP children than in controls examined at 8 years of age. General growth of children and IGF-I levels seem to be involved in development of ocular growth and morphology.
**Research Title:** Oral Hypoglycemic Agents Give Better Glycemic Control in Saudi Type 2 Diabetic Patients Than Insulin Therapy

**Journal:** Novel Treatment for Diabetes  
**Publisher:** Endocrine Society  
**Volume / Issue:** FRI-703-FRI-703  
**Pages:**

**ISSN:**

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**Abstract**

Background: Type 2 diabetes (T2D) is one of the fastest growing public health problems in both developed and developing countries1 imposing a high financial burden on health care costs2. The IDF has estimated that the numbers of adults with diabetes is expected to rise from 387 millions in 2014 to 592 millions by 20352. Saudi Arabia shows one of the highest prevalence of diabetes in the world3. The aim of diabetes management is to keep the glycated Hemoglobin (Hb A1c) < 7.0%4, pre-prandial capillary plasma glucose between 70-130 mg/dl and peak postprandial capillary plasma glucose < 180 mg/dl to prevent, or at least delay further complications. 5 Insulin therapy is reported to lead to better glycemic control of T2DM in many populations6-10. The latest “Saudi National Reference For Diabetes Mellitus Guidelines In Primary Health Care” recommends the use of insulin in patients not able to reach glycated hemoglobin (HbA1c) level of 7.0% with other treatment regimens. Insulin will be made freely available in all primary health care centers, leading to more physicians prescribing it.

Aim: To compare the effect of currently used different treatment regimens (oral hypoglycemic agents, insulin therapy, and combination of both) on glycemic control and other cardio metabolic risk factors in Saudi T2DM patients

Methods: Using a cross sectional study design, patients diagnosed with type 2 DM were randomly recruited from the diabetes outpatients clinics at King Abdulaziz University hospital (KAUH), and King Fahad Armed Force Hospital (KFAFH) in Jeddah, between June 2013 and July, 2014. Ethical approval was obtained from the “Committees on the Ethics of Human Research” at the two hospitals. Only those without change in treatment modality for the last 18 months were asked to participate. A signed informed consent form was obtained from all those willing to participate before inclusion in the study. Exclusion criteria included: patients recently diagnosed with diabetes (less than 1 year period), pregnancy, having any other severe chronic illness or diabetic complications (i.e. end stage renal disease, liver disease, recent myocardial infarction, etc). Height was measured bare footed to the nearest 0.5 cm using a stationary stadiometer. Weight was measured to the nearest 0.5 Kg while wearing light street clothing using a portable calibrated scale (Omron BF 511). Both measurements were used to calculate body mass index (BMI). Blood pressure was measured following the recommendations of the Joint National Committee using a standard mercury sphygmomanometer with the cuff on the right upper arm. 11In addition; using face-to-face interview; a questionnaire covering the management plan followed by the patient, and demographic information was completed. Treatment plan was recorded from files as, lifestyle modification (i.e. diet and exercise), oral hypoglycemic agents, insulin, or any combination of them. Glycated hemoglobin (HbA1c), and lipid profile were measured in fasting blood samples by routinely used automated methods at the biochemistry laboratory in the respective hospital. Hb A1c <7% was considered controlled, in accordance to the American Diabetic Association Guidelines (ADA).
Data was entered, coded, and analyzed using SPSS, version 20. One-way analysis of variance (ANOVA) was used to test for differences between means of different treatment groups. P-values <0.05 were considered statistically significant.

Results: One hundred and ninety-seven subjects were recruited from both locations (41.1% were males and 58.9% were females). Active, structured patients’ education; including lifestyle modification; programs were not implemented in either hospital. Hence, none of the patients was managed by lifestyle modification alone. The majority of the patients were found to be using oral hypoglycemic agents only in comparison to insulin only, or combined therapy (Figure 1). Only 18.3% of the sample had controlled Diabetes mellitus (DM). Even though the mean HbA1c was high in all patients’ groups, there was a significant difference between the means when using different management methods of DM. The mean HbA1c was lower in patients using oral hypoglycemic agents only, compared to means of those using insulin, or combined therapy in patients with disease duration of ≤10 years (P= 0. 001), and in those with longer duration of the disease (P= 0. 001 ) as presented in (Table 1). However, there was no significant difference in means of BMI for patients' groups following different management methods (P= 0.188) (Table 1). Furthermore, there was no significant difference between means of lipids profile components; namely triglyceride, LDL, and HDL among different management methods groups (Table 1). In addition, results indicated that there are differences in means of systolic and diastolic blood pressure in patients with >10 years DM duration (P=.032, .045, respectively), with lower mean in the group taking insulin only. However, this was not noted in patients with ≤10 years duration of disease.

Table 1: Glycated hemoglobin, lipid profile, and Blood Pressure (Means± SD) in groups of patients using different management modalities

Discussion and Conclusion: Among all factors associated with better glycemic control in diabetic patients, active patients’ education; including lifestyle modification; has been proven worldwide to be the main determinant 13. Even though a recent Saudi study showed significant association between diabetes education and glycemic improvement 14, such education programs are not usually implemented in government run health centers in the Kingdom of Saudi Arabia, Hence, it was not surprising to find poor glycemic control among studied patients; even when insulin therapy is used; in the absence of well structure diabetes health education and diabetes educational material in the two centers. Therefore, it might be disadvantageous to encourage the wider dependence on insulin therapy without first investigating reasons for poor glycaemic control in Saudi patients with T2DM, and ways to improve it.
Research Title: Outbreak of Middle East respiratory syndrome at tertiary care hospital, Jeddah, Saudi Arabia, 2014

Journal: Emerging infectious diseases
Publisher: Centers for Disease Control and Prevention
Volume / Issue: 22/5
Pages: 794
ISSN: 10.3201/eid2205.151797
Department: Internal Medicine


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Abstract

During March–May 2014, a Middle East respiratory syndrome (MERS) outbreak occurred in Jeddah, Saudi Arabia, that included many persons who worked or received medical treatment at King Fahd General Hospital. We investigated 78 persons who had laboratory-confirmed MERS during March 2–May 10 and documented contact at this hospital. The 78 persons with MERS comprised 53 patients, 16 healthcare workers, and 9 visitors. Among the 53 patients, the most probable sites of acquisition were the emergency department (22 patients), inpatient areas (17), dialysis unit (11), and outpatient areas (3). Infection control deficiencies included limited separation of suspected MERS patients, patient crowding, and inconsistent use of infection control precautions; aggressive improvements in these deficiencies preceded a decline in cases. MERS coronavirus transmission probably was multifocal, occurring in multiple hospital settings. Continued vigilance and strict application of infection control precautions are necessary to prevent future MERS outbreaks.
### Abstract

AIM: This study evaluated the survival outcome, pattern of failure and prognostic factors in cervix uteri cancer patients.

METHODS: We reviewed the data of 60 patients with stages IB-IVA cancer who were treated between January 2004 and December 2010.

RESULTS: Most patients (n = 50; 83%) had squamous cell carcinoma. Stage IIB was the most common presentation (n = 41; 68%). Forty-seven patients (78%) received Cisplatin concurrent with radiotherapy (CRT). The 2- and 4-year overall survival (OS) was 82% and 79%, respectively. Prolongation of the overall treatment time (OAT) for greater than 56 days, advanced stage and pretreatment hemoglobin (Hb) levels (<10 g/dL) negatively predicted OS (P = 0.039, P = 0.044 and P = 0.008, respectively). The 2- and 4-year disease-free survival (DFS) rates were 80% and 69%, respectively. Vaginal infiltration and brachytherapy (orthogonal versus CT-based planning) were significant factors for the prediction of relapse (P = 0.048 and P = 0.049, respectively). The 2- and 4-year loco-regional control (LRC) rates were 78% and 70%, respectively, and the distant metastasis-free survival (DMFS) rates were 82% and 79%, respectively. Vaginal infiltration was the only negative predictive factor for LRC (P = 0.045), and pathological tumor grade was the only factor indicative of distant metastases (P = 0.037). Grade 3 or 4 late rectal reactions were reported in two patients (3%), and no patients developed grade 3 or 4 urinary reactions.

CONCLUSION: The treatment results in our cervix uteri cancer patients and the prognostic factors are comparable to those of previous reports. Orthogonal brachytherapy planning and vaginal infiltration negatively predicted relapse.
Abstract

Hypothesis / aims of study: Vaginal delivery (VD) is a major risk factor for pelvic floor dysfunction (PFD) (1). Despite its debatable protective effect, prevention of PFD is a major reason for the steadily increasing incidence of caesarean section (CS) on maternal request (2). This is the first study to evaluate pelvic floor (PF) outcomes with a combination of validated instruments and magnetic resonance imaging (MRI) after either type of delivery in the same patient population. We aimed to prospectively investigate the impact of mode of delivery on PF structure, function, symptoms and quality of life (QoL) in nulliparous women using MRI and validated assessment tools before and after childbirth. We also aimed to determine whether delivery by CS could prevent PF injury and subsequent development of PFD.

Study design, materials and methods: In this prospective cohort observational study, continent primiparae aged ≥18 yrs with singleton pregnancy were invited to participate in the third trimester. Women with previous anti-incontinence/prolapse surgery and medical disorders including diabetes/collagen disorders were excluded. We recruited 240 women and performed the following investigations antepartum: stress test, perineometry, pelvic organ prolapse quantification system (POP-Q), translated/ validated Arabic language versions of the International Consultation on Incontinence Questionnaire-Urinary Incontinence (ICIQ/UI SF) and Pelvic Floor Distress Inventory (PFDI-20). We excluded 55 (23%) women postpartum and 27 of the remaining 185 (14.6%) dropped-out. Exclusion criteria for VD were instrumental delivery, prolonged second stage and 3rd/4th degree tears. Caesarean sections were either elective or emergency in the 1st stage before pushing, a participant was otherwise excluded. All investigations, in addition to PF MRI, were repeated 12 months postpartum. Investigators and radiologists were blinded to mode of delivery. Preliminary data of 98 participants were accepted as a poster at ICS 2014.

Results: A total of 158 (65.8%) women were assessed postpartum; 118 (74.7%) delivered vaginally and 40 (25.3%) by CS. Women were analyzed within and between their delivery groups. At the one-year assessment, mean changes in all POP-Q component points were statistically significant after VD and CS. However, mean differences comparisons of both delivery groups showed significant objective worsening in all component points (apart from C, D and TVL) after VD (table 1). Perineometry at one-year showed significant reduction in PF muscle strength and endurance after VD but not after CS (P <0.001). MRI data were available for 117 women; all abnormalities in urethral and vaginal support were after VD. No abnormalities in iliococcygeus muscle or anal sphincters were detected after both types of delivery (table 2). The relationships between injuries in puborectalis (PR) muscle, fascia level III, POP stage ≥2 and positive stress test were statically significant. Mean changes were statistically significant for PFDI-20 summary score and its subscales after CS and VD. However, mean differences comparisons of both delivery groups showed significant increase in subjective worsening and greater symptom distress after VD in all of QoL measurements apart from Colon Rectal Anal Distress Inventory (table 3). The risk of having
POP ≥stage 2, positive stress test and moderate/severe urinary incontinence, respectively, was 12.7, 6.2 and 5.6 times more after VD as compared to CS.

Interpretation of results: Our data show that VD causes injuries to the PF musculature and fascia. It is significantly associated with PF muscle weakness, POP, SUI and have negative impact on symptoms and QoL. The mechanism of development of SUI and POP is probably related to PR muscle and fascial injuries.

Concluding message: Despite the potential increase in morbidity and mortality, CS (elective/1st stage before pushing) appears to be protective to the PF and the subsequent development of PFD in primiparous women. The results of our study could help in providing women who decide to expose themselves to the potential risks of CS in order to protect their PF with balanced discussion and better evidence. Table 1. POP-Q component points after VD and CS
This cross-sectional study investigated the prevalence and correlates of lower-extremity amputation (LEA) in a Saudi population with diabetic foot ulcer. The study population consisted of 91 participants, with a median age of 55.0 years. Biomarkers were measured following standard protocols. Local symptoms of foot ulcer, including peripheral neuropathy (PN), peripheral artery disease (PAD), and foot infection were diagnosed by standard objective diagnostic tools or diagnosed clinically by a specialized surgeon. The severity of foot ulcer was classified according to the Wagner wound classification system. The prevalence of LEA was 29.7% in this population. The odds ratio for LEA comparing extreme tertiles was 2.42 (95% confidence interval [CI] = 0.70-8.45; P for trend = .03) for ulcer size and 0.22 (95% CI = 0.06-0.87; P for trend = .03) for high-density lipoprotein cholesterol. C-reactive protein and homocysteine levels were each positively associated with odds of LEA, but the associations became nonsignificant in multivariable models. Participants with foot infection showed a significantly higher adjusted prevalence of LEA (40.7%, 95% CI = 27.1%-54.3%) compared with those without foot infections (19.3%, 95% CI = 6.0%-32.4%, P = .03). Participants with Wagner grade 3 presented a significantly higher prevalence (40.5%, 95% CI = 27.8%-53.2%) than those with Wagner grade of 1 or 2 (16.4%, 95% CI = 2.4%-30.5%, P = .02). Participants with PN and PAD showed nonsignificantly higher prevalence of LEA. We found a relatively high prevalence of LEA as well as several clinical markers and local symptoms associated with LEA in this Saudi population with diabetic foot ulcer.
King Abdulaziz University, Faculty of Medicine
2014-2015-2016 Community Related Research

<table>
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<tr>
<th>Research Title:</th>
<th>Prevalence and Incidence of Uterine Fibroid at King Abdulaziz University Hospital Saudi Arabia</th>
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<td>Journal:</td>
<td>Clinical Medicine and Diagnostics</td>
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<td>Department:</td>
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<td>Authors:</td>
<td>Hanan Y Abbas, Ibrahim A Awad, Ebtihal Alharbi, Halaiem Alaameri, Shaima Althubaiti, Layla Ashkar</td>
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<tr>
<td>Correspondence Email:</td>
<td><a href="mailto:habbas1@kau.edu.sa">habbas1@kau.edu.sa</a></td>
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Abstract

Aim of the work: Extensive study has been made to get specific ratio of the women who had uterine fibroid and the total range of incidence of the leiomyoma.

Methods and Material: Retrospective study of (1111) women patients referred from obstetrics and gynecology clinics (Women’s’ age between 15 and 79 years, mean was 52yrs). Data was collected from January 2013 to December 2014 at the Hospital of king Abdulaziz University.

Results: A total of 236(21.2%) of 1111 patients were cases of uterine fibroid, while the remaining 875(78.8%) cases had normal ultrasound findings. According to the clinical symptoms that related to fibroid, bleeding which included 65(27.5%) was the commonest symptom for the patient’s then abdominal pain 32(13.6%). The 123(52%) of the women presented with solitary fibroids and 113(48%) women with multiple leiomyomata.

Conclusions: Uterine fibroid highly related with reproductive age by (56.3%) and this result is matching to the result published in previous studies.
Reasearch Title: Prevalence and predictors of hepatitis B in Jeddah City, Saudi Arabia: a population-based seroprevalence study

Journal: JOURNAL OF INFECTION IN DEVELOPING COUNTRIES
Publisher: Open Learning on Enteric Pathogens
Volume / Issue: 10/10
Pages: 1116-1123
ISSN: 1972-2680

Department: Family and Community Medicine

Authors: Rajaa M Al-Raddadi, Noha A Dashash, Hani A Alghamdi, Hanan S Alzahrani, Abdullah J Alsahahi, Abdullah M Algarni, Zeyad M AlRaddadi, Majed M Alghamdi, Raghad F Hakim, Abdulmohsen Hamdan Al-Zalabani

Correspondence Email: aalzalabani@gmail.com

Abstract

Introduction: Despite solid preventive strategies to reduce the risk of hepatitis B virus (HBV) infection, recent reports about its prevalence and predictors are lacking in several Saudi cities at the community level. This study aimed to assess the seroprevalence of HBV and to identify the most important predictors among the Saudi population in Jeddah city, Saudi Arabia.

Methodology: A cross-sectional study was conducted among 5,584 Saudi people attending primary health-care centers in Jeddah city during 2012/2013. Sociodemographic and hepatitis-related data were collected. HBV was diagnosed by ELISA test. The seroprevalence of HBV was estimated, and appropriate statistical analyses were performed, including univariate and multivariable regression analyses.

Results: The seroprevalence of HBV was 2.2% (95% CI = 1.82-2.58) in the studied participants. The prevalence was higher among non-governmental workers (3.5%), male participants (3.4%) and those aged >= 25 years (2.4%). The most important predictors for increasing the risk of HBV in this study were HBV contacts, male sex, history of dental procedures and blood transfusion. The significant positive risks associated with these predictors were 3.3, 2.5, 2.0 and 1.65, respectively. HBV vaccination, on the other hand, was associated with a significant risk reduction of 88% (OR = 0.12; 95% CI = 0.03-0.51).

Conclusions: The seroprevalence of HBV was relatively low among the Saudi population in Jeddah city reflecting the actions taken by health authorities to control HBV infection. However, more efforts, particularly in relation to health education programmes, strict control of blood banks and dental clinics, are still needed.
Research Title: The Prevalence of Diabetes and Prediabetes in the Adult Population of Jeddah, Saudi Arabia - A Community-Based Survey

Journal: PLOS ONE
Publisher: PUBLIC LIBRARY SCIENCE
Volume / Issue: 11/4
Pages: e0152559
ISSN: 1932-6203
Department: Clinical Biochemistry, Mohammed Hussein Al-Amoudi Chair for Diabetic Foot Research
Authors: Suhad M Bahijri, Hanan A Jambi, Rajaa M Al Raddadi, Gordon Ferns, Jaakko Tuomilehto
Correspondence Email: sbahijri@gmail.com

Abstract
Background: Type 2 (T2DM) is believed to be common in Saudi Arabia, but data are limited. In this population survey, we determined the prevalence of T2DM and prediabetes.

Materials and Methods: A representative sample among residents aged ≥18 years of the city of Jeddah was obtained comprising both Saudi and non-Saudi families (N = 1420). Data on dietary, clinical and sociodemographic characteristics were collected and anthropometric measurements taken. Fasting plasma glucose and glycated hemoglobin (HbA1c) were used to diagnose diabetes and prediabetes employing American Diabetes Association criteria. Multiple logistic regression analysis was used to identify factors associated with T2DM.

Results: Age and sex standardized prevalence of prediabetes was 9.0% (95% CI 7.5-10.5); 9.4% (7.1-11.8) in men and 8.6% (6.6-10.6) in women. For DM it was 12.1% (10.7-13.5); 12.9% (10.7-13.5) in men and 11.4% (9.5-13.3) in women. The prevalence based on World Population as standard was 18.3% for DM and 11.9% for prediabetes. The prevalence of DM and prediabetes increased with age. Of people aged ≥50 years 46% of men and 44% of women had DM. Prediabetes and DM were associated with various measures of adiposity. DM was also associated with and family history of dyslipidemia in women, cardiovascular disease in men, and with hypertension, dyslipidemia and family history of diabetes in both sexes.

Discussion: Age was the strongest predictor of DM and prediabetes followed by obesity. Of people aged 50 years or over almost half had DM and another 10-15% had prediabetes leaving only a small proportion of people in this age group with normoglycemia. Since we did not use an oral glucose tolerance test the true prevalence of DM and prediabetes is thus likely to be even higher than reported here. These results demonstrate the urgent need to develop primary prevention strategies for type 2 diabetes in Saudi Arabia.
## Research Title:
Prevalence of hypertension, obesity, hematuria and proteinuria amongst healthy adolescents living in Western Saudi Arabia

### Journal:
Saudi Medical Journal

### Publisher:
Saudi Medical Journal

### Volume / Issue:
37/10

### Pages:
1120-1126

### ISSN:
1658-3175

### Department:
Pediatrics

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Email: jkari@doctors.org.uk

## Abstract

Objectives: To determine the prevalence of hypertension, obesity, hematuria, and proteinuria among healthy adolescents and to determine the associated risk factors.

Methods: This is a cross-sectional study of 8 intermediate schools in Jeddah, Saudi Arabia between March 2015 and June 2015. Samples were selected randomly and equal proportions from each school for both genders were ensured. Both blood pressure and body mass index were measured and a brief questionnaire was filled out for the specified studied group. Urine dipstick analysis was carried out for 294 children. A second questionnaire was completed for hypertensive and obese subjects in addition to those with hematuria and proteinuria.

Results: A total of 401 children (200 males) with a mean (SD) age of 13.87 (1.27) were included. Hypertension was found in 17.2% with a male to female ratio of 1.4:1. Pre-hypertension was found in 4.2% of our sample with a male to female ratio of 2.1:1. Obesity was found in 19.2% with a male to female ratio of 1.5:1. Obesity was found to be the most significant risk factor for hypertension with a related risk: 2.87, 95% and confidence interval: 1.9-4.3. For urine abnormalities, 10.2% of samples were positive for proteinuria, 17% for hematuria, and 3.1% for both.

Conclusion: It was found that there is a positive correlation between the incidence of obesity and hypertension in adolescents. Hematuria and proteinuria were also found to be high. Screening and prevention programs are therefore recommended.
<table>
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<th>Research Title:</th>
<th>Prevalence of intimate partner violence and its associated risk factors among Saudi female patients attending the primary healthcare centers in Western Saudi Arabia</th>
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<td>Journal:</td>
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<td>Publisher:</td>
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<td>Volume / Issue:</td>
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<td>Authors:</td>
<td>Turki A Alzahrani, Bahaa A Abaalkhail, Iman K Ramadan</td>
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<td>Correspondence Email:</td>
<td><a href="mailto:abalkhail60@hotmail.com">abalkhail60@hotmail.com</a></td>
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**Abstract**

Objectives: To estimate the prevalence of intimate partner violence (IPV) among female patients, age 18-60 years, attending primary health care centers (PHCCs) and to measure its determinants, and reporting behavior.

Methods: A cross-sectional study design using validated, translated, and self-administered questionnaire among 497 Saudi female patients attending PHCCs in Taif, Kingdom of Saudi Arabia (KSA) from January to February 2015 was employed. A 2-stage probability sampling was adopted for selection of PHCCs in the first stage, and then participants in the second stage.

Results: The estimated prevalence of IPV during the last year was 11.9%. Predictors of IPV related to abused women included divorced status and divorced parents; while those related to abusers (husbands) included widowed parents, exposure to violence in childhood, and alcohol or drugs addiction. Most of the abused wives (56%) talked regarding their IPV to their families, their husbands' families (15.2%), or their friends (11.8%); while only a minority (3.3%) complained to the police or to a judge, and no one reported this to a family physician, or to women protection agency.

Conclusion: One out of 10 women is a victim of IPV in Taif, KSA. Intimate partner violence is significantly associated with a number of victim and abuser-related psychosocial factors, the detection of which might help screening for individuals at risk.
Abstract

Acute bacterial meningitis is associated with high rates of morbidity and mortality. Streptococcus pneumoniae is a major cause in adults and children. Choice of empirical antibiotics must be made in consideration of the global increase of resistant strains to penicillin and third-generation cephalosporins. In order to determine the most common pathogens responsible for bacterial meningitis in King Abdulaziz University Hospital (KAUH) in Jeddah, Saudi Arabia, we did a retrospective review of all positive cerebrospinal fluid (CSF) cultures submitted from 1/2006 to 8/2016 for all ages. We identified all causative organisms, and determined the susceptibility pattern of S. pneumoniae and gathered clinical outcome data. The microbiology lab have received a total of 7958 CSF cultures, with 456 (6%) being positive for bacteria or fungi. The most common isolated organisms were the group of coagulase negative Staphylococci. S. pneumoniae was isolated from 15 samples from 13 different patients. Out of the 13 isolates, three showed resistance to penicillin or ceftriaxone (23%). This suggests that drug resistant S. pneumoniae causing meningitis is not uncommon in our hospital. The addition of empirical vancomycin to third-generation cephalosporins to treat community-acquired meningitis might be necessary especially in high risk cases.
### Research Title:
Prevalence of vitamin D deficiency in mother-infant pairs in a tertiary hospital in the west coast of Saudi Arabia

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<td>Volume / Issue:</td>
<td>5/4</td>
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<td>Authors:</td>
<td>Heidi Al-Wassia, Noran Abo-Ouf</td>
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<td>Correspondence Email:</td>
<td><a href="mailto:halwassia@kau.edu.sa">halwassia@kau.edu.sa</a></td>
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### Abstract

**Background:** Vitamin D deficiency in pregnant mothers is a widely recognized public health problem.

**Methods:** A cross-sectional study of pregnant women who gave birth at King Abdulaziz University Hospital, Jeddah, Saudi Arabia, from January 1, 2015, to June 30, 2015, to determine the prevalence and potential risk factors of Vitamin D deficiency and to correlate maternal and cord blood Vitamin D levels.

**Results:** A total of 201 mother-infant pairs were enrolled. There was a high prevalence of Vitamin D deficiency both in mothers (90.5%) and their infants (86%). There was no statistically significant difference in age, parity, body mass index, skin color, education, and employment status between mothers with deficient Vitamin D levels and those with Vitamin D levels 50 nmol/L. There was a statistically, significant positive correlation between maternal and cord blood Vitamin D levels (r = 0.83, P< 0.001).

**Conclusion:** We demonstrated a high prevalence of Vitamin D deficiency in pregnant mothers, which was strongly correlated with cord blood Vitamin D levels. Clinical trials on the effect of supplementing Vitamin D to pregnant mothers and its effect on maternal and neonatal outcomes should be the focus of future research.
Purpose: To assess Quality of Life, job satisfaction and their related factors among nurses working in King Abdulaziz University Hospital, Jeddah, Saudi Arabia. Material and methods: A cross-sectional survey was conducted among 268 nurses, 2014/2015. A validated, confidential data collection sheet was utilized. It contained the World Health Organization Quality of Life-BREF (WHOQOL-BREF), and Job Descriptive Index/Job in General (JDI/JIG) scales. Results: The majority of nurses (83.5%) perceived their general QOL as very good and good. Age, marital status, having children, nationality, income, education, residence, working experience, department and shift time were associated with QOL domains (p<0.05). Similarly, working experience, income, shifts, working in inpatient and surgical departments were associated with job satisfaction. Positive correlations were found between job satisfaction and different QOL domains, and between different JDI/JIG subscales together. Conclusion: Improvement of the modifiable factors as nurses’ income and shift time is needed for better QOL and job satisfaction.
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<th>Research Title:</th>
<th>“Raoultibacter massiliensis” gen. nov., sp. nov., a new bacterium isolated from the human gut of a Saudi Bedouin</th>
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<td>Authors:</td>
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<td>Correspondence Email:</td>
<td><a href="mailto:sophie.edouard@univ-amu.fr">sophie.edouard@univ-amu.fr</a></td>
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**Abstract**

We propose the description of a new bacterial genus and new bacterial species, “Raoultibacter massiliensis,” isolated from a faecal specimen of a 19-year-old healthy Saudi Bedouin
Research Title: Religious beliefs, practices, and health in colorectal cancer patients in Saudi Arabia

Journal: PSYCHO-ONCOLOGY
Publisher: WILEY-BLACKWELL
Volume / Issue: 25/3
Pages: 292-299
ISSN: 1099-1611
Department: Internal Medicine
Authors: Mahmoud Shaheen Al Ahwal, Faten Al Zaben, Mohammad Gamal Sehlo, Doaa Ahmed Khalifa, Harold G Koenig

**Abstract**

Objective: Colorectal cancer (CRC) patients experience considerable psychological stress because of changes brought on by their illness. Religion may be a resource for such patients. We examined the prevalence of religious beliefs and practices in CRC patients and correlation with demographic, social, psychological, and physical health characteristics.

Methods: Seventy CRC patients (all Muslim) in Jeddah, Saudi Arabia, were surveyed using a 13-item Muslim religiosity scale. Standard measures were used to assess depressive symptoms, depressive disorder, and social support; demographic and social factors, psychiatric history, and disease factors were also measured.

Results: All 70 participants (100%) engaged in group worship and prayer (Fard) five times/day, and 75.7% never skipped or combined two or more obligatory prayers; 71.4% read or recited the Qur'an several times/week or daily; 80.0% gave money to the poor each year (Zakat); 71.4% fasted throughout the month of Ramadan (Sawm) and other times as well; 91.4% said they definitely experienced the presence of Allah; and 74.3% said their entire approach to life was definitely based on their religious beliefs. Overall religiosity was inversely related to depressive symptoms (B=-0.58, SE=0.30, p=0.026) and suicidal ideation (B=-0.07, SE=0.03, p=0.025), after controlling for financial status and social factors.

Conclusions: Religious involvement was widespread in this sample of CRC patients in Saudi Arabia and was related to fewer depressive symptoms and less suicidal ideation. No relationship was found with stage of disease or duration of treatment.
Research Title: Religious Involvement and Adaptation in Female Family Caregivers

Journal: JOURNAL OF THE AMERICAN GERIATRICS SOCIETY
Publisher: WILEY-BLACKWELL
Volume / Issue: 64/3
Pages: 578-583
ISSN: 1532-5415
Department: Internal Medicine
Authors: Harold G Koenig, Bruce Nelson, Sally F Shaw, Salil Saxena, Harvey Jay Cohen
Correspondence Email: Harold.Koenig@duke.edu

Abstract

Objectives: To examine the relationship between religious involvement (RI) and adaptation of women caring for family members with severe physical or neurological disability.

Design: Two-site cross-sectional study.

Setting: Community.

Participants: A convenience sample of 251 caregivers was recruited. RI and caregiver adaptation (assessed by perceived stress, caregiver burden, and depressive symptoms) were measured using standard scales, along with caregiver characteristics, social support, and health behaviors. Bivariate and multivariate analyses were conducted to identify relationships and mediating and moderating factors.

Results: Religious involvement (RI) was associated with better caregiver adaptation independent of age, race, education, caregiver health, care recipient's health, social support, and health behaviors (B=0.09, standard error=0.04, t=-2.08, P=.04). This association was strongest in caregivers aged 58-75 and spouses and for perceived stress in blacks.

Conclusion: Religious involvement (RI) in female caregivers is associated with better caregiver adaptation, especially for those who are older, spouses of the care recipients, and blacks. These results are relevant to the development of future interventions that provide support to family caregivers.
AIM: To compare the effect of different treatment regimens (oral hypoglycemic agents [OHGs], insulin therapy, and combination of both) on glycemic control and other cardiometabolic risk factors in type 2 diabetes mellitus (T2DM) patients in Saudi.

SUBJECTS AND METHODS: Patients with T2DM, but no serious diabetic complications, were randomly recruited from the diabetes clinics at two large hospitals in Jeddah, Saudi Arabia, during June 2013 to July 2014. Only those without change in treatment modality for the last 18 months were included. Blood pressure and anthropometric measurements were measured. Treatment plan was recorded from the patients’ files. Fasting blood sample was obtained to measure glucose, HbA1c, and lipid profile.

RESULTS: A total of 197 patients were recruited; 41.1% were men and 58.9% were women. The mean (±SD) age was 58.5 ± 10.5 years. Most patients (60.7%) were on OHGs, 11.5% on insulin therapy, and 27.7% were using a combination of insulin and OHGs. The mean HbA1c was lower in patients using OHGs only, compared with means in those using insulin, or combined therapy in patients with disease duration of ≤10 years (P = 0.001) and also in those with a longer duration of the disease (P < 0.001). A lower mean diastolic and systolic blood pressure was found among patients on insulin alone (P < 0.01). No significant differences were found in lipid profiles among the groups.

CONCLUSION: Insulin therapy, without adequate diabetes education, fails to control hyperglycemia adequately in Saudi T2DM patients. There is a challenge to find out reasons for poor control and the ways as to how to improve glycemic control in T2DM.
Abstract

Background: Little is known about levels of glycemic control and risk factors for uncontrolled hyperglycemia in Saudi children with type 1 diabetes mellitus (T1DM). The aim of the present study was to identify levels of glycemic control, risk factors and predictors of uncontrolled hyperglycemia (HG) and diabetic ketoacidosis (DKA) in children with T1DM.

Methods: A retrospective study was performed on Saudi children and adolescents with confirmed T1DM who were followed at the Pediatric Endocrinology Clinic of the Maternity and Children Hospital, Jeddah, from 2000 to 2014. Data collection included all possible factors that may be associated with uncontrolled T1DM. Patients were classified according to American Diabetes Association guidelines for target HbA1c levels per age group. Comparisons were made between well-controlled (WC) patients, HG patients, and DKA patients. Calculation of odds ratios and logistic regression allowed for estimation of the role of each risk factor in uncontrolled T1DM.

Results: Only 31.2 % of children and adolescents with T1DM were well controlled. Better glycemic control was associated with age < 6 years, urban residence, and T1DM duration <5 years. Glycemic control was not affected by gender, insulin therapy, or comorbidities. The most significant independent predictors of hyperglycemia and DKA were poor compliance with a healthy lifestyle (adjusted hazards ratio [AHR] 28.94; 95 % confidence interval [CI] 8.37–100.04) and an excess intake of sweets (AHR 3.31; 95 % CI 1.54–7.11).

Conclusion: The most significant independent predictor for poor glycemic control (particularly DKA rather than hyperglycemia) in Saudi children and adolescents was poor compliance with a healthy lifestyle with an excessive intake of sweets.
Healthcare settings can amplify transmission of Middle East respiratory syndrome coronavirus (MERS-CoV), but knowledge gaps about the epidemiology of transmission remain. We conducted a retrospective cohort study among healthcare personnel in hospital units that treated MERS-CoV patients. Participants were interviewed about exposures to MERS-CoV patients, use of personal protective equipment, and signs and symptoms of illness after exposure. Infection status was determined by the presence of antibodies against MERS-CoV. To assess risk factors, we compared infected and uninfected participants. Healthcare personnel caring for MERS-CoV patients were at high risk for infection, but infection most often resulted in a relatively mild illness that might be unrecognized. In the healthcare personnel cohort reported here, infections occurred exclusively among those who had close contact with MERS-CoV patients.
Research Title: Risk Factors for Primary Middle East Respiratory Syndrome Coronavirus Illness in Humans, Saudi Arabia, 2014

Journal: EMERGING INFECTIOUS DISEASES
Publisher: Centers for Disease Control and Prevention
Volume / Issue: 22/1
Pages: 49-55
ISSN: 1080-6059

Department: Internal Medicine


Correspondence Email: tmadani@kau.edu.sa

Abstract

Risk factors for primary Middle East respiratory syndrome coronavirus (MERS-CoV) illness in humans are incompletely understood. We identified all primary MERS-CoV cases reported in Saudi Arabia during March November 2014 by excluding those with history of exposure to other cases of MERS-CoV or acute respiratory illness of unknown cause or exposure to healthcare settings within 14 days before illness onset. Using a case control design, we assessed differences in underlying medical conditions and environmental exposures among primary case-patients and 2-4 controls matched by age, sex, and neighborhood. Using multivariable analysis, we found that direct exposure to dromedary camels during the 2 weeks before illness onset, as well as diabetes mellitus, heart disease, and smoking, were each independently associated with MERS-CoV illness. Further investigation is needed to better understand animal-to-human transmission of MERS-CoV.
Objective: The aim was to assess sexual performance by screening Saudi women before and after the age of 40 years.

Materials and Methods: A cross-sectional study (March-May 2013), conducted at King Abdulaziz University Hospital (KAUH), with two groups of women under 40 years of age and aged 40 or more years, were randomly selected from OPD. Ethical committee approved the study. After verbal consent, one-paper self-administered questionnaire was distributed, and filled in anonymously and privately. Questionnaire included demographic data, the six-item version of female sexual function index (FSFI) to assess desire, lubricants, orgasm, satisfaction, and pain. If score was 19 or less, it meant that women needed further investigations (full assessment using FSFI-19).

Results: Out of 194, 49.5% (96) were over 40 years of age and 50.5% (98) were under 40 years of age. Answering the six questions regarding sexual dysfunction indicated that women > 40 years had sexual dysfunction more than women < 40 (statistically significant). A scored of less than 19 was found to be statistically significant in women > 40 years. Post-menopausal women, diabetics, women with urogynecological symptoms and/or psychological disorder required further evaluation.

Discussion: Using the six-item version of FSFI and calculating a score less than 19 for screening, women aged more than 40 years, reduction in estrogen, diabetes, urogynecological symptoms, and psychological disorder were all found to be important factors affecting female sexual dysfunction.
Objectives: To determine sleep habits and sleep quality in medical students during their clinical years using validated measures; and to investigate associations with academic performance and psychological stress.

Methods: In this cross-sectional study, medical students (n= 320) were randomly selected from a list of all enrolled clinical-year students in a Saudi medical school from 2011-2012. Students filled a questionnaire including demographic and lifestyle factors, Pittsburgh Sleep Quality Index, Epworth Sleepiness Scale, and Perceived Stress Scale.

Results: Students acquired on average, 5.8 hours of sleep each night, with an average bedtime at 01:53. Approximately 8% reported acquiring sleep during the day, and not during nighttime. Poor sleep quality was present in 30%, excessive daytime sleepiness (EDS) in 40%, and insomnia symptoms in 33% of students. Multivariable regression models revealed significant associations between stress, poor sleep quality, and EDS. Poorer academic performance and stress were associated with symptoms of insomnia.

Conclusion: Sleep deprivation, poor sleep quality, and EDS are common among clinical years medical students. High levels of stress and the pressure of maintaining grade point averages may be influencing their quality of sleep.
**Research Title:** Susceptibility of influenza viruses circulating in Western Saudi Arabia to neuraminidase inhibitors

**Journal:** Saudi Medical Journal  
**Publisher:** Saudi Medical Journal  
**Volume / Issue:** 37/4  
**Pages:** 461-465  
**ISSN:** 0379-5284  
**Department:** Medical Microbiology and Parasitology  
**Authors:** Ahmed M Tolah, Esam I Azhar, Anwar M Hashem  
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## Abstract

Objectives: To investigate the sensitivity of circulating influenza viruses in Western Saudi Arabia to neuraminidase inhibitors (NAIs); mainly, zanamivir and oseltamivir.

Methods: Respiratory samples were collected from patients presenting with respiratory symptoms to King Abdulaziz University Hospital, Jeddah, Kingdom of Saudi Arabia (KSA) between September 2013 and October 2014. All samples were tested prospectively by real-time reverse-transcription polymerase chain reaction for influenza A and B viruses. Positive samples were then inoculated on Madin-Darby Canine Kidney (MDCK) cells and isolated viruses were examined for their sensitivity to NAIs using fluorescent neuraminidase inhibition assay.

Results: Out of 406 tested samples, 25 samples (6.2%) were positive for influenza A/pdmH1N1 virus, one sample (0.25%) was positive for influenza A/H3N2 virus, and 7 samples (1.7%) were positive for influenza B Yamagata-like virus. Screening of isolated influenza A and B viruses (9 out of 33) for their sensitivity to NAIs showed no significant resistance to available NAIs.

Conclusion: Our results show that circulating influenza viruses in Jeddah are still sensitive to NAIs.
### Abstract

Objectives: Hearing loss is one of the most common afflictions in the world affecting about one in every 1000 newborns (Petersen and Willems 2006). Genetic factors are estimated to be the underlining cause of more than half of the hearing loss cases. The majority of hereditary hearing loss cases is not associated with syndromes (nonsyndromic hearing loss; NSHL) which can be transmitted in an autosomal recessive, autosomal dominant or X-linked modes of inheritance (Petersen and Willems 2006). At least half of the hereditary NSHL cases are caused by mutations in the GJB2/CONNEXIN26 gene (Hereditary Hearing Loss Home Page, http://webh01.ua.ac.be/ hhh/). However, the contribution of GJB2 mutation to NSHL in the Kingdom of Saudi Arabia is minimal (Al-Qahtani et al. 2009) where the rate of children affected with sensineuronal hearing loss was estimated to be approximately 26 children out of 1000 (Bafaqeeh et al. 1994). NSHL can be caused by mutations affecting any one of over 80 deafness loci identified so far making NSHL a very heterogenous trait and complicates diagnosis and genetic counseling (Hilgert et al. 2009).

Methods: The recent advancements in targeted sequencing technologies have made it feasible to sequence multiple genes at a reasonably low cost. Therefore we have designed a targeted sequencing panel using the Ampliseq technology to amplify and sequence 84 genes known to cause NSHL. Genes were selected and custom primers were designed and manufactured through the Ampliseq portal (http://ampliseq.com).

Results: The design resulted in a coverage of 97.42% generating 2697 amplicons with a size range of 125–275 bp in two pools and generating 500.44 kb of DNA sequence.

Conclusion: This panel, which we termed OtoScan will be a useful front line genetic screening tool that will speed up the identification of many genetic causes of hereditary deafness in the Kingdom of Saudi Arabia.
Abstract

Objectives: To evaluate the relationship between body mass index (BMI) and the duration spent on electronic devices, and to assess the factors that can cause obesity among children.

Methods: A cross-sectional study including 541 participants. Data was collected from March to June 2015 via ambulatory pediatric clinics in Jeddah, Kingdom of Saudi Arabia. The BMI standard deviation was calculated based on Center of Disease Control and Prevention (CDC) standards.

Results: The mean age of the participants was 10.1 years. Children who spent >= 2 hours daily on electronic devices showed an increased BMI, and made up 68.4% of the sample.

Conclusion: An increased BMI was more common among children who spent >= 2 hours daily on electronic devices. The relationship between BMI, reduced physical activity, and eating during television viewing was determined.
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<th>The Awareness of Folic Acid Supplements among Women of Childbearing Age in King Abdulaziz University Hospital, Jeddah, Saudi Arabia</th>
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<tr>
<td>Correspondence Email:</td>
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**Abstract**

Background: This study aimed to assess the awareness of the importance of folic acid in preventing neural tube defects (the timing of folic acid supplementation and the right doses) in Jeddah the western region of Saudi Arabia.

Method: A sample of 501 married women in the reproductive age (19-45 years) who visited the outpatients clinics at King Abdulaziz University Hospital between August and October/2015 were asked to participate in a survey study targeting the awareness and the use of folic acid before and during pregnancy. First step was collecting participants’ responds on a range of questions related to socio-demographic and medical characteristics. Then in second step they were provided with questions related to their awareness before and after reading the distributed intervention brochure.

Results: Of the 501 Participants, 317 (63.3%) were Saudies, many were above 30 years of age (55.1%), 460 (91.8%) heard about folic acid and 429 (85.6%) have taken it. However, only 169 (33.7%) knew that it must be given during preconception and as early as the 1st 12 weeks of gestation. A significant difference was found before and after reading the brochure in participants' knowledge about the benefits of folic acid in preventing neural tubal defect, the critical time of administration, and the right doses (P<0.000, P<0.000, P<0.000) respectively. University education was the strongest predictor to have the right information with significant difference (P<0.000). 279 (71.2%) of the participants reported the medical staff as to be their main source of information.

Conclusion: The health care professionals and media need to increase women awareness about the importance of taking folic acid supplementation in the proper time to reduce the risk of neural tube defects.
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<th>Research Title:</th>
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<td>Zakariya Al-Salam, Saleh Al-Alaiyan, Jubara Alallah, Fahad Al-Hazzani, Khalid Alfaleh, Saad Alsaedi, Sameer Y Al-Abdi</td>
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**Abstract**

Premature infants are at a high risk of morbidity and mortality. Furthermore, physiologic immaturity renders most very low birth weight infants (VLBWIs) in need of interventions and stabilization immediately following birth. Some of these may trigger deleterious processes that become significant precursors to acute and chronic morbidities. The Kingdom of Saudi Arabia is lacking guidelines that focus on VLBWI, especially on the first hour of life (golden hour). Therefore, the aim of these practice guidelines is to compliment rather than replace clinical judgment. In addition, golden hour approach will enable units to collaborate in providing comprehensive care to VLBWI and thus will improve their chances of survival without pulmonary, neurodevelopmental, and neurosensory morbidities.
Abstract

Background: Type 2 (T2DM) is believed to be common in Saudi Arabia, but data are limited. In this population survey, we determined the prevalence of T2DM and prediabetes.

Materials and Methods: A representative sample among residents aged ≥ 18 years of the city of Jeddah was obtained comprising both Saudi and non-Saudi families (N = 1420). Data on dietary, clinical and sociodemographic characteristics were collected and anthropometric measurements taken. Fasting plasma glucose and glycated hemoglobin (HbA1c) were used to diagnose diabetes and prediabetes employing American Diabetes Association criteria. Multiple logistic regression analysis was used to identify factors associated with T2DM.

Results: Age and sex standardized prevalence of prediabetes was 9.0% (95% CI 7.5-10.5); 9.4% (7.1-11.8) in men and 8.6% (6.6-10.6) in women. For DM it was 12.1% (10.7-13.5); 12.9% (10.7-13.5) in men and 11.4% (9.5-13.3) in women. The prevalence based on World Population as standard was 18.3% for DM and 11.9% for prediabetes. The prevalence of DM and prediabetes increased with age. Of people aged ≥ 50 years 46% of men and 44% of women had DM. Prediabetes and DM were associated with various measures of adiposity. DM was also associated with and family history of dyslipidemia in women, cardiovascular disease in men, and with hypertension, dyslipidemia and family history of diabetes in both sexes.

Discussion: Age was the strongest predictor of DM and prediabetes followed by obesity. Of people aged 50 years or over almost half had DM and another 10-15% had prediabetes leaving only a small proportion of people in this age group with normoglycemia. Since we did not use an oral glucose tolerance test the true prevalence of DM and prediabetes is thus likely to be even higher than reported here. These results demonstrate the urgent need to develop primary prevention strategies for type 2 diabetes in Saudi Arabia.
## Research Title:
The prevalence of diabetes mellitus in patients with acute coronary syndrome in King Abdulaziz University Hospital (KAUH), Jeddah, Saudi Arabia

## Journal:
International Journal of Research in Pharmacy & Science

## Publisher:
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## Volume / Issue:
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5-8

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2320-6071

## Department:
Surgery, Internal Medicine

## Authors:
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## Abstract
Coronary atherosclerosis is accelerated and highly prevalent in patients with diabetes mellitus. Acute coronary syndrome (ACS) is common in diabetes mellitus and is a major cause of mortality and morbidity in these patients. The aim of this study is to assess prevalence of diabetes mellitus among patients with acute coronary syndrome in King Abdulaziz University hospital, Jeddah, Saudi Arabia. The study included 115 patients (21 females and 94 males) with acute coronary syndrome out of 133 patients admitted to CCU ward of KAUH from January to June 2014. ECG changes and levels of myocardial enzymes (troponin), HbA1C, serum triglycerides and cholesterol were recorded at admission. Out of all patients 70% were diabetics and 20% were prediabetics. Approximately 21% had unstable angina (UA) and 79% had myocardial infarction (MI). Out of 24 patients with unstable angina 4% were nondiabetics, 30% were prediabetics, and 66% were diabetics. Out of 91 patients with myocardial infarction 12% were nondiabetics, 18% were prediabetics, and 70% were diabetics. Serum cholesterol, triglycerides, and LDL levels did not differ between diabetic patients with or without acute coronary syndrome. Diabetes was more frequent among females than males (80.95% vs. 67.02%). In this prospective study about 70% of patients with acute coronary syndrome have diabetes, which may cause more serious complications of acute coronary syndrome.
Background: Introduction: Immune-mediated destruction of platelets is thought to be the mechanism of thrombocytopenia seen after the viremic phase of dengue hemorrhagic fever (DHF). Immuno-suppressants such as steroids, immune globulin and Anti D immunoglobulin are effective in the treatment of this type of immune thrombocytopenic purpura.

Aims: To evaluate the efficacy of oral Prednisolone in the rate of resolution of thrombocytopenia and monitoring of complications in patients recovering from Dengue hemorrhagic fever.

Methods:A controlled study was carried out on diagnosed cases Dengue hemorrhagic patients presenting with sever thrombocytopenia and symptoms like confluent ecchymosis, epistaxis and purpuric rashes. This study was conducted in Ittefaq hospital (trust) in collaboration with KAU Jeddah, during the period of October to December 2013. Treatment group received steroids in two forms i.e. 1st line therapy prednisolone orally or as 2nd line therapy of initial I/V high dose (prednisolone) in pulse doses i.e. 40 mg bid for four days and later oral prednisolone as in 1st line therapy with omeprazole 20 mg bid in addition to standard treatment. Control group received standard supportive care only.

Results: A total of 341 suspected patients were admit in hospital. Serological diagnosis was confirmed in 166 patients. CBC revealed platelet count ≤100x10⁹/l in 106 patients. A group of symptomatic febrile patients have platelet count<20x10⁹/l was selected for therapeutic intervention. 1st line therapy (oral prednisolone was stated in 43 patients. In Fourteen patients 2nd line therapy (high dose dexamethasone pulse) therapy was instituted. Seven of them attained complete response whereas two patients achieved partial response. Four patients were shifted to Anti D therapy. Three deaths occurred during our study. Rest of all the patients improved and were discharged in due course of time.

Summary/Conclusions: This small scale preliminary study shows promising results in reducing the morbidity of patients in a relatively serious stage but large scale double blinded randomized controlled studies are needed before making recommendations on use of steroids in symptomatic thrombocytopenic patients with dengue hemorrhagic fever.
# Abstract

Background: Driven by disease trends, such as obesity and metabolic syndrome, that are increasingly prevalent in the general population, we aimed to evaluate the comorbidities and attributes of the brain-dead organ donor population over time in a longitudinal study.

Methods: We compared overall health and baseline attributes of organ donors between 2000-2005 and 2006-2012 using our prospective transplant database. Descriptive and comparative analyses of the 2 historical cohorts were performed.

Results: A total of 1040 brain-dead organ donors were included in our analysis: 496 from the 2000-2005 period and 544 from the 2006-2012 period. Our analysis revealed that donors from the recent (2006-2012) period were more likely to have increased body mass index (26.4 ± 6.0 v. 25.0 ± 4.8, p = 0.003), smoking history (57.0% v. 27.2%, p < 0.001), coronary artery disease (14.3% v. 3.2%, p = 0.015) and dyslipidemia (19.1% v. 4.2%, p < 0.001), but less likely to have concurrent infection (1.1% v. 7.9%, p < 0.001) than those from the earlier period.

Conclusion: Our data suggest that the characteristics and comorbidities of brain-dead organ donors have somewhat deteriorated over the last decade. Further studies are needed to evaluate the impact of these health attributes on donated organ utilization and outcomes.
Abstract

BACKGROUND: Numerous studies have reported a decline in stroke-related mortality in developed countries.

OBJECTIVE: To assess trends in one-year mortality following a stroke diagnosis in Saudi Arabia.

DESIGN: Retrospective longitudinal cohort study.

SETTING: Single tertiary care center from 2010 through 2014.

PATIENTS: All patients admitted with a primary admitting diagnosis of stroke.

METHODS: Demographic data (age, gender, nationality), risk factor profile, stroke subtypes, in-hospital complications and mortality data as well as cause of death were collected for all patients. A multivariable logistic regression model was used to assess factors associated with one-year mortality following a stroke admission.

MAIN OUTCOME MEASURE(S): One-year mortality.

RESULTS: In 548 patients with a mean age of 62.9 years (SD 16.9), the most frequent vascular risk factors were hypertension (90.6%), diabetes (65.5%), and hyperlipidemia (27.2%). Hemorrhagic stroke was diagnosed in 9.9%. The overall mortality risk was 26.9%. Non-Saudis had a significantly higher one-year mortality risk compared with Saudis (25% vs. 16.8%, respectively; P=.025). The most frequently reported causes of mortality were neurological and related to the underlying stroke (32%), sepsis (30%), and cardiac or other organ dysfunction-related (each 9%) in addition to other etiologies (collectively 9.5%) such as pulmonary embolism or an underlying malignancy. Significant predictors in the multivariate model were age (P < .0001), non-Saudi nationality (OR 1.8, CI 95 1.1 to 2.9; P=.019), and hospital length of stay (OR 1.01, CI 95 1 to 1.004; P=.001).

CONCLUSION: We observed no decline in stroke mortality in our center over the 5-year span. The establishment of stroke systems of care, use of thrombolytic agents, and opening of a stroke unit should play an important role in a decline in stroke mortality.

LIMITATIONS: Retrospective single center study. Mortality data were available only for patients who died in our hospital.
Abstract

Vitamin D deficiency is a major health problem in the Saudi population. A negative association between blood pressure and vitamin D level has been suggested in several clinical and epidemiological studies and evidence for an effect of vitamin D in lowering blood pressure was reported. These findings indicate that 1,25(OH)2D3 deficiency may play a role in the pathogenesis of hypertension through its effect on the renin-angiotensin system. We are the first to investigate the correlation between blood pressure or renin concentration and vitamin D status in the Saudi population.

METHODS: we included 201 healthy Saudi premenopausal females (20-45 years old). Blood pressure was measured by a standardized method using an automated blood pressure monitor (BPTru). Fasting blood samples were collected from each participant after 20 minutes of rest in the seated position. Serum cholecalciferol, PTH and renin concentration were measured by sandwich chemiluminescence immunoassay method (DiaSorin, Italy).

RESULTS: The analysis included 192 subjects who were normotensive (blood pressure <140/90 mmHg). A total of 34% of women had a severe deficiency (vitamin D ≤ 12.5 nmol/L); 41% had moderate deficiency (vitamin D levels between 12.5 - 25 nmol/L); 23% had mild deficiency (vitamin D level ≥ 25 - < 50 nmol/L); and 2% had insufficiency (vitamin D level ≥ 50 - ≤ 75 nmol/L). None had a sufficient level of ≥75 nmol/L. The systolic blood pressure ranged from 79 - 130.5 mmHg and the diastolic from 48.5 - 85.5 mmHg. Both systolic and diastolic blood pressures were significantly higher in women that were in the lower 2 quartiles of vitamin D. However, linear regression analysis adjusting for potential confounders showed that 25(OH)D level was not a predictor of either systolic or diastolic blood pressures. A negative correlation (although not significant) was found between vitamin D level and plasma renin concentration in this study group.

CONCLUSION: Vitamin D deficiency was highly prevalent among the study group. Vitamin D was not a predictor of either systolic or diastolic blood pressure. There was a negative correlation between vitamin D level and renin concentration although not statically significant. It is possible that any underlying relationship was obscured by the relatively young age group or due to the narrow blood pressure range of the studied population. A larger sample size including hypertensive subjects may be needed.
### Abstract

BACKGROUND: The aim of this study was to compare the clinical features, predictors, and clinical outcomes of patients hospitalized with acute heart failure (AHF), with and without worsening heart failure (WHF).

METHODS AND RESULTS: We used data from a multicentre prospective registry of AHF patients created in Saudi Arabia. WHF was defined as recurrence of heart failure symptoms or signs-with or without cardiogenic shock. In-hospital short- and long-term outcomes, as well as predictors of WHF are described. Of the 2609 AHF patients enrolled, 33.8% developed WHF. WHF patients were more likely to have a history of heart failure and ischaemic heart disease. Use of intravenous vasodilators, inotropic agents, furosemide infusions, and discharge beta-blockers was significantly higher in WHF patients, while use of discharge ACE inhibitors was higher in patients without WHF. Length of hospital stay was significantly longer for WHF patients than for those without WHF [median (interquartile range) 13 (14) vs. 7 (7) days, \( P < 0.001 \)]. In-hospital, 30-day, 1-year, and 2-year mortality rates were higher in WHF patients than in non-WHF patients. The adjusted odds ratios for in-hospital, 30-day, and 1-year mortality were 4.13 [95% confidence interval (CI) 2.74-6.20, \( P < 0.001 \)], 3.17 (95% CI 2.21-4.56, \( P < 0.001 \)), and 1.34 (95% CI 1.04-1.71, \( P = 0.021 \)), respectively. The strongest predictors for WHF were having ischaemic cardiomyopathy, AHF with concomitant acute coronary syndrome, and low haemoglobin.

CONCLUSION: In real-world clinical practice, WHF during hospitalization for AHF is a strong predictor for short- and intermediate-term mortality, and a cause for longer hospital stays.
Research Title: Xenoestrogen Exposure Affects Early-Onset Puberty Among Young Girls in Western Saudi Arabia: A primary cross-sectional study

Journal: World Journal of Research and Review
Publisher: WJRR
Volume / Issue: 3/4
Pages: 37-40
ISSN: 2455-3956
Department: Pediatrics
Authors: Abdulmoein Eid Al-Agha, Abdulaziz Mohammed Alkahtani, Ahmed Ali Basalama, Rehab Salah, Aldin Alhindi
Correspondence Email: n/a

Abstract

Background: To investigate the correlation between xenoestrogen and the impact on early pubertal development among young girls in Western Saudi Arabia.

Methods: This was a cross-sectional study of 794 young girls. Data were collected between June 5, 2016 and August 25, 2016 from the Pediatric Endocrine Clinic at King Abdulaziz University Hospital, Jeddah, Saudi Arabia. The clinical characteristics of the participants were recorded.

Results: The mean age of the participants was 10.87 years. The most common xenoestrogen products used daily included plastic packaging materials (n=353; 44.5%), pesticides (n=351; 44.2%), and plastic water bottles (n=311; 39.2%); the least common product used daily was food preservatives (n=101; 12.7%). There was a significant inverse relationship between the use of plastic packaging materials and age of breast (p=0.027) and pubic hair (p=0.005) development. Furthermore, there was a significant association between the increased use of pesticides and early development of pubic hair (p=0.044). A total of 516 participants were yet to experience menarche, which represented 65% of the total sample size for this study.

Conclusion: There was a direct relationship between the frequent usage of various xenoestrogen products and early development of breasts, pubic hair, and age of menarche among young girls living in Western Saudi Arabia.
2015
Community Related Researches
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ABSTRACT

Objectives: To examine relationship between the quality of marital relationship and anxiety among women with breast cancer (BC) in the Kingdom of Saudi Arabia (KSA).

Methods: This cross-sectional study recruited a consecutive series of 49 married women with BC seen in the Al-Amoudi Breast Cancer Center of Excellence at King Abdulaziz University, Jeddah, KSA in early 2013. Participants completed the Hospital Anxiety and Depression Scale, Spouse Perception Scale, and Quality of Marriage Index forms, and answered questions on demographic and cancer characteristics.

Results: Anxiety symptoms indicating "possible" anxiety disorder were present in 10.4% and "probable" anxiety disorder in 14.6% (25% total). No significant relationship was found between the quality of marital relationship and anxiety symptoms (B=-0.04, standard error=0.05, t=-0.81, p=0.42). Anxiety was primarily driven by low education, poor socioeconomic status, and young age.

Conclusion: Anxiety symptoms are prevalent among married women with BC seen in a university-based clinic in the KSA. Further research is needed to determine whether a diagnosis of BC adversely affects marital relationship, and whether this is the cause for anxiety in these women.
ABSTRACT

Background: Cordylobia anthropophaga, is responsible for nodular cutaneous myiasis in sub-Saharan Africa. The fly has long been limited to tropical Africa except for Asir Province, Saudi Arabia. Al Baha Province; north of Asir has an ecological pattern close to that dominant in subtropical Africa. The Southern parts of Saudi Arabia, including Al Baha, are considered part of the Afro-tropical zoogeographical belt where C. anthropophaga is dominant. A case, with cutaneous nodular lesions, was presented to us, where comprehensive investigations were done to establish the diagnosis and to relate it to the known epidemiological background.

Materials and methods: A thorough history taking, comprehensive clinical examination and an intensive parasitological examination on a viable larva recovered from the cutaneous lesions, were performed. Taxonomic identification of the larva was done based on various criteria including shape, size, cuticle spine pattern and the posterior spiracles of the recovered larva.

Results: We report a case of cutaneous myiasis, caused by Cordylobia anthropophaga, indigenously acquired in Al-Baha. The recovered larva was identified as the third instar of C. anthropophaga. With no history of travel to Africa or to Asir, along with a comprehensive epidemiological assessment, an autochthonous pattern of transmission was confirmed.

Conclusion: We present a new focus of autochthonous transmission of C. anthropophaga in Saudi Arabia suggesting a need for an epidemiological reassessment. We also propose considering Cordylobia myiasis as a differential diagnosis in furuncular skin lesions, even in individuals with no history of traveling to Africa.
ABSTRACT

The objective of this study was to investigate the accuracy of the OraQuickA (R) rapid diagnostic test in the detection of hepatitis C virus (HCV) antibodies in oral fluid among a Saudi population sample.

A case-control cross-sectional study was conducted on 60 HCV-positive patients and 100 HCV-negative control subjects.

The HCV-positive patients were recruited from the Clinics of Infectious Diseases of King Abdulaziz University (KAU) Hospital, Jeddah, while the control group was collected from KAU, Faculty of Dentistry, including staff and students. The OraQuickA (R) HCV rapid antibody test (OraSure Technologies, Inc. USA) utilized the oral fluid swab. Sensitivity and specificity for the test were calculated and correlated to the patients' viral load.

Out of the 60 PCR + ve patients, 53 (88.33 %) revealed a positive OraQuick test, whereas 7 (11.67 %) patients showed negative test, revealing 88.33 % sensitivity and 100 % specificity for detection of salivary HCV antibodies. Only PCR level was valuable in predicting the outcome of OraQuick test.

Using oral fluid for the detection of HCV antibodies could be a useful tool for epidemiological purposes and for field collection of samples in developing countries or in nonclinical settings by persons with minimal training.

Millions of pilgrims visit Saudi Arabia during every year, many of whom are from countries where HCV infection is endemic; therefore, it will be very helpful to use a noninvasive, quick, simple, specific, and sensitive method for detection of HCV antibodies using oral fluid.
ABSTRACT

We describe here a new measure of religious commitment, the Belief into Action (BIAC) scale. This measure was designed to be a comprehensive and sensitive measure of religious involvement that could discriminate individuals across the religious spectrum, and avoid the problem of ceiling effects that have haunted the study of highly-religious populations. Many scales assess religious beliefs, where assent to belief is often widespread, subjective, and a superficial assessment of religious commitment. While people may say they believe, what does that mean in terms of action? This 10-item scale seeks to convert simple belief into action, where action is assessed in terms of what individuals say is most important in their lives, how they spend their time, and where they put their financial resources. We summarize here the psychometric characteristics of the BIAC in two very different populations: stressed female caregivers in Southern California and North Carolina, and college students attending three universities in Mainland China. We conclude that the BIAC is a sensitive, reliable, and valid measure of religious commitment in these two samples, and encourage research in other population groups using this scale to determine its psychometric properties more generally.
ABSTRACT

Breast cancer (BC) accounts for 24% of all women cancer cases diagnosed in Saudi Arabia each year. Awareness is extremely important in combating this disease. This study was undertaken to assess male high school students’ response to BC. This cross-sectional survey was performed on male high school students across schools in Jeddah. A questionnaire gathered data on respondent demographics, beliefs about BC, BC risk factors, early screening methods, and role of men in BC. Statistical analysis was done using SPSS 20. A total of 824 students participated, with an average age of 17.0 years. There was more than 50% agreement that early detection of BC enhances the chances of recovery, that BC is treatable, and that clinical breast examination and breastfeeding provide protection from BC. Around half the survey population thought that BC was fatal and contagious. Fewer than 50% thought that BC was inherited and related to smoking, consumption of contraceptive pills, repeated exposure to radiation, obesity, and wearing a bra and that breast tumors were all malignant and spread to different parts of the body. Others knew that mammograms should be performed periodically. A high percentage persuaded their relatives to have mammograms and provided them with psychological support. Knowledge of BC among male high school students in Saudi Arabia is still limited, and, therefore, programs and activities need to be established to increase awareness among high school students.
ABSTRACT

Background: Asthma, a common lung disease in children, is caused by excessive immune responses to environmental antigens.

Objective: Given the immuno-modulatory properties of vitamin D, the aim of the current study was to investigate the relationship between vitamin D levels and markers of asthma severity.

Methods: This was investigated in a 70 Saudi children with and without asthma and were recruited from the King Abdul Aziz University Hospital, Jeddah, Saudi Arabia, over the period of 11 months (May 2011-April 2012). Childhood asthma control test instrument was employed to assess the level of asthma control among asthmatic patients. Anthropometric measurements were taken and interviewer-administrated questionnaire was completed for all study participants. Pulmonary function test was performed by recording changes in the peak expiratory flow. Venous blood samples were withdrawn for measurements of vitamin D, bone profile, cytokines profile (interleukin-10, tumor necrosis factor-alpha, platelets derived growth factor), and atopy markers (IgE and eosinophil count).

Results: Hypovitaminosis D is highly prevalent among asthmatic children with highly significant increase in several markers of allergy and asthma severity as compared with healthy control children. Significant correlations between several inflammatory and immunological markers and vitamin D levels were also found. Finally, lower 25-hydroxyvitamin D levels were associated with a higher asthma prevalence in multivariable analysis.

Conclusion: Our study showed that hypovitaminosis D is highly prevalent in the whole population in addition to a highly significant increase in several markers of allergy and asthma severity among asthmatic children as compared with healthy control children.
ABSTRACT

Objective: To identify the frequency and reasons of operations cancellation in 25 Makkah region hospitals in Saudi Arabia.

Methods: Retrospective evaluation of the rate of surgery cancellation in 25 hospitals of Makkah region was performed in this study. The data of scheduled surgeries from 15 different surgical specialties was collected from January to December 2013. Frequency and reasons of cancellation of elective surgical cases in different specialty were studied with a view to recommend suggestions for improvement. Data was analyzed on SPSS - 16.

Results: There are 120 operating rooms (OR) in 25 Makkah region hospitals and during the year 2013, a total of 16,211 surgery cases were listed, and 1,238 (7.6%) cases were canceled. Contribution to total cancellation was highest in orthopedic 33.8% followed by general surgery 27.5%, obstetrics 7.7% and ENT 5.2%. According to category, 42.81% rate of cancellation was patient related, 20.03% facility related, 9.45% due to improper work-up, 1.45% associated with anesthesia, 7.19% related to surgeons, and 18.90% other/and not recorded reasons.

Conclusions: Present study found 7.6% cancelation rate in Makkah region hospitals and three most common causes for cancellations were patients related, facility related and improper work-up.
ABSTRACT

Background: The contribution of genetic factors to the development of breast cancer in the admixed and consanguineous population of the western region of Saudi Arabia is thought to be significant as the disease is early onset. The current protocols of continuous clinical follow-up of relatives of such patients are costly and cause a burden on the usually over-stretched medical resources. Discovering the significant contribution of BRCA1.2 mutations to breast cancer susceptibility allowed for the design of genetic tests that allows the medical practitioner to focus the care for those who need it most. However, BRCA1.2 mutations do not account for all breast cancer susceptibility genes and there are other genetic factors, known and unknown that may play a role in the development of such disease. The advent of whole-exome sequencing is offering a unique opportunity to identify the breast cancer susceptibility genes in each family of sufferers. The polymorphisms mutations identified will then allow for personalizing the genetic screening tests accordingly. To this end, we have performed whole exome sequencing of seven breast cancer patients with positive family history of the disease using the Agilent SureSelect T Whole-Exome Enrichment kit and sequencing on the SOLiD T platform.

Results: We have identified several coding single nucleotide variations that were either novel or rare affecting genes controlling DNA repair in the BRCA1.2 pathway.

Conclusion: The disruption of DNA repair pathways is very likely to contribute to breast cancer susceptibility in the Saudi population.
**ABSTRACT**

**Objectives:** The aims of this study were assessing the frequency of clinical characteristics of patients with severe Diabetic ketoacidosis (DKA) who were admitted to the intensive care unit (ICU) and investigating the relationship between paraclinical (glucose, anion gap, and serum bicarbonate) and clinical parameters in patients with severe DKA.

**Method:** A retrospective chart review of all adult patients with DKA who were admitted to the ICU at King Abdulaziz University Hospital, Jeddah, Saudi Arabia between January 2012 and December 2013. The data collected include the demographic data, clinical presentation, precipitating factors, duration of hospital stay and mortality rate. The data were analyzed using STAT software.

**Results:** A total of 60 patients were included. Of these, 50 were men (83.3%). The median age was 23 years (ranging 18-29 years). Newly diagnosed diabetics accounted for 15 (25%) of the cases; the remainder were previously known patients of type1 diabetes on treatment. The main precipitating factors of DKA were insulin treatment cessation (87.5%) and infection/sepsis (39.6%). Serum blood glucose, serum bicarbonate level, and the calculated anion gap did not significantly correlate with clinical parameters of severe DKA.

**Conclusion:** Most patients with severe DKA who were admitted to the ICU of our institution presented with gastrointestinal symptoms. Non-compliance to insulin therapy was the main precipitating factor of DKA.
**ABSTRACT**

**Background:** Dengue viruses (DENVs) are mosquito-borne viruses which can cause disease ranging from mild fever to severe dengue infection. These viruses are endemic in several tropical and subtropical regions. Multiple outbreaks of DENV serotypes 1, 2 and 3 (DENV-1, DENV-2 and DENV-3) have been reported from the western region in Saudi Arabia since 1994. Strains from at least two genotypes of DENV-1 Asia and America/Africa genotypes) have been circulating in western Saudi Arabia until 2006. However, all previous studies reported from Saudi Arabia were based on partial sequencing data of the envelope E) gene without any reports of full genome sequences for any DENV serotypes circulating in Saudi Arabia.

**Findings:** Here, we report the isolation and the first complete genome sequence of a DENV-1 strain (DENV-1-Jeddah-1-2011) isolated from a patient from Jeddah, Saudi Arabia in 2011. Whole genome sequence alignment and phylogenetic analysis showed high similarity between DENV-1-Jeddah-1-2011 strain and D1/H/IMTSSA/98/606 isolate Asian genotype) reported from Djibouti in 1998. Further analysis of the full envelope gene revealed a close relationship between DENV-1-Jeddah-1-2011 strain and isolates reported between 2004-2006 from Jeddah as well as recent isolates from Somalia, suggesting the widespread of the Asian genotype in this region.

**Conclusions:** These data suggest that strains belonging to the Asian genotype might have been introduced into Saudi Arabia long before 2004 most probably by African pilgrims and continued to circulate in western Saudi Arabia at least until 2011. Most importantly, these results indicate that pilgrims from dengue endemic regions can play an important role in the spread of new DENVs in Saudi Arabia and the rest of the world. Therefore, availability of complete genome sequences would serve as a reference for future epidemiological studies of DENV-1 viruses.
### ABSTRACT

**Background:** The puberty ages in females living in western and middle eastern countries is declining rapidly because of many underlying causes including consumption of animal protein, caloric intake (fat, soft drinks), and fruits and vegetables (fiber).

**Aim:** To investigate the relationship between early puberty and the intake of various types of protein (chicken, beef and fish), fruits, vegetables, dairy products, caffeine and soft drinks.

**Study Design:** This cross-sectional study was conducted in Jeddah. The sample included 568 young women from different areas; pubertal staging was conducted using the Tanner staging, and relevant data were collected through a questionnaire. Data was analyzed using the Pearson’s correlation coefficient; we assumed that the data followed a normal distribution based on the large sample size of 568 girls.

**Results:** Early breast and pubic hair development was significantly correlated with meat, fast food, French fries, and soft drink consumption. It was also observed that the age at menarche was significantly correlated with chicken consumption.

**Conclusion:** A significant relationship between early pubertal development and excessive consumption of chicken and beef was observed along with varying relationships between fat, soft drink, caffeine, calcium, and fruit and vegetable intake and pubertal development. Reduced organic chicken and beef intake was highly recommended.
ABSTRACT

Background: The majority of available studies have shown that children with sickle cell disease (SCD) have a higher risk of depressive symptoms than those without. The present study aimed to: assess the prevalence of depression in a sample of children with SCD; evaluate the association between disease severity, social support and depression, and the combined and/or singular effect on health-related quality of life (HRQL) in children with SCD; and show the predictive value of social support and disease severity on depression.

Methods: A total of 120 children were included in the study, 60 (group I) with SCD and 60 matched, healthy control children (group II). Depression was assessed in both groups using the Children’s Depression Inventory (CDI) and the Children’s Depression Inventory-Parent (CDI-P). Children with CDI and CDI-P scores of more than 12 were interviewed for further assessment of depression using the Diagnostic Interview Schedule for Children Version IV (DISC-IV). The Pediatric Quality of Life Inventory Version 4.0 Generic Core Scales (PedsQL 4.0) was used to assess HRQL in both groups, and social support was measured with the Child and Adolescent Social Support Scale (CASSS).

Results: Eight (13%) of the 60 children with SCD had CDI and CDI-P scores of more than 12 (CDI mean score 14.50 ± 1.19, CDI-P mean score 14.13 ± 1.12), and were diagnosed as having clinical depression using the diagnostic interview DISC-IV. For group I, HRQL was poor across all PedsQL 4.0 domains in both self- and parent-reports (P < 0.001) compared with group II. A higher level of parent support was a significantly associated with decreased depressive symptoms, demonstrated by lower CDI scores. Better quality of life was shown by the associated higher total PedsQL 4.0 self-scores of children with SCD (B = −1.79, P = 0.01 and B = 1.89, P = 0.02 respectively).

Conclusions: The present study demonstrates that higher levels of parent support were significantly associated with decreased depressive symptoms and better quality of life in children with SCD. Interventions focused on increasing parent support may be an important part of treatment for depression in children with SCD.
**Research Title:** Depression In Female Patients With Rheumatoid Arthritis: The Effect Of Physical Disability And Family Support

**Source:** European Psychiatry
Ovid Technologies, Inc.

**ISSN:** 2090-5408

**Month and Year of Publication:** JUL 2015

**Impact Factor:** 3.21

**Affiliated Department(s):** Medicine

**Author(s):** Mohammad G Sehlo, Sami M Bahlas

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## ABSTRACT

**Objectives:** (a) To assess the rate of depression in a sample of female patients with rheumatoid arthritis (RA); (b) to evaluate the factors associated with depression in those patients; (c) to evaluate the impact of family support on depression in those patients.

**Participants and methods:** In a cross-sectional study, 100 female patients with RA were recruited in the study (mean age=39.98 +/- 7.4). Depression was diagnosed in those patients using the Structured Clinical Interview for DSM-IV Axis [IOTA] disorders, clinical version (SCID-I-CV) and its severity was assessed using the Center for Epidemiologic Studies-Depression Scale (CES-D), family support was assessed using the Family Cohesion Subscale of the Family Environment Scale, physical disability was measured using the Health Assessment Questionnaire Disability Index (HAQ-DI) and the disease activity was measured using the 'Disease Activity Score' for 28 joints (DAS 28).

**Results:** The rate of depression among female patients with RA was 24% (24/100), there was a significant association between increased severity of physical disability and increased risk and severity of depression (odds ratio=2.39; 95% confidence interval=1.1-4.2; P=0.02 and B=0.15, P=0.03, respectively). Higher levels of family support were significantly associated with decreased risk [for every unit increase on the Family Cohesion Subscale physical, the likelihood of depressive disorder decreased by 15% (odds ratio=0.85; 95% confidence interval=0.69-0.98, P=0.01)] and severity of depression (B=-0.29, P=0.001).

**Conclusion:** Our results demonstrate that increased physical disability was associated with an increased risk and severity of depression in female patients with RA and higher levels of family support were associated with decreased risk and severity of depression. Family support has an important role in improving the symptoms of depression and family therapy aiming to increase the family support may be very beneficial in improving depression and subsequently preventing the serious consequences of depression in those patients.
**ABSTRACT**

**Objective:** Persons with colon cancer experience considerable psychological stress due to physical and social changes brought on by illness, increasing their risk of depressive disorder (DD). We examine the prevalence of DD and depressive symptoms and determine baseline demographic, social, psychological, and physical health correlates.

**Methods:** A convenience sample of 70 cancer patients in Jeddah, Saudi Arabia, was screened for DD using an abbreviated version of the Structured Clinical Interview for Depression (SCID) and for depressive symptoms using the Hamilton Depression Rating Scale (HDRS). Demographic, psychosocial, psychiatric, and physical health characteristics were also assessed, along with past treatments for colon cancer. Bivariate and multivariate analyses identified predictors of DD and symptoms.

**Results:** The 1-month prevalence of DD was 30.0% (12.9% major depression, 5.7% minor depression, and 11.4% for dysthymia) and significant depressive symptoms were present in 57.1% (HDRS 8 or higher), including having persistent suicidal thoughts for 2 weeks or longer within the past month (14.3%). Low social support and having a co-morbid psychiatric illness (particularly anxiety) independently predicted DD based on the SCID. Saudi nationality, poor financial situation, low social support, and co-morbid psychiatric illness independently predicted depressive symptoms on the HDRS. Surprisingly, stage of cancer, duration of cancer, and treatments for cancer were unrelated to DD or depressive symptoms.

**Conclusions:** DD and significant depressive symptoms are common in patients with colon cancer in Saudi Arabia, and are predicted by a distinct set of demographic and psychosocial risk factors that may help with identification. Demographic and psychological risk factors were more likely to be associated with depression than cancer characteristics in this sample.
ABSTRACT

Aim: This study was conducted to assess development and cognitive functions in relation to growth in Saudi pre-school children with feeding problems (FPs) without underlying medical disorders.

Methods: Three hundred fifteen pre-school children with FPs (221 with normal growth (FP-N), 62 with failure to thrive (FTT) (FP-FTT), 32 with overweight (FP-OW)) and 100 healthy children (Ref group) underwent in-depth assessment by anthropometric measurements, dietetic history, Behavioral Pediatrics Feeding Assessment Scale, Denver Developmental Screening test (DDST) and Stanford Binet fifth edition intelligence scales (SB-5).

Results: The main FPs detected in Saudi children were picky eating in 85.5% of FP-N group, infantile anorexia and poor eating in more than 90% of FP-FTT group and overeating in 53% of FP-OW group. FPs were not due to evident psychosocial factors but were mostly related to unhealthy feeding behaviours. FP-N children were still having normal growth parameters, but they had significantly lower growth parameters than healthy children. Failed screening with DDST was only more significantly recorded in FP-FTT children than in Ref children (P = 0.04). The overall IQ value by SB-5 was significantly lower in FP-FTT group compared with FP-N group (P = 0.01), in FP-FTT group compared with Ref group (P < 0.001) as well as in FP-OW group compared with Ref group (P < 0.001).

Conclusions: Persistent FPs resulted in significant negative impact not only on growth status but also on developmental milestones and cognitive functions of pre-school children. Healthy feeding habits are mandatory to prevent serious consequences of FPs on growth and development of Saudi pre-school children.
Objective: To evaluate the diseases pattern among pilgrims attending the 2 Holy Mosque (Haram) Health Care Centers during the Hajj season 2013 (Hijra 1434).

Methods: In this cross-sectional study, data was collected from 2 medical centers located in the Holy Mosque in Makkah city, Saudi Arabia, from the first of Dhul-Hijjah to sixteenth Dhul-Hijjah 1434. The present study was completed in 16 days (6th October to 21st October 2013).

Results: Over 16 days, 1008 patients attended the medical centers during Hajj 1434, (2013), out of which 554 (55%) were males and 454 (45%) were females. Most of the patients were Egyptians (n=242, 24%), followed by Saudis (n=116, 11.5%), Pakistani (n=114, 11.3%), Turkish (n=50, 5%), and other nationalities (n=404). According to age distribution, mostly were in the 51-60 years age group (n=237, 23.5%), followed by other age groups. Out of 1008 patients, 842 (83.5%) patients were treated and subsequently discharged, while 166 patients (16.5%) were referred to the tertiary centers. According to the diseases pattern, most of the patients were suffering from respiratory problems (n=177, 17.6%) followed by skin diseases (n=158, 15.7%), gastrointestinal tract (GIT) diseases (n=133, 13.2%), and others.

Conclusion: Most of the patients were suffering from respiratory problems followed by skin and GIT diseases, and <25% of patients were referred to tertiary care centers.
**Research Title:** Disparities in Health Care Delivery and Hospital Outcomes between Non-Saudis and Saudi Nationals Presenting with Acute Coronary Syndromes in Saudi Arabia

**Source:** PLOS One
Public Library Science
Vol. 10, Issue 4, Article no.: e0124012

**ISSN:** 1932-6203

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**Affiliated Department(s):** Medicine

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### ABSTRACT

**Background:** Saudi Arabia has a non-Saudi workers population. We investigated the differences and similarities of expatriate non-Saudi patients (NS) and Saudi nationals (SN) presenting with acute coronary syndromes (ACS) with respect to therapies and clinical outcomes.

**Methods:** The study evaluated 2031 of the 5055 ACS patients enrolled in the Saudi Project for Assessment of Acute Coronary Syndrome (SPACE) from 2005 to 2007. Propensity score matching and logistic regression analysis were performed to account for major imbalances in age and sex in the two groups.

**Results:** The mean patient age was 56.2 +/- 9.8, and 83.5% of the study cohort were male. SN were more likely to have risk factors of atherosclerosis. ST-elevation MI (STEMI) was the most common ACS presentation in NS, while non-ST ACS was more common in SN. The median symptom-to-door time was significantly greater in NS patients (Median 175 min (197) vs. 130 min (167), p=0.027). The only difference in pharmacological therapies between the two groups was that NS were more likely to receive fibrinolytic therapy. NS were less likely than SN to undergo percutaneous coronary interventions (PCI; 32.6% vs. 42.8%, p=0.0001) or primary PCI (7.8% vs. 22.8%, p<0.001). Hospital mortality, cardiogenic shock, and heart failure were significantly higher in NS compared to SN. After adjusting for baseline variables and therapies, the odds ratios for hospital mortality and cardiogenic shock in NS were 2.9 (95% CI 1.5-6.2, p=0.004) and 2.8 (95% CI 1.5-4.9, p<0.001), respectively.

**Conclusion:** Our findings indicate disparities in hospital care between NS and SN ACS patients. NS patients had worse hospital outcomes, which may reflect unequal health coverage and access-to-care issues.
**Research Title:** Dysmenorrhea among female medical students in King Abdulaziz University: Prevalence, Predictors and outcome

**Source:** Pakistan Journal of Medical Sciences
Professional Medical Publications
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**ISSN:** 1682-024X

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**Impact Factor:** 0.231

**Affiliated Department(s):** Family and Community Medicine; Medicine

**Author(s):** Nahla Khamis Ragab Ibrahim, Manar S AlGhamdi, Alanoud N Al-Shaibani, Fatima A Al-Amri, Huda A Alharbi, Arwa K Al-Jadani, Raghad A Alfaidi

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**ABSTRACT**

**Objective:** To determine the prevalence, predictors and outcome of dysmenorrhea among female medical students in King Abdulaziz University (KAU), Jeddah, Saudi Arabia.

**Methods:** A cross-sectional study was conducted among 435 medical students at KAU, Jeddah selected through stratified random sample method. A pre-constructed, validated, self-administered questionnaire was used to collect personal and socio-demographic information. Data about menstrual history, stress, smoking were also collected. The severity of dysmenorrhea was scored by the "Visual Analogue Scale (VAS)". Descriptive and analytical statistics were conducted.

**Results:** The prevalence of dysmenorrhea was 60.9%. Logistic regression showed that heavy period was the first predictor of dysmenorrhea (aOR=1.94; 95% CI: 1.29-2.91), followed by stress (aOR=1.90; 95% C. I.: 1.19-3.07). The prevalence of severe dysmenorrhea among the sufferers was 38.6%. Depressed mood was the commonest (80.8%) symptom accompanying dysmenorrhea. Regarding the outcome of dysmenorrhea, 67.5% of the sufferers reported emotional instability, while 28.3% reported absenteeism from the university.

**Conclusions:** A high prevalence of dysmenorrhea was prevalent among medical students in King Abdulaziz University (KAU). Health promotion, screening programs, and stress management courses are recommended.
Research Title: Effect of Ramadan fasting in Saudi Arabia on serum bone profile and immunoglobulins

Source: Therapeutic Advances in Endocrinology and Metabolism SAGE Publications

ISSN: 2042-0196

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Impact Factor: n/a

Affiliated Department(s): Medical Genetics; Clinical Biochemistry; Princess Al-Jawhara Albrahim Center of Excellence in Hereditary Disorders Research

Author(s): Suhard M Bahijri, Ghada M Ajabnoor, Anwar Borai, Jumana Y Al-Aama, George P Chrousos

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**ABSTRACT**

**Background:** Each year Muslims fast from dawn to sunset for 1 month (Ramadan). In Saudi Arabia, the sleep–wake cycle during Ramadan is severely disturbed and is associated with abolition of the circadian cortisol rhythm, exposing Saudis to continuously increased cortisol levels, which may influence the immune response. In addition to cortisol, sleep and fasting affect the secretion of parathyroid hormone (PTH) and hence bone metabolism.

**Methods:** Our objective was to investigate the effect of Ramadan type fasting on secretory patterns of PTH, markers of bone metabolism, and serum immunoglobulins. Blood samples from healthy young volunteers were collected at 9 a.m. and 9 p.m. (± 1 hour) before (Shaban) and 2 weeks into Ramadan. Calcium, phosphorus, magnesium, albumin, alkaline phosphatase, 25-OH vitamin D, intact PTH (iPTH), and immunoglobulin (Ig) A, M and G were measured.

**Results:** During Ramadan, evening-adjusted calcium was higher (p = 0.036) and phosphate lower (p < 0.001) than the corresponding morning value. Moreover, the Ramadan mean morning phosphate was higher and the evening level lower was than Shabaan values (p =0.010 and p <0.001, respectively), while mean iPTH level was decreased compared with the morning value (p = 0.001), and the evening mean during Shabaan (p = 0.029). Mean IgG concentration was significantly lower during Ramadan (p = 0.003 and p = 0.021 for morning and evening, respectively).

**Conclusions:** Changes in dietary practices during Ramadan modulated PTH secretion to a pattern which might be beneficial to bone health. Combined effects of fasting and disturbed sleep led to a noted decrease in IgG level. Therefore, a possible beneficial effect of fasting on bone turnover is combined with decreased immune response.
**ABSTRACT**

**Background and aim:** Regular physical exercise (RPA) have a great role in management of type 1 diabetes mellitus (T1DM). We aimed from this study to correlate between regular physical activity and glycaemic control in pediatric age group with T1DM.

**Patients and methods:** This is a cross-sectional study, includes 243 T1DM children and adolescents visiting pediatric diabetes clinic at King Abdul-Aziz University Hospital (KAUH). Clinical and laboratory characteristics of patients were all recorded. Patients were divided into two groups, good glycemic control (HbA1c<8%) and poor glycemic control (HbA1c ≥ 8%). The collected data used to examine cross-sectional association between glycaemic control (HbA1c) and physical activity.

**Results:** There was no significant difference between two groups regarding age, gender, mother education, father education, family history of type 1 diabetes and duration of RPA ( P value>0.05 ), while there was significant difference between two groups regarding RPA and frequency of RPA /week( P value<0.05 ). We found. Lower level of HbA1c in patients with more frequent RPA (P<0.05). Patients with no RPA were at 3.5 times risk of poor glycemic control (HbA1c ≥ 8%). Patients with long duration of diabetes had higher HbA1c.

**Conclusion:** Children and adolescents with T1DM should be encouraged to participate regularly in physical activity which results in better glycaemic control.
ABSTRACT

Objectives: To investigate the relationship between metabolic control, acute and long-term complications, the coexistence of autoimmune diseases, and to assess the different factors that can affect the glycemic control level among children with type 1 diabetes mellitus (T1DM).

Methods: This is a cross-sectional study that included 228 T1DM children and adolescents visiting the pediatric diabetes clinic at the King Abdulaziz University Hospital (KAUH), Jeddah, Saudi Arabia from January 2013 to January 2014. The clinical and laboratory characteristics of the patients were recorded. Metabolic control, complications, and associated autoimmune diseases were evaluated.

Results: The mean age of patients was 10.99 years, and the glycated hemoglobin (HbA1c) level was 8.8%. Acute complications included ketoacidosis in 65.4% of patients, and hypoglycemic attacks in 68.9%. Longterm complications were detected in patients including retinopathy (4.4%), microalbuminuria (16.2%), and dyslipidemia (8.3%). Autoimmune thyroiditis was noted in 14%, and celiac disease was found in 19.7% of patients. A significant difference was found in pubertal and pre-pubertal age groups in terms of glycemic control (p=0.01).

Conclusion: The level of HbA1c was found to be higher among the pubertal age group. A relationship between autoimmune diseases and gender was determined.
Health related quality of life (HRQOL) is an important indicator of health status. Knowledge about factors related to HRQOL among military personnel may assist in designing programs to maximize their fitness and readiness for action when called upon. The aim of present study was to assess the HRQOL of military personnel in Iran, compare it to that of other populations in Iran and the U.S., and identify socio-demographic variables related to HRQOL in Iranian military personnel. Using a cross-sectional design, 502 male military personnel were recruited across the country. The SF-36 health survey was used to assess health status and demographic characteristics. Student t-test and multiple regression analysis were used to examine the associations between socio-demographic variables and HRQOL. Subscale scores on the SF-36 were also compared to those in the general population. The mean age of participants was 33.0 (SD, 6.8) with an average working experience of 13.5 (SD, 6.2) years. Physical functioning was higher than other components of HRQOL. The mean scores for physical and mental subscale scores were 46.1 (8.6) and 46.6 (9.7), respectively. Significant differences were found on subscale scores of HRQOL between participants and the general population (p < 0.01). Variables such as age, marital status, disease history, and health status were associated with several components of HRQOL. These findings should assist in the development of programs to enhance HRQOL among military personnel, and underscore the need for further research to better understand the components of health status in soldiers and other military personnel.
Research Title: Impact of Physiological Symptoms and Complications of Colorectal Cancer on the Quality of Life of Patients at King Abdulaziz University Hospital

Source: Journal of Cancer Education
Springer International Publishing AG
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Affiliated Department(s): Medicine; Family Medicine

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ABSTRACT

Colorectal cancer (CRC) is common worldwide. The high prevalence of the disease raises concerns about how CRC influences the health-related quality of life (QoL). To explore the impact of physiological symptoms and complications of CRC on patients’ QoL, we conducted a cross-sectional survey using the FACT-C self-report instrument. The chi-square test was used to compare qualitative data. We found that pain was reported by most of the patients (n = 31; 77.5 %). Furthermore, male patients were more likely to complain of pain “mostly” as compared with females (P = .032). We found no significant differences between genders regarding general health-related questions. A greater proportion of male patients often complained of abdominal cramps (P = .542), weight loss (P = .086), and diarrhea (P = .408). More than half of the patients (n = 26; 65 %) reported having a good appetite; a greater proportion of males reported having a good appetite “mostly” (P = .014). Social and psychological qualities of life were not significantly different between male and female patients. Male and female patients did not differ in their report of disease acceptance (P = .420) and ability to enjoy life (P = .744). No difference was also found between genders regarding contentment with QoL (P = .793) or ability to sleep well (P = .695). Furthermore, there were no differences between genders regarding job fulfillment (P = .272). Our results add to the growing body of knowledge about the effect of CRC on QoL. Importantly, the differences in self-reported pain and appetite between male and female patients in our study suggest the importance of gender-based treatments in improving patients’ QoL.
Research Title: Incidence and potential causative factors associated with chronic benign neutropenia in the Kingdom of Saudi Arabia

Source: BMC Proceedings
BioMed Central Ltd
Vol. 9, Issue 2, Page: 1

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Month and Year of Publication: JAN 2015

Impact Factor: n/a

Affiliated Department(s): Hematology

Author(s): Mamdooh Gari, Mohammed Dakhakhni, Abdullah Gari, Erada Alshihri, Rowan Al-Jahdali, Kothandaraman Narasimhan, Shen Liang, Fatin Al-Sayes, Gauthaman Kalamegam, Adeel Chaudhary, Adel Abuzenadah, Mohammed Al-Qahtani

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ABSTRACT

Background: Benign neutropenia often presents in certain populations without any genotype nor phenotype. Middle East countries are among the regions where endemic cases of chronic benign neutropenia are reported in the general population with an incidence of approximately between 10-15%. Not many studies have been performed to ascertain the cause or burden associated with this condition. The objective of the current study was to identify the frequency and characterize the consequences of chronic benign neutropenia in the country of Saudi Arabia.

Results: Benign neutropenia was found to be high in the Saudi Arabia general population (up to 20%), with an average neutrophil count of 1.48 (range 0.99 – 1.95 × 10^9 cells/L), with Saudis having a higher incidence of chronic benign neutropenia compared to non-Saudis (p = <0.05). Complete blood count analyses showed significant difference in the total white cell count of neutrophils (p < 0.0001), WBC (p < 0.0001), lymphocytes (p < 0.001), monocytes (p < 0.001), eosinophils (p = 0.013) as well as the CD19 B cells (p = 0.008).

Conclusions: Our study is the first to carefully quantitate benign neutropenia in Saudi Arabia. We identified that this condition is prevalent in the middle aged population (18 years to 55 years). These individuals not only had lower neutrophil counts, but also reduced peripheral blood cells types, especially the B-lymphocyte population (CD19 subset). As B-lymphocytes are involved in antibody production and antigen recognition, a decrease might easily predispose the individuals to infectious agents. As such more mechanistic studies need to be undertaken to understand the cause and potential long-term consequences of benign neutropenia.
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<th>Research Title:</th>
<th>Incidence of diabetic foot disorders in patients with diabetes in Jeddah, Saudi Arabia</th>
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<tr>
<td>Source:</td>
<td>International Journal of Diabetes in Developing Countries Springer India Vol. 35, Issue 2, Page: 115-122</td>
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<td>Affiliated Department(s):</td>
<td>Surgery; Mohammed Hussein Al-Amoudi Chair for Diabetic Foot Research</td>
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<td>Author(s):</td>
<td>Hasan A Alzahrani, Dong Wang, Almad H Alzahrani, Frank B Hu</td>
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<td>Correspondent’s Email:</td>
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**ABSTRACT**

Epidemiology of diabetic foot disorders in Saudi Arabia has not been well documented. We therefore performed a 1-year follow-up study to characterize the incidence of diabetic foot disorders, including peripheral arterial disease (PAD), peripheral neuropathy (PN), foot ulcer, gangrene, and amputation, among 556 diabetic patients in Saudi Arabia. All the disorders were diagnosed by standard objective diagnostic tools or diagnosed clinically by a specialized surgeon. Complication of foot ulcer (CFU) was defined as at least one of the following complications: foot ulcer, gangrene, and amputation. Diabetic foot disorder (DFD) was defined as at least one of the following complications: PAD, PN, foot ulcer, gangrene, and amputation. The 1-year cumulative incidence of PAD, PN, CFU, and DFD was 6.3, 9.2, 3.6, and 16.7 %, respectively. The 1-year cumulative incidence was 1.8 % for foot ulcer, 1.5 % for gangrene, and 0.6 % for amputation. Only one participant was diagnosed as more than one disorder. The longer duration of diabetes was associated with an increased incidence of PN and DFD. Relatively high incidences, as well as the duration of diabetes as the major risk factors for diabetic foot disorders were found in this Saudi population.
ABSTRACT

Background: Oral contraceptive pills (OCPs) are one of the most reliable methods of contraception. However, lack of knowledge about oral contraceptive use and inconsistent pill-taking might result in decreased efficacy. The study reported here aimed to explore women's knowledge about oral contraceptive use and assess the factors associated with knowledge about OCPs among users.

Methods: This cross-sectional survey was conducted at King Abdulaziz University Hospital, Jeddah, Saudi Arabia between April and June 2014. We included married, non-pregnant women >18 years old who had used a combined 21-day OCP for at least 3 months prior to recruitment. A questionnaire was used to collect the participants' demographic information. It also assessed their knowledge about OCPs. Data were entered into and analyzed using SPSS software.

Results: A total of 357 women were recruited. Of these, 57.7% reported they knew what to do after missing one or two pills, but only 18.3% knew exactly what to do after missing more than two pills consecutively. Postgraduate women had a significantly higher knowledge score than illiterate women (P=0.002) and those who had completed at least primary education (P=0.001). Conversely, there was no difference in knowledge scores between Saudi and expatriate women (P=0.2). Monthly incomes (P=0.2) and mode of OCP selection (P=0.2) were also not significantly associated with knowledge scores.

Conclusion: Women had poor knowledge about OCP use. Appropriate measures should be taken to educate women about proper oral contraceptive use.
Research Title: Knowledge, Attitude and Satisfaction of Health Care Providers Regarding Premarital Screening and Genetic Counseling Program in Jeddah

Source: Kuwait Medical Journal
Kuwait Medical Assoc
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Impact Factor: 0.098

Affiliated Department(s): Family and Community Medicine

Author(s): Nahla Khamis Ibrahim, Bahaa Abalkheil, Jawaher Al Ahmadi, Hussein Al Bar, Waleed Milaat, Mahdi Qadi

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ABSTRACT

Objective(s): To determine level of knowledge and attitudes of health care providers (HCP) regarding premarital screening and genetic counseling (PMSGC), to identify the predictors of high knowledge score and to verify their satisfaction with and recommendations for improving the program

Design: Cross-sectional study conducted during the January 2010 - January 2011 period

Setting: Outpatient clinics of three governmental hospitals in Jeddah

Subjects: Three hundred and forty-five HCP

Intervention(s): A self-administered questionnaire containing personal and socio-demographic data, 30 PMSGC knowledge items, and 14 attitude statements were used. HCP working in the program were asked about their satisfaction and recommendations for improvement.

Main Outcome Measure(s): Knowledge, attitudes and satisfaction of the HCP Results: About one-half (51.6%) of the health care providers had satisfactory knowledge about PMSGC. After controlling for the confounding factors, the only predictor of satisfactory knowledge score was being a specialized provider (aOR = 2.86; 95% CI: 1.63 - 5.02). Regarding attitudes, almost all participants (99%) strongly agreed and agreed on the importance of the PMSGC program. Concerning satisfaction, half of HCP working in the program had excellent or very good scores for program confidentiality and higher percentages for counseling about discovered diseases.

Conclusions: HCP had good attitudes towards PMSGC program. However, there is some lack of knowledge. They recommended adding vaccinations, new screening and counseling to the current program. Formal training course(s) for HCP about the program were recommended.
ABSTRACT

Although the prevalence of obesity and overweight in Saudi Arabia is high, studies of associated factors are lacking. This study aimed to investigate the relationship between socio-demographic and lifestyles factors and different measures of obesity amongst adults living in Jeddah. A cross sectional design was used employing a multi stage geographical cluster random sampling technique to select survey locations. Only families living in KSA for ≥ 5 years were included. Participants were interviewed about dietary and socio-demographic information, and their anthropometric measurements (weight, height, waist and hip circumference) were taken. Body mass index (BMI) and waist to hip ratio (WHR) were used as measures of general and abdominal obesity, respectively. 331 adults were included in the study; mean age ± SD was 37.12 ± 13.58. General and central obesity were both inversely related to educational level, fast food consumption, number of snacks consumed and the level of physical activity. Central obesity was more prevalent in frequent breakfast consumers and smokers. Males who consumed less snacks and were physically inactive had higher odds of being generally obese, while those with increasing breakfast intake and decreasing fast food consumption were prone to central obesity. Females with a greater number of meals consumption had higher odds of general obesity while those who consumed less snacks and were physically inactive were prone to central obesity. The design of health programs and strategies to reduce the prevalence of obesity tailored to associated factors is a health priority.
Research Title: Maternal knowledge of acute seizures

Source: Neurosciences
PubMed Central
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Month and Year of Publication: OCT 2015

Impact Factor: 0.708

Affiliated Department(s): Pediatrics

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ABSTRACT

Objective: To study maternal knowledge-of, and behavior during acute seizures.

Methods: A cross sectional study conducted from September 2013 to January 2014 included consecutive mothers presenting at the Pediatric Neurology Clinics of King Abdulaziz University Hospital, Jeddah, Kingdom of Saudi Arabia. A structured 30-item questionnaire was designed to examine their demographics, knowledge, and behavior on acute seizures. Disclosure. The authors declare no conflicting interests, support or funding from any drug company.

Results: A total of 92 mothers were interviewed and 41% witnessed at least one acute seizure in their affected child (range 1-15 years, mean 4.5). Up to 26% felt not knowledgeable at all regarding the acute care and management of seizure. Mothers with higher education (college or university degree) were more likely to feel very knowledgeable (19% versus 11%, p=0.02). Only 10% were aware of an antiepileptic drug that could be used at home to stop prolonged seizures, and 35% mentioned that they would wait for 15 minutes before taking the child to the emergency department. Most mothers (93%) wanted more information. Those who felt strongly regarding that (66%), were more likely to be younger (<27 years) (p=0.01), and have at least 3 out of 7 mismanagement decisions (p=0.003).

Conclusion: Maternal level of knowledge and behavior during acute seizures needs improvement. Many mothers have significant misinformation, negative behavior, and poor management practices. Increased awareness and educational programs are needed.
Date palm is an important crop, especially in the hot-arid regions of the world. Date palm fruits have high nutritional and therapeutic value and possess significant antibacterial and antifungal properties. In this study, we performed bioactivity analyses and metabolic profiling of date fruits of 12 cultivars from Saudi Arabia to assess their nutritional value. Our results showed that the date extracts from different cultivars have different free radical scavenging and anti-lipid peroxidation activities. Moreover, the cultivars showed significant differences in their chemical composition, e.g., the phenolic content (10.4-22.1 mg/100 g DW), amino acids (37-108 molg-1 FW) and minerals (237-969 mg/100 g DW). Principal component analysis (PCA) showed a clear separation of the cultivars into four different groups. The first group consisted of the Sokary, Nabtit Ali cultivars, the second group of Khlas Al Kharj, Khla Al Qassim, Mabroom, Khlas Al Ahsa, the third group of Khals Elshiokh, Nabot Saif, Khodry, and the fourth group consisted of Ajwa Al Madinah, Saffawy, Rashodia, cultivars. Hierarchical cluster analysis (HCA) revealed clustering of date cultivars into two groups. The first cluster consisted of the Sokary, Rashodia and Nabtit Ali cultivars, and the second cluster contained all the other tested cultivars. These results indicate that date fruits have high nutritive value, and different cultivars have different chemical composition.
ABSTRACT

Objective: To present the histopathological and clinical correlation of mycetoma among patients attending King Abdulaziz University Hospital between 1998-2013.

Methods: The data of all histopathologically diagnosed mycetomas in the period between January 1998 and January 2013 were collected through a computerized database search of the anatomic pathology archives at King Abdulaziz University Hospital. The collected data were analysed. Identification of species were performed for five patients using 16S ribosomal DNA and internal transcribed spacer 2.

Results: There were 19 patients with mycetoma with an average age of 44.26 years and male: female ratio of 4:1. Actinomycetoma were 63.15% and eumycetoma were 36.84%. All patients presented with the classic lesions; presenting as painless subcutaneous mass, sinuses and discharge containing grains. The swellings were of slow evolution, with preferential foot localization. Species specification performed for samples from five patients with active lesions revealed species of Actinomyces israelii and Madurella mycetomatis in respective cases.

Conclusions: Actinomycetoma is more common than eumycetoma in this region. The fact that one of the patients with eumycetoma was a Saudi national raises the possibility of an indigenous species similar to Maduraella mycetomatis to be further explored for characteristics and pathogenesis. The disease has to be prioritized again and more robust and quick molecular diagnostic tools should be made available in order to save patients form disfiguring amputations.
**Research Title:** Normal male sexual function: emphasis on orgasm and ejaculation

**Source:** Fertility and Sterility Elsevier Science Inc Vol. 104, Issue 5, Page: 1051-1060

**ISSN:** 0015-0282

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**Affiliated Department(s):** Urology

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**ABSTRACT**

Orgasm and ejaculation are two separate physiological processes that are sometimes difficult to distinguish. Orgasm is an intense transient peak sensation of intense pleasure creating an altered state of consciousness associated with reported physical changes. Antegrade ejaculation is a complex physiological process that is composed of two phases (emission and expulsion), and is influenced by intricate neurological and hormonal pathways. Despite the many published research projects dealing with the physiology of orgasm and ejaculation, much about this topic is still unknown. Ejaculatory dysfunction is a common disorder, and currently has no definitive cure. Understanding the complex physiology of orgasm and ejaculation allows the development of therapeutic targets for ejaculatory dysfunction. In this article, we summarize the current literature on the physiology of orgasm and ejaculation, starting with a brief description of the anatomy of sex organs and the physiology of erection. Then, we describe the physiology of orgasm and ejaculation detailing the neuronal, neurochemical, and hormonal control of the ejaculation process.
ABSTRACT

Poisoning is a medical emergency that represent a major health problem all over the world. Studies on drug overdose and chemical poisoning are very limited in Saudi Arabia (SA). We aimed to describe the current pattern and assess risk factors of drug overdose and chemical poisoning in King Khalid National Guard hospital, Jeddah, SA. Medical records of patients attended emergency department in King Khalid National Guard hospital during the period from January 2008 to December 2012 due to drug overdose and chemical poisoning were reviewed. A total of 129 cases were included in the study. The majority of the population was Saudi (97.7 %), and almost half of them were females (54.3 %). Children under 12 years were the most affected age group (44.2 %). Drug overdose was the most common cause of poisoning (92.2 %). Analgesics and non-steroidal anti-inflammatory drugs represented the highest percentage of used medications (20.4 %). The most commonly reported symptoms were symptoms of the central nervous system (57.4 %) followed by GIT symptoms (41.9 %). Intentional poisoning was reported in 34 cases (26.4 %). Female patients were significantly more likely to attempt suicide than male patients (OR = 7.22, 95 % CI = 1.70, 30.62). Children continue to be at high risk for medication and chemical poisoning. Accessibility to medications at homes encountered for most of poisoning cases among children. Implementing methods to raise public awareness and minimize children access to medications would significantly contribute to reducing burden of this problem on the community.
ABSTRACT

Objectives: To determine the prevalence of habitual snoring among a sample of middle-aged Saudi adults, and its potential predictors.

Methods: A cross-sectional study was conducted from March 2013 until June 2013 in randomly selected Saudi Schools in Jeddah, Kingdom of Saudi Arabia. The enrolled subjects were 2682 school employees (aged 30-60 years, 52.1% females) who were randomly selected and interviewed. The questionnaire used for the interview included: the Wisconsin Sleep Questionnaire to assess for snoring, medical history, and socio-demographic data. Anthropometric measurements and blood pressure readings were recorded using standard methods.

Results: Forty percent of the 2682 enrolled subjects were snorers: 23.5% were habitual snorers, 16.6% were moderate snorers, and 59.9%, were non-snorers. A multivariate analysis revealed that independent predictors of snoring were ageing, male gender, daytime sleepiness, hypertension, family history of both snoring and obstructive sleep apnea, water-pipe smoking, and consanguinity.

Conclusion: This study shows that snoring is a common condition among the Saudi population. Previously reported risk factors were reemphasized but consanguinity was identified as a new independent predictive risk factor of snoring. Exploring snoring history should be part of the clinical evaluation.
ABSTRACT

Objectives: To identify Methicillin-resistant Staphylococcus aureus (MRSA) nasal carriage status among medical students during their clinical rotations.

Methods: This cross-sectional study detected the prevalence of MRSA among medical students at King Abdulaziz University (KAU), Jeddah, Saudi Arabia, using molecular approaches. Nasal swabs were collected from 150 internship and sixth-year medical students between September 2014 and January 2015, and compared with the control group of 32 third-year medical students who were not exposed to clinical work. Polymerase chain reaction (PCR) screening was performed to identify Staphylococcus aureus (S. aureus) nuc gene, and an additional PCR was performed on S. aureus positive samples to detect the presence of mecA gene.

Results: Out of 150 students screened, 38 were nasal carriers of S. aureus. The prevalence of methicillin-sensitive S. aureus (MSSA) carriers was 18.7% (n= 28), whereas 10 students (6.7%) were mecA-positive, representing MRSA carriers. Interns carry MRSA more than 6th year students and students who were not exposed to clinical work (p< 0.05), while MSSA is found more in students who were not exposed to clinical work (p< 0.01).

Conclusion: We found MRSA carriers among medical students at KAU, which showed a possible contribution of this group to transmit infection to hospitalized patients. Medical students must receive sufficient knowledge regarding control measures to avoid spread of this infection in hospitals.
ABSTRACT

Objectives: To investigate the prevalence of obesity and hypertension among University students' and their knowledge and attitude towards risk factors of cardiovascular disease (CVD) in Jeddah, Saudi Arabia.

Methods: A total of 610 male students were selected for present cross sectional study and their blood pressure (BP) and body mass index (BMI) was determined, other data was gathered through a questionnaire, and SPSS-16 was used for analyzing data.

Results: Out of 610 students, 7.5% were hypertensive (systolic 2.6% and diastolic 6.3%) while the BMI of 51.6% was in the normal range, 29.8% were overweight and 10.7% were moderately obese and 7.9% were severely obese. Majority of the participants considered that smoking, increased fatty food intake, obesity, high BP, and increased LDL-cholesterol level, are the main causes of the CVD. Most of the participants agreed that one should know his BP, blood sugar, serum cholesterol and one should maintain normal body weight and should do regular exercise. They were also aware that healthy lifestyle could prevent CVD. However, majority of the participants were not practicing healthy lifestyle.

Conclusion: A huge gap exists in the knowledge, attitude and practice regarding risk factors of CVD among the university students.
Papillon–Lefevre syndrome (PALS) is a rare, autosomal recessive disorder characterized by periodontitis and hyperkeratosis over the palms and soles. Mutations in the cathepsin C gene (CTSC) have been recognized as the cause of PALS since the late 1990s. More than 75 mutations in CTSC have been identified, and phenotypic variability between different mutations has been described. Next generation sequencing is widely used for efficient molecular diagnostics in various clinical practices. Here we investigated a large consanguineous Saudi family with four affected and four unaffected individuals. All of the affected individuals suffered from hyperkeratosis over the palms and soles and had anomalies of both primary and secondary dentition. For molecular diagnostics, we combined whole-exome sequencing and genome-wide homozygosity mapping procedures, and identified a recurrent homozygous missense mutation (c.899G>A; p.Gly300Asp) in exon 7 of CTSC. Validation of all eight family members by Sanger sequencing confirmed co-segregation of the pathogenic variant (c.899G>A) with the disease phenotype. This is the first report of whole-exome sequencing performed for molecular diagnosis of PALS in Saudi Arabia. Our findings provide further insights into the genotype–phenotype correlation of CTSC pathogenicity in PALS.
Research Title: Prospective study of depression among dialysis patients in Saudi Arabia


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ABSTRACT

The purpose was to determine the short-term course of depression among dialysis patients in Saudi Arabia and identify baseline characteristics that may influence course.

Thirty-nine dialysis patients in Jeddah, SA, were identified with subthreshold, minor, or major depressive disorders using the Structured Clinical Interview for Depression (SCID) and followed up at 6 and 12 weeks using the Longitudinal Interview and Follow-up Evaluation (LIFE) schedule. Depressive symptoms were tracked using the Hamilton Depression Rating Scale (HDRS). Patient characteristics measured at baseline included demographic, psychosocial, physical health, and treatment factors.

Of the 20 patients with major or minor depressive disorder, eight (40 %) fully remitted by 6 weeks and an additional three patients remitted over the next 6 weeks, leaving 45 % with significant depressive symptoms persisting beyond 12 weeks. Subthreshold disorders followed a similar course (42 % with persistent symptoms). Few patients received treatment for depression. Those with more education, severe health problems, poorer psychological function, more severe depressive symptoms, or a family psychiatric history were less likely to remit. Similar factors predicted change in depressive symptoms assessed by HDRS, especially high medical co-morbidity, severe illness, and overall poor psychological functioning.

Nearly one-half of depressed dialysis patients in Saudi Arabia continue to have significant symptoms beyond 12 weeks of follow-up, few of whom were treated. Specific characteristics at baseline identify depressed dialysis patients at greater risk of persistent symptoms who need treatment.
ABSTRACT

Puberty has different factors affecting its onset e.g. race, nutrition, hormonal stimulation. The aim of this research is to investigate the racial differences in onset of puberty among Saudi and non-Saudi young females living in the same environment. This cross-sectional study includes 568 healthy young females aged between 6-14 years living in Jeddah. In the present study, 60.7% of females were Saudis and 38.2% were non-Saudis. There were no significant differences found between each of the age of breasts development ($p=0.187$), age of first appearance of pubic hair ($p=0.308$), and the age of menarche ($p=0.651$) among Saudi and non-Saudi young females living in Jeddah. There were no significant differences between pubertal developmental age among Saudi and non-Saudi young females living in Jeddah.
ABSTRACT

This study assessed the relationship between parental punishment and depression as well as quality of life in children with primary monosymptomatic nocturnal enuresis (PMNE). A consecutive sample of 65 children (7-13 years) with PMNE and 40 healthy children, selected as controls (Group III), were included in the study. The children with PMNE were further sub-classified into two groups: Group I, which included children who received parental punishment for enuresis and Group II, which comprised children who were not punished for bedwetting. Depression and health-related quality of life (HRQL) were assessed among the three groups. The number of wet nights per week was significantly increased in Group I compared with Group II (P<.001). In addition, the severity of depressive symptoms increased in Group I as compared to the other two groups (P<.001). Similarly, the psychosocial HRQL lower in Group compared to the control group (Group III) (P<.001). Prior parental discipline, including corporal punishment (B = 0.55, P = .008), as well as the frequency (B = 0.73, P<.001) and duration of punishment (B = 0.33, P = .02) were strong predictors of increased depressive symptom severity. It was also found that prior punishment (B = -0.42, P = .01) and the frequency (B = -0.62, P<.001) and duration of punishment (B = -0.34, P = .02) were strong predictors for poor psychosocial HRQL. Overall, parental punishment has a poor outcome in children with PMNE.
ABSTRACT

Objective: This study aims to identify possible risk factors for falls among Saudi postmenopausal women in a population-based study.

Methods: Seven hundred seven postmenopausal women aged 50 years or older were followed in a prospective cohort study. Participant demographic characteristics, medical history, lifestyle factors, past-year history of falls, and physical activity (PA) scores were assessed. We recorded single and multiple falls, anthropometric parameters, five special physical performance tests, hormone levels, and bone mineral density measurements. Data on knee osteoarthritis (OA), lumbar spondylosis, and osteopenia were collected. Knee and lower back pain were assessed by interview, and cognition was assessed with Mini-Mental State Examination.

Results: During the mean (SD) follow-up of 5.2 (1.3) years, 164 women (23.2%) reported at least one fall, of whom 73 women (10.3%) reported multiple falls. Six independent predictors of all falls were identified: PA score of 12.61 or lower (lowest quartile; odds ratio [OR], 4.10; 95% CI, 1.82-8.90); past-year history of falls (OR, 2.44; 95% CI, 2.30-2.90); age 65 years or older (OR, 2.16; 95% CI, 1.30-3.12); presence of knee OA (OR, 1.56; 95% CI, 1.03-2.34); handgrip strength of 13.88 kg or lower (lowest quartile; OR, 1.33; 95% CI, 1.09-1.64); and 8-ft walk test of 3.94 s or longer (highest quartile; OR, 1.18; 95% CI, 1.07-1.35).

Conclusions: Poor PA score, past-year history of falls, age 65 years or older, presence of knee OA, poor handgrip strength, and prolonged time on the 8-ft walk test are risk factors for all falls among Saudi postmenopausal women.
**Research Title:** Self-Screening for Malnutrition Risk in Outpatient Inflammatory Bowel Disease Patients Using the Malnutrition Universal Screening Tool

**Source:** Journal of Parenteral & Enteral Nutrition
SAGE
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**Affiliated Department(s):** Medicine

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## ABSTRACT

**Background and Aims:** Malnutrition is common in patients with inflammatory bowel disease (IBD) and is associated with poor outcomes. Our aim is to determine if patient self-administered malnutrition screening using the malnutrition universal screening tool (MUST) is reliable by comparing patient scores with those derived from the healthcare practitioner (HCP), the gold standard.

**Methods:** We conducted a prospective validation study at a tertiary Canadian academic center that included 154 adult outpatients with IBD. All patients with IBD completed a self-administered nutrition screening assessment using the MUST score followed by an independent MUST assessment performed by HCPs. The main outcome measure was chance-corrected agreement (κ) of malnutrition risk categorization.

**Results:** For patient-administered MUST, the chance-corrected agreement κ (95% confidence interval [CI]) was 0.83 (0.74–0.92) when comparing low-risk and combined medium- and high-risk patients with HCP screening. Weighted κ analysis comparing all 3 risks groups yielded a κ (95% CI) of 0.85 (0.77–0.93) between patient and HCP screening. All patients were able to screen themselves. Overall, 96% of patients reported the MUST questionnaire as either very easy or easy to understand and to complete.

**Conclusion:** Self-administered nutrition screening in outpatients with IBD is valid using the MUST screening tool and is easy to use. If adopted, this tool will increase utilization of malnutrition screening in hectic outpatient clinic settings and will help HCPs determine which patients require additional nutrition support.
According to the World Health Organization, 46% of the world's children suffer from anemia, which is usually treated with iron supplements such as ferrous sulfate. The aim of this study was to prepare iron as solid lipid nanoparticles, in order to find an innovative way for alleviating the disadvantages associated with commercially available tablets. These limitations include adverse effects on the digestive system resulting in constipation and blood in the stool. The second drawback is the high variability in the absorption of iron and thus in its bioavailability. Iron solid lipid nanoparticles (Fe-SLNs) were prepared by hot homogenization/ultrasonication. Solubility of ferrous sulfate in different solid lipids was measured, and effects of process variables such as the surfactant type and concentration, homogenization and ultrasonication times, and charge-inducing agent on the particle size, zeta potential, and encapsulation efficiency were determined. Furthermore, in vitro drug release and in vivo pharmacokinetics were studied in rabbits. Results indicated that Fe-SLNs consisted of 3% Compritol 888 ATO, 1% Lecithin, 3% Poloxamer 188, and 0.2% dicetylphosphate, with an average particle size of 25 nm with 92.3% entrapment efficiency. In vivo pharmacokinetic study revealed more than fourfold enhanced bioavailability. In conclusion, Fe-SLNs could be a promising carrier for iron with enhanced oral bioavailability.
Research Title: Subclinical Hypovitaminosis D and Osteoporosis in Breast Cancer Patients

Source: Middle East Journal of Internal Medicine
Medi+WORLD International
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Impact Factor: n/a

Affiliated Department(s): Clinical Biochemistry

Author(s): Tamer Gheita, Safaa Sayed, Waleed Hammam, Gehan A Hegazy

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ABSTRACT

Objective: This study was designed to detect 25-hydroxy vitamin D serum levels and bone mineral density (BMD) status in breast cancer patients, and to determine their relation to treatment and disease stages.

Patients and methods: The study included 74 female patients with breast cancer and 52 healthy volunteers as the control group. Serum levels of 25-hydroxy vitamin D, calcium, phosphorus, and alkaline phosphatase were measured using ELISA kits, while dual energy x-ray absorptiometry (DXA) was performed to assess the BMD. Twelve patients received chemotherapy only; 12 received chemotherapy and hormonal therapy, 22 received chemotherapy and radiotherapy while 28 received chemotherapy, hormonal therapy and radiotherapy.

Results: Serum levels of phosphorous and 25-hydroxy vitamin D were significantly lower (p =0.0001), and alkaline phosphatase was significantly increased (p =0.0001) in patients compared to the control. Hip, spine, and forearm DXA were significantly lower in patients than in controls (p =0.0001). The worst bone status was in those receiving both chemotherapy and hormonal therapy. The grade of tumor significantly correlated with the serum phosphorus level (p =0.048) and negatively with the serum 25- hydroxyl vitamin D level (p =0.03) as well as with the DXA of hip (p =0.01) and spine (p =0.0001).

Conclusion: Our study supports findings of increased incidence of hypovitaminosis D, osteoporosis and osteopenia in breast cancer patients. Hence, we throw light on the importance of offering calcium and vitamin D supplements to breast cancer patients. It is recommended that breast cancer patients have a DXA scan on a yearly basis.
The desire to utilize postmastectomy breast reconstruction in Saudi Arabian women: Predictors and barriers

**ABSTRACT**

**Objectives:** To study factors that influence the desire to utilize breast reconstruction after mastectomy, and to investigate the barriers to reconstruction among women in Saudi Arabia.

**Methods:** We conducted a cross-sectional study at 2 surgical centers in Jeddah, Saudi Arabia. A self-administered questionnaire was distributed to all breast cancer patients attending the surgery clinics for follow-up after mastectomy between January and March 2013. Ninety-one patients met the study inclusion criteria. The first part of the questionnaire covered the demographic and socioeconomic information regarding factors that might influence the desire to utilize breast reconstruction including possible barriers. Multivariate logistic regression was used to determine the significant predictors of the desire to undergo reconstruction.

**Results:** Overall, 16.5% of patients underwent breast reconstruction after mastectomy. Young age and high educational attainment were significantly associated with an increased desire to undergo reconstruction. The main barriers to reconstruction were the lack of adequate information on the procedure (63%), concerns on the complications of the procedure (68%), and concerns on the reconstruction interfering with the detection of recurrence (54%).

**Conclusion:** Age and educational level were significant predictors of the desire to utilize breast reconstruction. Furthermore, modifiable barriers included the lack of knowledge and misconceptions on the procedure. Addressing these issues may increase the rate of breast reconstruction in Saudi Arabia.
ABSTRACT

Background: Osteoporosis is a major public health problem in Saudi Arabia. Low bone mineral density (BMD) is a major predictor for osteoporosis and fractures. Parity and lactation are suggested as two risk factors for Low BMD.

Aim: The aim of this study is to assess the relation between parity, lactation and bone mineral density among Saudi women.

Methods: This cross sectional study was conducted at Centre of Excellence for Osteoporosis Research (CEOR), Jeddah City, Saudi Arabia on a sample of 321 women. Women who delivered within the past two years were excluded. A total of 283 women were included in the final analysis. Dual- Energy-X-Ray Absorptiometry (DEXA) was used for BMD measurements using Lunar DPX-IQ Machine. The measurements included: Lumbar spine, total hip and total wrist. The data collected was age, number of children, duration of lactation, height and weight for body mass index (BMI) calculation. Multiple logistic regression was used to identify the effect of parity and lactation on BMD.

Results: A sample of 283 women ranging in age from 23 to 58 years, mean (SD) 39.1(6.4). Number of pregnancies ranged from 0 to 12, with a median of 4 pregnancies and Inter Quartile Range (IQR) 2-5. Lactation was reported by 79.7% of those who have live births. Median duration of lactation was 20 months IQR 2-24. After adjustment for confounding variables, a decrease in wrist BMD was significantly associated with increase duration of lactation.

Conclusion: The results of the current study suggest that duration of lactation is one of the determinants of BMD at wrist joint.
ABSTRACT

Background: Ulcerative colitis (UC) is a chronic inflammatory disorder of the colon that has a relapsing–remitting course. Health related quality of life (HRQL) is significantly lower in patients with UC than the general population due to the negative effects of the disease on physical, psychological and social well-being. Randomized controlled trials (RCTs) evaluating medical interventions for UC have traditionally used clinical disease activity indices that focus on symptoms to define primary outcomes such as clinical remission or improvement. However, this approach does not evaluate benefits that are highly relevant to patients such as HRQL.

Objectives: The primary objective was to assess the impact of biologic therapy on the HRQL of UC patients.

Search methods: We searched PubMed, MEDLINE, EMBASE and CENTRAL from inception to September, 2015. Conference abstracts and reference lists were also searched.

Selection criteria: RCTs that compared biologics to placebo in UC patients and reported on HRQL using the Inflammatory Bowel Disease Questionnaire (IBDQ), or the SF-36 or EQ-5D to measure HRQL were included.

Data collection and analysis: Two authors independently screened studies for inclusion, extracted data and assessed study quality using the Cochrane risk of bias tool. The primary outcome was improvement in HRQL. For dichotomous outcomes we calculated the risk ratio (RR) and 95% confidence interval (CI). For continuous outcomes we calculated the mean difference (MD) and 95% CI. The overall quality of the evidence supporting the primary outcome was assessed using GRADE.

Main results: Nine RCTs (n = 4143) were included. Biologics included rituximab (one small study), interferon-beta-1a (one study), vedolizumab (one study), and the tumor necrosis factor-alpha (TNF-alpha) antagonists infliximab (two studies), adalimumab (three studies), and golimumab (one study). Risk of bias was low in eight studies. The rituximab study was judged to be at high risk of bias due to attrition bias. The studies comparing interferon-beta-1a and rituximab to placebo found no clear evidence of a difference in the proportion of patients who experienced an improvement in HRQL at 8 or 12 weeks respectively. The proportion of patients with a clinically meaningful improvement in HRQL at 6 or 52 weeks was significantly higher in vedolizumab patients compared to placebo. At 6 weeks 37% (83/225) of vedolizumab patients had an improvement in IBDQ score of at least 16 points.
from baseline compared to 23% (34/149) of placebo patients (RR 1.62, 95% CI 1.15 to 2.27; 1 study). At 52 weeks, 64% (157/247) of vedolizumab patients had an improvement in IBDQ score of at least 16 points from baseline compared to 38% (48/126) of placebo patients (RR 1.62, 95% CI 1.15 to 2.27; 1 study). A GRADE analysis indicated that the overall quality of the evidence supporting these outcomes was moderate due to sparse data (< 400 events). Patients who received maintenance vedolizumab every eight weeks had significantly higher mean SF-36 scores than placebo patients at 52 weeks (MD 3.40, 95% CI 1.56 to 5.24, 1 study 248 patients). This difference appears to be clinically meaningful as the lower boundary for a clinically meaningful change in SF-36 is three points. A GRADE analysis indicated that the overall quality of the evidence supporting this outcome was moderate due to sparse data (< 400 events). Adalimumab patients had significantly higher mean IBDQ scores than placebo patients at weeks 8 (MD 9.00, 95% CI 2.65 to 15.35; 1 study, 494 patients) and 52 (MD 8.00, 95% CI 0.68 to 15.32; 1 study, 494 patients). However, these differences may not be clinically meaningful as the lower boundary for a clinically meaningful change in IBDQ is 16 points. A GRADE analysis indicated that the overall quality of the evidence supporting this outcome was moderate due to sparse data (< 400 events). Infliximab patients had significantly higher mean IBDQ scores at week 6 or 8 than placebo patients (MD 18.58, 95% CI 13.19 to 23.97; 2 studies, 529 patients). This difference in HRQL is clinically meaningful. A GRADE analysis indicated that the overall quality of the evidence supporting this outcome was high. The proportion of patients with a clinically meaningful improvement in HRQL at eight weeks was significantly higher in infliximab patients compared to placebo. Sixty-nine per cent (333/484) of infliximab patients had an improvement in IBDQ score of >= 16 points from baseline compared to 50% of placebo patients (RR 1.39, 95% CI 1.21 to 1.60; 1 study). A GRADE analysis indicated that the overall quality of the evidence supporting this outcome was high. Similar results were found between infliximab and placebo when HRQL was measured using the SF-36 instrument.

One small study (n = 43) found no difference in HRQL between infliximab and placebo when measured by the EQ-5D. Pooled analyses of TNF-alpha antagonists showed a benefit in HRQL favouring TNF-alpha over placebo.

Authors’ conclusions: These results suggest that biologics have the potential to improve HRQL in UC patients. High quality evidence suggests that infliximab provides a clinically meaningful improvement in HRQL in UC patients receiving induction therapy. Moderate quality evidence suggests that vedolizumab provides a clinically meaningful improvement in HRQL in UC patients receiving maintenance therapy. These findings are important since there is a paucity of effective drugs for the treatment of UC that have the potential to both decrease disease activity and improve HRQL. More research is needed to assess the long-term effect of biologic therapy on HRQL in patients with UC. More research is needed to assess the impact of golimumab and adalimumab on HRQL in UC patients. Trials involving direct head to head comparisons of biologics would help determine which biologics provide optimum benefit for HRQL.
Iron deficiency anemia is extremely common, particularly in the developing world, reaching a state of global epidemic. Iron deficiency during pregnancy is one of the leading causes of anemia in infants and young children. Many women go through the entire pregnancy without attaining the minimum required intake of iron. This review aims to determine the impact of maternal iron deficiency and iron deficiency anemia on infants and young children. Extensive literature review revealed that iron deficiency is a global nutritional problem affecting up to 52% of pregnant women. Many of these women are symptomatic. Lack of proper weight gain during pregnancy is an important predictor of iron deficiency.
Hijamah (a well-known Prophetic complimentary treatment) has been used for centuries to treat various human diseases. It is considered that this traditional treatment (also known as wet cupping) has the potential to treat many kinds of diseases. It is performed by creating a vacuum on the skin by using a cup to collect the stagnant blood in that particular area. The vacuum at the end is released by removing the cup. Superficial skin scarification is then made to draw the blood stagnation out of the body. This technique needs to be performed in aseptic conditions by a well trained Hijamah-physician. Prophet Muhammad (PBUH) had described Hijamah as the best treatment humans can have. This novel treatment methodology has been successfully used as cure for numerous diseases including skin diseases. In this case report, we discuss about the application of this method in the treatment of psoriasis (an autoimmune skin disease). Results illustrated that with Hijamah, disease can not only be controlled but can be brought to a nearly complete remission.
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ABSTRACT

Appropriate and timely treatment is of utmost importance especially for patients in intensive care unit (ICU). Hence knowledge of antibiotic resistance pattern of common organisms that cause infection amongst the patients in ICU, can guide the medical practitioners/intensivist in administration of the antibiotic treatment accordingly and help to reduce the emergence of antibiotic resistant pathogens. The study was conducted from June 2012-to June 2013, in order to examine the prevalence and antibiotic resistance patterns among the patients in ICU at King Abdul Aziz university hospital, Jeddah (tertiary centre in the western province of Saudi Arabia). A retrospective study design, where isolates are obtained from a wide range of clinical samples including blood, Sputum and Tracheal samples from 1235 patients in the ICU, blood culture, routine sputum culture and broncoalveolar lavage methods were used to observe the growth of organisms in the samples. The clinical samples were collected over the studied period. The results indicated that, common pathogens found in this study are Acinetobacter Baumanii and Klebsiella were found to be the most common organism amongst the ICU patients. As well as, the susceptibility to antibiotics was more or less equal in both men and women, however, the level of resistance increase with the length of the stay in ICU. The study concluded that, Preventing the emergence and propagation of these antibiotic resistant pathogens would substantially reduce the detrimental events and also associated expenses.
ABSTRACT

Recurrent spontaneous abortion has been reported to occur in 15-20% of all clinically recognizable pregnancies. Numerous studies have reported a clear relationship between the chromosomal abnormalities in parents and recurrent miscarriages and infertility, however limited data is available from Arabian Peninsula. The main goal of this study was to determine the prevalence of chromosomal abnormalities and correlate them with clinical characteristics of couples with recurrent spontaneous abortions (RSA) in Saudi Arabia.
ABSTRACT

Objective: To study the prevalence, pattern of distribution, and the outcome of different types of kidney and urinary tract anomalies (CAKUT) diagnosed during the antenatal period. The second objective is to test the accuracy of antenatal diagnosis of CAKUT.

Materials And Methods: In a cross-sectional hospital-based study, all cases diagnosed antenatally with urinary tract anomalies at King Abdulaziz University Hospital (KAUH), Jeddah, Kingdom of Saudi Arabia, were studied. The prevalence, pattern of distribution, and immediate postnatal outcomes, in addition to the accuracy of antenatal diagnosis, of those cases are reported.

Results: One hundred and forty-one cases of urinary tract anomalies were antenatally diagnosed; postnatal diagnosis was confirmed in 128 cases (90.1%). The prevalence of CAKUT in our population is 3.26 per 1000 births. The most common abnormalities detected were hydronephrosis, polycystic kidney disease, multicystic dysplastic kidney, and renal agenesis, in descending order of frequency. The perinatal mortality rate among fetuses with CAKUT is 310 per 1000, the majority of these cases (90%) occurred in cases with renal parenchyma involvement.

Conclusions: The prevalence of different types of CAKUT is higher than that reported in developed countries. Urinary tract anomalies can be accurately diagnosed and classified in the antenatal period using ultrasonography imaging. Antenatal diagnosis is a helpful tool in planning immediate postnatal care and deciding the place for delivery. This might prevent or slow renal function deterioration and help in early identification of patients who need early surgical intervention.
Research Title: Assessment of the Common Risk Factors Associated with Type 2 Diabetes Mellitus in Jeddah

Source: International Journal of Endocrinology
Hindawi Publishing Corporation
Volume 2014, page 1-9

ISSN: 1687-8345

Date and Year of Publication: 2014-SEPT

Impact Factor: 1.515

Affiliated Department(s): Family Medicine

Author(s): Manal A Murad, Samia S Abdulmageed, Rahila Iftikhar, Bayan Khaled Sagga

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ABSTRACT

Risk factor management is important in avoiding life-threatening complications and preventing new-onset diabetes. We performed a case-control study in 2013 at ten primary health care centers in Jeddah, Saudi Arabia to determine the common risk factors of diabetes mellitus type 2 (DM2) and the demographic background of adult Saudi patients with DM2. Known diabetic patients were recruited as cases, while nondiabetic attendants were selected as controls. A pretested designed questionnaire was used to collect data from 159 cases and 128 controls. Cases were more likely than controls to be men (P < 0.0001), less educated (P < 0.0001), natives of eastern Saudi Arabia (P < 0.0001), retired (P < 0.0001), lower-salaried (P < 0.0001), or married or divorced (P < 0.0001). By univariate analysis cases were likely to be current smokers (P < 0.0001), hypertensive (P < 0.0001), or overweight/obese (P < 0.0001). Cases were also more likely to have a history of DM in a first-degree relative (P = 0.020). By multivariate analysis, cases were more likely to be older than 40 years (P < 0.0001), less educated (P = 0.05), married or divorced (P = 0.04), jobless/housewives (P < 0.0001), or current smokers (P = 0.002). They were also more likely to have salaries <7000 Saudi riyals (P = 0.01). Overall, prediabetic and high risk groups should be identified and counseled early before the occurrence of diabetes.
The prevalence of obesity is increasing in Saudi Arabia. The search for genes that increase the susceptibility to develop obesity has become important. One set of candidate genes for obesity is the heterotrimeric G proteins, which are key components of intracellular signal transduction and play a focal role in adipogenesis. The aim of this study was to study the association between the C825T (C-to-T substitution at nucleotide 825 in exon 10) (rs5443) polymorphism of the GNB3 gene and obesity in a sample Saudi population. Blood samples from 116 healthy volunteers in age group 18-60 years were taken and obesity status was determined by the Body Mass Index (BMI). DNA was extracted from whole blood and PCR for the GNB gene was done. The PCR product thus obtained was subjected to restriction analysis using the enzyme BsaJ1 to determine the presence or absence of the GNB3 C825T polymorphism. Alleles T represent the absence of restriction site while alleles C indicate the presence of restriction site. Association between the genotypes and obesity was determined. We found that the presence of the T allele was a major contributing factor to obesity because from our study group we observed a higher occurrence of TT genotype in obese and over obese people while the normal people had a high occurrence of CT genotype and the underweight people had a high occurrence of CC genotype. Genotyping studies clearly showed that the T allele was a major contributing factor towards obesity. Higher T allele frequency was associated with obesity as compared with normal individuals.
ABSTRACT

Background: intermittent fasting improves risk factors for coronary artery disease. However, Muslims in Saudi Arabia experience severe disturbance in their sleeping patterns during the fasting month of Ramadan and cortisol, a hormone that controls the expression of many hormones and inflammatory markers, loses its circadian rhythm during this month. This might have deleterious effects on metabolic homeostasis, increasing the risk of chronic cardiometabolic disorders.

Objectives: to investigate the change during Ramadan in the pattern of secretion of: 1- high sensitivity C-reactive protein (hsCRP), an inflammatory marker associated with increased cardiovascular risk and regulated by cortisol and 2-the adipokines leptin and adiponectin and related changes in insulin resistance.

Subjects and methods: Twenty-three young, apparently healthy subjects were evaluated before and two weeks into Ramadan. Blood samples were collected at 9.00 am and 9.00 pm for measurements of glucose, insulin, leptin, adiponectin and hsCRP.

Results: During Ramadan, the concentrations of hsCRP were lower compared to regular living conditions, while glucose homeostasis was maintained by increases in the secretion of insulin without a change in its circadian pattern, indicating an increase in insulin resistance, as also measured by HOMA-IR. Furthermore, leptin and adiponectin secretion were significantly changed to a pattern favoring insulin resistance. Mean morning concentrations of leptin were significantly higher than pre-Ramadan values (p = 0.001), in contrast to those of adiponectin, which were significantly lower (p < 0.001).

Conclusions: In Saudi Arabia, the beneficial effects of fasting on hsCRP during Ramadan is offset by disturbed sleeping and eating patterns leading to alterations in leptin and adiponectin secretion, associated with decreased insulin sensitivity. These changes might contribute to the high prevalence of obesity, metabolic syndrome and diabetes mellitus type 2, and their cardiovascular sequelae, in this population.
ABSTRACT

Background: Little research has been conducted on the heart rate variability (HRV) parameters in late adolescent females. The present study aimed to assess HRV time and frequency domain parameters in overweight and obese late adolescent females. Also to assess any possible correlation between HRV parameters and obesity indices in that particular age group.

Subjects And Methods: Fifteen-minute period of standardized ECG recording was implemented to record HRV time and frequency parameters in 42 normotensive euglycemic female medical students aged (18-21 years); lean (n = 13), overweight (n = 13), and obese (n = 16). For the analysis of results, 2.5-minute data were used.

Results: Root mean squares of successive differences between adjacent RR intervals (rMSSD) and high-frequency (HF) power were significantly decreased in overweight and obese late adolescent females. Parameters reflecting sympathetic activity which include low-frequency (LF) power and LF/HF ratio showed significant increase in overweight group. Interestingly, LF power was significantly reduced in obese group while the LF/HF ratio was insignificantly different. No significant correlations were observed between HRV indices and parameters of total or visceral obesity in the study groups.

Conclusion: HRV indices showed sympathetic hyperactivity in overweight late adolescent females and diminished sympathetic response in matching obese group. Both overweight and obese females showed decreased protective vagal influence on the heart.
ABSTRACT

Hospital readmissions within 30 days of initial discharge occur frequently. In studies of elderly patients receiving Medicare, readmissions have been associated with poor-quality inpatient care, ineffective hospital-to-home transitions, patient characteristics, disease burden, and socioeconomic status. Among adult family medicine patients spanning a wide age range, we hypothesize that previous hospitalizations, length of stay, number of discharge medications, medical comorbidities, and patient demographics are associated with a greater risk of hospital readmission within 30 days. A retrospective case-control study of 253 family medicine inpatients was conducted to determine the factors associated with 30-day readmission. Odds ratio and one sample T-test were computed to determine the risk factors for unscheduled re-admittance. The results indicated that Patients who were admitted again in 30 days had additional related morbidities (2.1 vs 1.2; P < .0001), and the characteristic associated morbidities of congestive heart failure, coronary artery disease, chronic obstructive pulmonary ailment, presence of a psychiatric disorder and recent cancer were all additionally widespread amongst cases. Also the study results indicated that unscheduled re-admittance is related to patient’s features. Patients with heart disease, cancer, pneumonia, sepsicaemia and liver diseases were more prone to admitted again. The proportion of re-admittance was associated with extended stay in the hospital, increased morbidity rate and hospital expenses.
Research Title: CD40 Ligand Preferentially Modulates Immune Response and Enhances Protection against Influenza Virus

Source: Journal of Immunology
Amer Assoc Immunologists
Volume 193, Issue 2, page 722-734

ISSN: 1550-6606

Date and Year of Publication: 2014-JUL

Impact Factor: 5.362

Affiliated Department(s): Microbiology and Medical Parasitology

Author(s): Anwar M Hashem, Caroline Gravel, Ze Chen, Yinglei Yi, Monika Tocchi, Bozena Jaentschke, Xingliang Fan, Changgui Li, Michael Rosu-Myles, Alexander Pereboev, Runtao He, Junzhi Wang, Xuguang Li

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**ABSTRACT**

CD40L, a key regulator of the immune system, was studied as both a targeting ligand and a molecular adjuvant in nucleoprotein (NP)-based host defense against influenza in mouse models with different genetic backgrounds. Adenoviral vectors secreting NP-CD40L fusion protein (denoted as rAd-SNP40L) afforded full protection of immunocompetent and immunocompromised mice (CD40L(-/-) and CD4(-/-)) against lethal influenza infection. Mechanistically, rAd-SNP40L preferentially induced early and persistent B cell germinal center formation, and accelerated Ig isotype-switching and Th1-skewed, NP-specific Ab response. Moreover, it drastically augmented primary and memory NP-specific CTL activity and polyfunctional CD8(+) T cells. The markedly enhanced nonneutralizing Abs and CTLs significantly reduced viral burdens in the lungs of mice upon lethal virus challenge. Data generated from CD40L(-/-) and CD4(-/-) mice revealed that the protection was indeed CD40L mediated but CD4(+) T cell independent, demonstrating the viability of the fusion Ags in protecting immunodeficient hosts. Notably, a single dose of rAd-SNP40L completely protected mice from lethal viral challenge 4 mo after immunization, representing the first report, to our knowledge, on NP in conjunction with a molecular adjuvant inducing a robust and long-lasting memory immune response against influenza. This platform is characterized by an increased in vivo load of CD40-targeted Ag upon the secretion of the fusion protein from adenovirus-infected cells and may represent a promising strategy to enhance the breadth, durability, and potency of Ag-specific immune responses.
**ABSTRACT**

Influenza nucleoprotein is a highly conserved antigen and a candidate universal vaccine against flu. However, NP-based vaccines can only afford weak protective immunity compared to HA. Using CD40 ligand (CD40L), a key regulator of the immune system, as both a targeting ligand and a molecular adjuvant, we show that single immunization with recombinant adenovirus carrying a fused gene encoding for secreted NP-CD40L fusion protein provided robust and long-lasting protection against influenza in normal mice. It enhanced B cell responses by inducing early and persistent B cell germinal center formation, accelerated immunoglobulin isotype-switching and TH1-skewed NP-specific immune response. Moreover, it significantly boosted primary and secondary NP-specific cytotoxic T-lymphocyte (CTL) activity and multiple cytokine producing CD8+ T cells. Transfer of sera or CD8+ T cells from immunized to naïve mice showed that targeting NP to CD40-expressing cells augmented the role of both NP-specific antibodies and CTLs in protection compared to untargeted NP. Importantly, it afforded effective protection in CD40L and CD4 deficient mice, confirming that the induced protection is CD40L-mediated and CD4+ T cell-independent.
Research Title: Chlamydia trachomatis infection among female inmates at Briman prison in Saudi Arabia.

Source: BMC Public Health
BioMed Central Ltd
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Affiliated Department(s): Ob-Gyne

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ABSTRACT

Background: Chlamydia trachomatis infection is the most common sexually transmitted infection (STI) in the western countries; its prevalence in the conservative Muslim population of Saudi Arabia is not known, but it is generally believed to be low. This study is the first to investigate the prevalence of and risk factors for C. trachomatis infection in the high-risk group of female inmates at Briman Prison in Jeddah.

Methods: The inmates were interviewed using a pre-designed questionnaire, and their urine samples were tested for C. trachomatis infection by real-time PCR assay.

Results: The overall prevalence of C. trachomatis infection was 8.7% in the study population. The ≤25 age group was predominantly affected, with an average prevalence of 16.6%. Two out of five (2/5, 40%) Yamani, (4/33 12.1%) Indonesian, (3/33, 9.1%) Somalian and (2/26, 7.7%) Ethiopian inmates were positive for infection. None of the Saudi inmates (0/14) were positive for infection. Among the studied variables, only age was significantly associated with the infection rate. The other variables (marital status, nationality, religion, employment status, education level, nature of the offense committed, knowledge about protection from STIs, and knowledge about condom use and the purpose of condom use) did not show a significant correlation with Chlamydia infection.

Conclusions: The overall prevalence of C. trachomatis infection was within the range published by other reports in similar prison settings in developed countries. The results indicate the need for a countrywide screening and treatment program for all inmates at the time of entry into prison.
ABSTRACT

Objectives: To characterize the clinical features of Fuchs’ Heterochromic Iridocyclitis in a Saudi population.

Methods: Retrospective analysis of the records of the consecutive patients presented to the uveitis clinic, Magrabi Eye and Ear Hospital, Jeddah, Saudi Arabia, between 2001 and 2011.

Results: We enrolled 21 eyes of 19 patients with the diagnosis of Fuch’s Heterochromic Iridocyclitis who completed a minimum of 6 months follow up. The mean follow up was 25 ± 13.35 (range 6–48) months. Males predominated (13/19, 68.3%). Majority (17/19, 89.5%) had unilateral presentation. The age at presentation was 36.2 ± 11 (range 18–59) years. 31.6% (6/19) showed heterochromia. All patients (100%) showed fine stellate filamentary keratic precipitates and majority (57.9%) showed mild (<1/2 cells and <1/2 flare) anterior chamber inflammation. Iris atrophy was seen in majority (15/19, 78.9%) of patients. All (100%) showed fine vitreous cells and vitreous debris. In majority of patients (15/19, 78.9%) Iris nodules were absent. Koeppe nodules were seen in 15.8% (3/19) patients. Peripheral anterior synechiae was noted in 3 (15.8%) patients and 2 of them had elevated intraocular pressure which responded to anti glaucoma treatment. All patients had developed cataracts. Best corrected visual acuity was better than 0.5 in 12/19 (63.2%) of patients at the final follow up.

Conclusion: Our patients had less heterochromia and Iris nodules. Subtle iris atrophy with fine keratic precipitates and very mild anterior chamber inflammation (<1/2 cells, <1/2 flare) along with fine vitreous cells and debris could lead to the diagnosis of Fuch’s Heterochromic Iridocyclitis in our population.
Research Title: Clinicopathological characteristics of lupus nephritis in Western region of Saudi Arabia: An experience from two tertiary medical centres

Source: Journal of Microscopy and Ultrastructure Elsevier B.V Volume 2, Issue 1, page 12-19

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Impact Factor: 0

Affiliated Department(s): Medicine, Pathology

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ABSTRACT

Background: We present the clinicopathological characteristics of lupus nephritis (LN) in a subset of population from Western Saudi Arabia.

Materials and methods: We retrospectively analysed previously diagnosed 148 renal biopsies in cases with systemic lupus erythematosus (SLE) from two medical centres. Microscopic slides from these patients were retrieved and re-assessed according to the WHO and ISN/RPS classifications by histological, immunological and electron microscopic items. Clinical and laboratory findings were retrieved from patients’ medical records.

Results: Median age of patients years is 24 (range: 2–65), females (85.1%), and males (14.9%). The frequency of cases in each class according to WHO classification and ISN/RPS classification was nearly the same and was as follows: class I (0%), class II (12.8%), class III (8.8%), class IV (51.4%), class V (23%), and class VI (4%). For IV class, IV-G (41.9%) subcategory was higher than IV-S (9.4%). Immunofluorescence examination revealed positive staining for IgG and C3 in 98.4% and 97.6% of cases respectively. In conclusion, class IV (51.4%) is the predominant class, followed by class V (23%).

Conclusion: There are differences in clinicopathological data reported from this study with other studies. Continuous reporting from different national specialised nephrology centres is recommended for better elucidation of the natural history of lupus nephritis in Saudi patients.
ABSTRACT

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ABSTRACT

Background & Objectives: Preoperative hand preparation with a brush-les method is almost a common practice. The aim of this study was to compare the efficacy of brushles preoperative hand preparation using alcohol to antiseptic soap, and non-medicated soap in eliminating germs by standard proper pre-operative hand preparation.

Methods: Twenty voluters tried three different ways of surgical hand preparation with antiseptic soap, alcohol, and non-medicated soap-based preoperative hand preparation.

Results: There was no positive bacterial growth sample in the alcohol-based scrubbing group while it was 2% with positive bacterial growth in the antimicrobial soap and 5% with positive bacterial growth in the non-medicated soap group.

Conclusion: The alcohol-based pre-operative hand preparation was significantly more efficient than both the antimicrobial soap and the non-medicated soap.
Research Title: Complete Genome Sequencing and Genetic Characterization of Alkhumra Hemorrhagic Fever Virus Isolated from Najran, Saudi Arabia

Source: Intervirology Karger Volume 57, Issue 5, page 300-310

ISSN: 0300-5526

Date and Year of Publication: 2014-AUG

Impact Factor: 1.773

Affiliated Department(s): Family Medicine, Medicine

Author(s): Tariq A Madani, Esam I Azhar, ET Abuelzein, Moujahed Kao, HM Al-Bar, Suha A Farraj, Badr E Masri, Noora A Al-Kaiedi, Shazi Shakil, Sayed S Sohrab, Jr J SantaLucia, Thomas G Ksiazek

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**ABSTRACT**

**Background:** Alkhumra hemorrhagic fever virus (AHFV) is a newly described flavivirus first isolated in 1994-1995 from the Alkhumra district south of Jeddah, Saudi Arabia. Subsequently, the virus was also isolated from Makkah (2001-2003) and Najran (2008-2009), Saudi Arabia.

**Methods:** The full-length genome of an AHFV strain isolated from patients in Najran (referred to as AHFV/997/NJ/09/SA) was PCR amplified and sequenced, and compared with the sequences of 18 other AHFV strains previously isolated from Jeddah and Makkah, dengue virus (DENV), Kyasanur forest disease virus (KFDV), Langat virus, Omsk hemorrhagic fever virus (OHFV), and tick-borne encephalitis virus (TBEV).

**Results:** The RNA of the AHFV/997/NJ/09/SA strain was found to have 10,546 nucleotides encoding for a single 3,416-amino acid polyprotein, whereas the previously reported AHFV strains were composed of 10,685-10,749 nucleotides. The AHFV/997/NJ/09/SA strain showed about 99% homology with the previously reported AHFV strains. The KFDV, Langat virus, TBEV, and OHFV isolates formed a separate cluster with a variable homology. The most important variations were observed in the core protein and NS4a gene sequences of two AHFV isolates.

**Conclusion:** The variation in the number of nucleotides and phylogenetic analysis with the other AHFV isolates could have resulted from recombination of circulating virus strains.
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<th>Consanguinity in Saudi Arabia: a unique opportunity for pediatric kidney research.</th>
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<td>Author(s):</td>
<td>Jameela A Kari, Detlef Bockenhauer, Horia Stanescu, Mamdooh Gari, Robert Kleta, Ajay K Singh</td>
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<td>Correspondent’s Email:</td>
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**ABSTRACT**

Identification of disease-related genes is a critical step in understanding the molecular basis of disease and developing targeted therapies. The genetic study of diseases occurring in the offspring of consanguineous unions is a powerful way to discover new disease genes. Pediatric nephrology provides an excellent example because ~70% of cases of kidney disease in childhood are congenital with a likely genetic basis. This percentage is likely to be even higher in countries with a high consanguinity rate, such as the Kingdom of Saudi Arabia. However, there are a number of challenges, such as cultural, legal, and religious restrictions, that should be appreciated before carrying out genetic research in a tradition-bound country. In this article, we discuss the background, opportunities, and challenges involved with this unique opportunity to conduct studies of such genetic disorders. Keys to success include collaboration and an understanding of local traditions and laws.
### Research Title:
Demographic distribution and transmission potential of influenza A and 2009 pandemic influenza A H1N1 in pilgrims

### Source:
Journal of Infection in Developing Countries
Volume 8, Issue 9, page 1169-1175

### ISSN:
1972-2680

### Date and Year of Publication:
2014-SEPT

### Impact Factor:
1.268

### Affiliated Department(s):
Medicine

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## ABSTRACT

**Introduction:** The World Health Organization's persistent reporting of global outbreaks of influenza A viruses, including the 2009 pandemic swine A H1N1 strain (H1N1pdm09), justified the targeted surveillance of pilgrims during their annual congregation that pools more than two million people from around 165 nations in a confined area of Makkah city in the Kingdom of Saudi Arabia (KSA).

**Methodology:** A total of 1,600 pilgrims were included in the targeted surveillance of influenza A and the 2009 pandemic swine H1N1 strain in the Hajj (pilgrimage) season of 2010. Each pilgrim responded to a demographic and health questionnaire. Collected oropharyngeal swabs were analyzed by real-time PCR for influenza A viruses, and positive samples were further analyzed for the presence of H1N1pdm09. Fisher's exact test was applied in the analysis of the significance of the distribution of influenza-positive pilgrims according to demographic characters.

**Results:** A total of 120 pilgrims (7.5%) tested positive for influenza A viruses by real-time PCR. Nine out of the 120 influenza-A-positive pilgrims (7.5%) were positive for H1N1pdm09. Demographics played a significant role in those pilgrims who tested positive for influenza A.

**Conclusions:** The detection of H1N1pdm09 in pilgrims at their port of entry to the KSA was alarming, due to the high potential of trans-boundary transmission. This situation necessitates the implementation of specific prevention and control programs to limit infection by influenza A viruses.
**Research Title:** Distribution of HBV genotypes from two blood transfusion centers in western Saudi Arabia

**Source:** Future Virology
Future Medicine Ltd
Volume 9, Issue 5, page 457-464

**ISSN:** 1746-0808

**Date and Year of Publication:** 2014-MAY

**Impact Factor:** 1

**Affiliated Department(s):** Hematology

**Author(s):** Leena H Bajrai, Taha Kumosani, Sherif El-Kafrawy, Mai El-Daly, Salwa Hindawi, Ahmed Ashshi, Esam I Azhar

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**ABSTRACT**

**Aim:** To determine the distribution of HBV genotypes among HBsAg-positive blood donors in Makkah and Jeddah.

**Materials & methods:** A total of 158 volunteered HBsAg-positive male blood donors donated blood samples at two transfusion centers in western Saudi Arabia. RFLP digestion was performed on 83 PCR products of the S gene. A subset of 77 positive samples were sequenced and aligned with reference Genbank sequences.

**Results:** RFLP showed the following genotype distribution: 71 (85.6%) D; two (2.4%) E; one (1.2%) A; one (1.2%) B; one (1.2%) C; five (6.0%) untypable; one (1.2%) mixed genotypes D+A; and one (1.2%) mixed genotype D+C. Seventy-seven samples were genotyped by sequencing as follows: 73 (94.8%) D, three (3.9%) E; and one (1.3%) A. The study showed that there is concordance in the results of RFLP and sequencing in 67 samples and discrepancy in ten samples: genotypes B, genotype C, one of genotype E and dual genotypes by RFLP could only been detected as genotype D by sequencing. Sequencing showed the RFLP untypable samples as genotypes D and E.

**Conclusion:** HBV type D is the most prevalent genotype in western Saudi Arabia. RFLP is a reliable tool for predicting genotype D in Saudi population.
ABSTRACT

Objective: To assess sexual function during pregnancy in Saudi women.

Methods: We recruited 454 sexually active Saudi women (221 pregnant women, and 233 non-pregnant women) from the antenatal and gynecological clinics of King Abdulaziz University Hospital in Jeddah, Saudi Arabia, a tertiary referral university hospital, between May and October 2011. Participants were asked to complete an Arabic version of the Female Sexual Function Index (FSFI) questionnaire. This questionnaire assesses all the major domains of sexual dysfunction: desire, arousal, lubrication, orgasm, satisfaction, and pain. The overall FSFI scores, and those for each domain, were calculated for the pregnant and non-pregnant women. The scores were compared between pregnant and non-pregnant women, as well as among women in each trimester of the pregnancy.

Results: The pregnant and non-pregnant women did not differ significantly in any of the 6 domains of the FSFI or in the overall scores. However, among the pregnant group, FSFI scores in each domain and overall scores decreased progressively from each trimester of pregnancy to the next. In general, FSFI scores were lower in our sample, as compared with those found in other populations in previous studies.

Conclusion: There are no differences in indices of sexual function between pregnant and non-pregnant Saudi women. However, indices of sexual function show significant declines over time during pregnancy. A modified FSFI cutoff score for diagnosis of sexual dysfunction in Saudi women may be needed.
**Research Title:** Energy Drinks Consumption amongst Medical Students and Interns from Three Colleges in Jeddah, Saudi Arabia

**Source:** Journal of Food and Nutrition Research
Science and Education Publishing
Volume 2, Issue 4, page 174-179

**ISSN:** 2333-1240

**Date and Year of Publication:** 2014-APR

**Impact Factor:** 0.444

**Affiliated Department(s):** Family Medicine

**Author(s):** Nahla Khamis Ragab Ibrahim, Rahila Iftikhar, Manal Murad, Hashim Fida, Bahaa Abalkhail, Jawaher Al Ahmadi

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### ABSTRACT

**Background:** Consumption of energy drink represents an escalating global public health problem especially among adolescents and young adults. Energy drink contains stimulants mainly caffeine that marketed as mental and physical stimulator although there are many safety concerns against use.

**Objectives:** To determine the prevalence, pattern and predictors of energy drink consumption among medical students and interns in medical colleges, Jeddah, Saudi Arabia.

**Materials and methods:** A cross-sectional study was conducted at three medical colleges (the governmental medical college of King Abdulaziz University and other two private colleges). A multistage stratified random sample technique was used with selection of 610 medical students & interns. Data was collected using a validated, confidential & self-administered questionnaire. SPSS version 21 was used for statistical analysis.

**Results:** More than one-half of the participants (52.6%) had ever tried energy drinks, while 33.4% consumed it regularly during the two months preceded the study. Friends, advertisement and curiosity were the inspirations for starting. Among regular users, the commonest reasons for consumption were enjoying leisure time with friends (57.5%), boosting energy for studying (56.4%), and staying awake for long hours (50.5%). However, 31.6% of regular energy drinks consumers experienced adverse effects as palpitation, insomnia and frequent micturition. In bivariate analysis, regular consumption of energy-drink was significantly associated with male gender, students from private colleges and smokers. After controlling of confounding factors smoking was the only predictor of energy drinks consumption (aOR= 3.68; 95% CI: 2.36-5.71).

**Conclusion:** Consumption of energy drinks is rather common among medical students and interns despite of high prevalence of adverse effects. Smoking is the most important predictor. Implementation of educational awareness campaigns, especially in medical colleges, about healthy dietary habits, potential benefits, side effects and correction of wrong perceptions about energy drinks is urgently needed. Policies for energy drinks consumption and smoking control programs are also recommended.
We describe the isolation and sequencing of Middle East respiratory syndrome coronavirus (MERS-CoV) obtained from a dromedary camel and from a patient who died of laboratory-confirmed MERS-CoV infection after close contact with camels that had rhinorrhea. Nasal swabs collected from the patient and from one of his nine camels were positive for MERS-CoV RNA. In addition, MERS-CoV was isolated from the patient and the camel. The full genome sequences of the two isolates were identical. Serologic data indicated that MERS-CoV was circulating in the camels but not in the patient before the human infection occurred. These data suggest that this fatal case of human MERS-CoV infection was transmitted through close contact with an infected camel.
In the present study, we study socio-spatial distribution of overweight and obesity among female colleagues in the faculty of arts and humanities, King Abdul Aziz University, Jeddah, and KSA. A cross-sectional study is conducted on female colleges in different majors (Arabic, English, European Languages, French, Psychology, Information Technology, Islamic Studies, Geography, History, and Media). A total of 525 colleges are included, and asked to answer a pre-designed validated questionnaire. Their body mass index (BMI) is calculated by measuring their individual weight and height. Then, based on their BMI, they are placed in the following categories: underweight; normal weight; overweight and obesity. 111 colleges are placed in the underweight category (21.1%), 286 (54.5%) are found to have a normal weight and 128 (24.4%) are overweight. We observe a significant correlation between increased age and the number of individuals in the “overweight and obese” category. The prevalence of overweight and obese subjects is significantly higher among married colleges and those who have children.
ABSTRACT

Objective: This study aims to identify the factors associated with domestic violence (DV) among women in Jeddah. Design Cross-sectional survey.

Setting: Outpatient departments of three tertiary hospitals in Jeddah.

Participants: Convenience sample of women, aged 15-70years, at the outpatient and inpatient clinics.

Interventions: Between 15 December 2011 and 30 May 2012, a psychologist and a professional health assistant explained the purpose of the research to participants, who were then asked to fill a 50-item questionnaire. The questionnaire was created based on questions from three questionnaires: the NorVold Domestic Abuse Questionnaire, the Pregnancy Risk Assessment Monitoring System and the Kansas Marital Satisfaction Scale. The questionnaire was used to assess the association between DV and family status, male partner attitudes, age, educational attainment, employment, financial and socioeconomic status.

Results: A total of 2301 women participated in the survey (81% response rate). The meanSD age of the participants was 34.4 +/- 10.9years. The lifetime prevalence of DV was 34%. Abused women had more children than non-abused women (p=0.001), and their spouses were significantly older than those of non-abused women (p<0.0001). Financially dependent women and those with a high educational status were significantly more likely to report abuse (p=0.003 and p<0.001, respectively). Abused women were also likely to report that their spouse was a smoker (p<0.0001) and had completed at least primary or secondary education (p<0.0001). A significantly lower proportion of abused women reported that their male partners were alcohol users (p=0.001). The results of logistic regression showed that women who were financially dependent had about 1.5-fold odds of being physically abused by a spouse.

Conclusions: Many factors are associated with DV against women, thereby highlighting the need to design effective DV prevention programmes.
ABSTRACT

Background: Basidiobolomycosis is a rare disease that is caused by the fungus Basidiobolus ranarum (B. ranarum). Gastrointestinal Basidiobolomycosis (GIB) is very rare and, not uncommonly, overlooked or misdiagnosed as other lesions with inevitable adverse consequences to the patient. The aim of this study is to review the clinicopathological pattern of GIB in a tertiary medical centre in the western region of Saudi Arabia and compare our findings with previously reported cases in an attempt to increase awareness of this entity.

Methods: We retrospectively analyzed the pathological and clinical data of patients diagnosed with GIB in King Faisal specialist hospital and research center, Jeddah (KFSHRCJ) during a period from January 2001 to June 2012.

Results: Four cases were identified. The age range was 20-63 years. There were 2 males and 2 females patients. Three patients presented with abdominal pain and one presented with bleeding per rectum. All the patients were found to have abdominal masses on radiological investigation and had significant peripheral blood eosinophilia. All the lesions showed similar histological features that included acute and chronic granulomatous inflammation with a large number of eosinophils associated with the presence of the characteristic fungal hyphae. Three of the patients were treated with antifungal therapy in addition to surgery and showed excellent response.

Conclusion: The presence of intra-abdominal mass lesions accompanied by peripheral blood eosinophilia in an immune-competent patient should raise the suspicion of this infection clinically. The presence of granulomata, necrosis, and increased number of eosinophils in tissue sections should strongly raise the suspicion of this type of infection pathologically and every attempt should be made to identify the fungal hyphae microscopically. It is important for clinicians and pathologists to be aware with this entity to avoid misdiagnosis of this treatable disease.
Research Title: Growth hormone therapy and treatment outcomes: current clinical practice of the Gulf Cooperation Council

Source: Expert Review of Endocrinology & Metabolism
Informa Plc.
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Affiliated Department(s): Pediatrics

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ABSTRACT

Over the last 20 years, recombinant human growth hormone (somatropin) has been the cornerstone of managing children with growth hormone deficiency (GHD). Although both international and national guidelines for growth hormone (GH) therapy exist, there is currently no consensus on the optimal use of GH therapy in Gulf Cooperation Council (GCC) countries. The goals of GH therapy are to normalize height during childhood, attain normal adult height and correct metabolic abnormalities related to GHD. However, extended use of GH >50 µg/kg/day may increase frequency of adverse events. Here, we report the proceedings from a meeting of nine GCC pediatric endocrinology experts, which took place in Beirut in November 2011. The meeting was also attended by three European counterparts and aimed to provide consensus on best practice in the management of children with GHD in the GCC based on current local medical and regulatory environments.
### ABSTRACT

**Background:** Muslims go through strict Ramadan fasting from dawn till sunset for one month yearly. These practices are associated with disturbed feeding and sleep patterns. We recently demonstrated that, during Ramadan, circadian cortisol rhythm of Saudis is abolished, exposing these subjects to continuously increased cortisol levels.

**Hypothesis:** Secretory patterns of other hormones and metabolic parameters associated with cortisol, and insulin resistance, might be affected during Ramadan.

**Protocol:** Ramadan practitioners (18 males, 5 females; mean age 6SEM = 23.1661.2 years) were evaluated before and two weeks into Ramadan. Blood was collected for measurements of endocrine and metabolic parameters at 9 am (61 hour) and again twelve hours later.

**Results:** In Ramadan, glucose concentration was kept within normal range, with a significant increase in the morning. Mean morning concentration of leptin was significantly higher than pre-Ramadan values (p = 0.001), in contrast to that of adiponectin, which was significantly lower (p<0.001). These changes were associated with increased insulin resistance in morning and evening. Concentrations of hsCRP were lower during Ramadan than those during regular living conditions, however, normal circadian fluctuation was abolished (p = 0.49). Even though means of liver enzymes, total bilirubin, total protein and albumin were all decreased during Ramadan, statistically lower means were only noted for GGT, total protein, and albumin (p = 0.018, 0.002 and 0.001 respectively).

**Discussion:** Saudi Ramadan practitioners have altered adipokine patterns, typical of insulin resistance. The noted decreases of hsCRP, liver enzymes, total protein, and albumin, are most likely a result of fasting, while loss of circadian rhythmicity of hsCRP is probably due to loss of circadian cortisol rhythm.

**Conclusions:** Modern Ramadan practices in Saudi Arabia, which are associated with evening hypercortisolism, are also characterized by altered adipokines patterns, and an abolished hsCRP circadian rhythm, all likely to increase cardiometabolic risk.
ABSTRACT

**Background:** Idiopathic pulmonary fibrosis (IPF) is rare and can be challenging to diagnose. Limited data is available from the Middle Eastern region, especially Saudi Arabia.

**Methods:** This was a retrospective study that looked at all the patients diagnosed with IPF between 2007 and 2012 at two tertiary care hospitals in Saudi Arabia. We collected the demographical, clinical, laboratory and radiological data from the patients' medical records. Medications administered and 1 year survival was also assessed.

**Results:** Between 2007 and 2012, 134 IPF patients were identified. Their baseline characteristics (Mean +/- SD) included: age 64 +/- 13 years, body mass index 29 +/- 8 kg/m(2), FEV1 56 +/- 15 percent of predicted, FVC 53 +/- 13 percent of predicted, FEV1/FVC 0.81 +/- 0.09, total lung capacity 75 +/- 13 percent of predicted, diffusing capacity of the lung for carbon monoxide 57 +/- 15 percent of predicted, on home oxygen at presentation 71 (53%), mean ejection fraction 0.50 +/- 0.07, mean pulmonary artery systolic pressure (via echocardiogram) 40 + 22 mmHg, presentation mean S-pO2 92 +/- 7%, presentation 6-min walk distance 338 +/- 64 m and lowest S-pO2 during 6-min walk test 88 +/- 5%. Patients were predominantly female (56%), and 42% of patients had diabetes and were active smokers. The IPF patients' frequency of hospital admission (n = 99) was 2.4 +/- 1.7 per year and duration of hospital stay (n = 99) was 17.4 +/- 23.8 days. Overall 1 year survival in all IPF patients was good, 93% (124) patients remained alive after 1 year.

**Conclusions:** In Saudi Arabia, IPF patients tended to be slightly older and the disease progression was somewhat slower than reported IPF cohorts in other populations. They had frequent hospital admissions and a long hospital length of stay. The influence of genetics and co-morbid diseases on the incidence and outcome of IPF should be explored further.
Impact of demographic and comorbid conditions on quality of life of hemodialysis patients: A cross-sectional study

Source: Saudi Journal of Kidney Diseases and Transplantation
Medknow Publications
Volume 25, Issue 2, page 432-437

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Impact Factor: 0

Affiliated Department(s): Medicine

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ABSTRACT

To assess the quality of life (QOL) of Saudi Arabian patients undergoing hemodialysis (HD) and to determine the impact of gender, age, education and comorbidities on the QOL of these patients, we conducted a cross-sectional study and used the short form-36 (SF-36) questionnaire, a generic instrument for measuring QOL. This questionnaire is composed of eight scales that summarize the physical component scale (PCS) and mental component scale (MCS) of health status. We calculated the PCS and MCS scores for each patient. We studied 205 HD patients (123 men; ages 18-75 years) from the King Fahd General Hospital, Jeddah, Saudi Arabia. The mean SF-36 score was 59.4 ± 21.7 in men and 41.9 ± 20.9 in women (P <0.0001). Patients older than 60 years had the worst score (41.5 ± 21.2), followed by patients aged 40-59 years (53.6 ± 22.8); patients aged 18-39 years had the best SF-36 score (57.5 ± 22.5; P <0.0001). Education had a positive impact on QOL (P <0.0001), whereas comorbid conditions had a negative impact. Peripheral vascular disease was associated with the worst outcome (SF-36 score, 40.4 ± 23.0; P <0.0001), followed by dyslipidemia (42.9 ± 22.4; P = 0.001) and diabetes mellitus (45.0 ± 22.0; P = 0.012). Among the comorbid conditions, hypertension was associated with the best SF-36 score (50.6 ± 22.7; P = 0.034). We conclude that old age, female gender, poor education and comorbid conditions have a negative impact on the QOL of HD patients in Saudi Arabia. These findings indicate a general need for social support for female patients on HD and early diagnosis and management of comorbid conditions.
**Research Title:** Impact of maternal breast cancer on school-aged children in Saudi Arabia

**Source:** BMC Research Notes  
BioMed Central Ltd  
Volume 7, Issue 1, page 261

**ISSN:** 1756-0500

**Date and Year of Publication:** 2014-APR

**Impact Factor:** 0

**Affiliated Department(s):** Medicine, Ob-Gyne, Family Medicine

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**ABSTRACT**

**Background:** We examine whether mothers with breast cancer told their children about the diagnosis, explore mothers’ perceptions of the impact of doing so on the mother-child relationship, and assess perceptions of how this affected the children.

**Methods:** A convenience sample of 28 women with breast cancer ages 35 to 60 was interviewed using a 39-item close-ended questionnaire at the Al-Amoudi Breast Cancer Center of Excellence, King Abdulaziz University, Jeddah, Saudi Arabia. Inclusion criteria were having a diagnosis of breast cancer and having school-aged children (ages 5 to 16 years). Questions were asked concerning each child (n = 99).

**Results:** The majority of women (75%) told their children about the diagnosis, and explained the treatment (61%). In most cases, telling the children had a positive effect on how the children treated their mothers (84%), on the maternal-child relationship (80%), and on the personality and behavior of the child (90%). The most common negative reaction by children was increased clinging behavior to the mother (15%). Despite the perceived positive impact on the mother-child relationship and on the child’s overall behavior towards the mother, school performance suffered as a result (77%).

**Conclusions:** These preliminary results suggest that when a mother with breast cancer tells a child about the diagnosis and discusses it with them, this often results in an improvement in the maternal-child relationship. However, the knowing the mother’s diagnosis may adversely affect the child’s school performance, which will need to be anticipated and addressed with formal counseling if it persists.
**ABSTRACT**

**Objective:** To study the incidence and types of herbal remedies as a cause of bowel perforation.

**Method:** This is a retrospective review of all patients who were diagnosed with bowel perforation at King Abdulaziz University Hospital between January 2005 and November 2013. The patients’ medical records were reviewed for demographic data, causes of the bowel perforation, types of foreign bodies if any, clinical picture and management. The data were entered and analyzed using the statistical package for social sciences (SPSS Inc, Chicago, IL, USA), version 20.00.

**Results:** Total of 36 cases of bowel perforation, 20 were males (55.6%) and 16 were females (44.4%). The mean age was 45.17±15.95 years old (range 13-85). The most common cause of bowel perforation was foreign body ingestion as it was found in 13 patients (36.1%); it was followed by intestinal obstruction in 6 patients (16.8%), diverticular disease in 5 patients (14.0%), iatrogenic in 4 patients (11.1%), Crohn’s disease in 3 patients, blunt injury in also 3 patients (8.3%), and the least common cause was malignancy in 2 patients (5.6%). The most common foreign body was herbal remedies in 8 patients (22.3%); Ginger in 4 patients (11.1%); Anise in 2 patients (5.6%); Ginseng in 1 patients (2.8%) and Liquoric in 1 patient (2.8%). There was no association between age nor gender and bowel perforation secondary to herbal remedies ingestion (p-value = 0.1). Other foreign bodies were fish bones in 3 patients (8.4%), chicken bone in 1 patient and plastic piece in 1 patient (2.8%).

**Conclusion:** Herbal remedies ingestion formed 22.3% of our bowel perforation cases. Ginger was the most common herb. At national level, patient’s education about complications of herbal remedies ingestion and risks of bowel perforation is needed to increase the community awareness regarding this problem and take the proper precautions before taking such remedies in order to avoid bowel perforation.
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ABSTRACT

Background: Pediatric inflammatory bowel disease (IBD) is increasingly recognized in developing countries; however, the incidence and trend over time have not been reported.

Methods: This retrospective study included children diagnosed with IBD in gastroenterology centers in the Kingdom of Saudi Arabia between 2003 and 2012. The date of birth, date and age at diagnosis, gender, and final diagnosis were collected on special forms. Clinical, laboratory, imaging, endoscopy, and histopathology results were reviewed to confirm the final diagnosis. Descriptive statistics were used to compare ulcerative colitis and Crohn's disease in different age groups, and significance was assessed by the chi-square test. Incidence rates and trend over time were analyzed with the assumption of Poisson distribution. The incidence rate over time was compared in 2 periods (2003-2007 and 2008-2012). A P value of <0.05 and 95% confidence intervals were used to assess the significance and precision of the estimates.

Results: A total of 340 Saudi Arabian children aged 0 to 14 years were diagnosed. The mean incidence rate per 100,000 individuals was 0.2, 0.27, and 0.47 for ulcerative colitis, Crohn's disease, and IBD, respectively. Except for the 0- to 4-year age group, there was a significant increase in incidence over time.

Conclusions: Although the incidence of pediatric IBD in Saudi Arabian children is lower than suggested in the Western literature, there is a significantly increasing trend over time. However, decreased trend in the younger age group over time is identified. Prospective studies will be important to identify the risk factors for IBD in different age groups.
ABSTRACT

Background: There is increasing interest in the non-skeletal effects of vitamin D and the relationship between vitamin D deficiency and chronic conditions such as diabetes mellitus. We aimed to investigate the relationship between surrogate indices of insulin resistance (IR), and vitamin D deficiency/insufficiency in postmenopausal Saudi women with and without metabolic syndrome.

Methods: The study population consisted of 300 postmenopausal women aged 46–88 years enrolled consecutively from women attending the Outpatient Clinics of King Abdulaziz University Hospital. Demographic, anthropometric, and biochemical parameters were recorded. Data were analyzed for women with and without metabolic syndrome.

Results: Abdominal obesity, IR, and hypovitaminosis D were highly prevalent within our population sample. Of the components used to define metabolic syndrome; waist circumference, serum triglycerides (TG), high density lipoprotein-cholesterol, and fasting blood glucose (FBG) were significantly related with all surrogate measures of IR. Significant inverse correlations were found between serum vitamin D and serum TG, FBG, and diastolic blood pressure, within the study cohort.

Conclusions: These observations suggest that hypovitaminosis D may be associated with the risk of developing metabolic syndrome. Interrelationships between IR, metabolic syndrome, and hypovitaminosis D are of particular interest in Saudi population, given the high prevalence of these conditions in this region.
ABSTRACT

To study the issues of medical errors in the private health sector and determine the conviction rate in the decisions by specialty on the defendants from health professions. The total number of decisions issued by the Health Authority within five years 331 resolution and the conviction rate (Number = 192, 58%) were distributed into the following health facilities: private hospitals (n = 248, 74.9%), private clinics (n = 56, 16.9%) and private dispensaries (n = 27, 8.2%). Total 252 out of 845 of defendants health professions were convicted, they are distributed as follows: Doctors (n = 236, 93.7%), nurses and midwives (n = 13, 5.2%), technicians (n = 2, 0.8%) and other professionals (n = 1, 0.4%). The conviction rate in five years is on the rise and thus this is reflected on the trend of medical errors into upward in the private health sector.
ABSTRACT

The purpose of this study was to assess medical students’ knowledge of smoking and cessation interventions as well as their preparedness to counsel patients. This was a cross-sectional survey conducted between October 2012 and May 2013 among sixth year medical students at King Abdulaziz University, Jeddah. We administered a self-filled questionnaire that comprised 59 questions that assessed students’ characteristics and smoking status, their knowledge of smoking epidemiology, benefits of smoking cessation, smoking risks, and cessation interventions. Data were analyzed using the Statistical Package for the Social Sciences. We recruited 238 students; 22 (9%) were current smokers. Although most students reported being prepared to help their future patients quit, their knowledge of smoking epidemiology in Saudi Arabia was below average with mean score (SD) of 45.8 (16.3). Similarly, students had poor understanding of cessation interventions with mean score (SD) of 29.42 (17.94). Male and female students had a similar level of knowledge of the risks of smoking (p=0.409) and pregnancy related hazards (p=0.071), but females were more knowledgeable about the risks of second hand smoking (p=0.009). Smokers and former smokers were less knowledgeable than never smokers about smoking risks (p=0.015). Final year students at King Abdulaziz University have a poor knowledge of the health consequences of tobacco and the current available cessation methods, suggesting that they need further information on smoking and training in cessation techniques.
**ABSTRACT**

People mistakenly think that all herbs are safe, because of the fact that they are natural, and the use of herbal medication is growing. Aspects of the efficacy, safety, and quality of herbal or natural products are the subjects of ongoing debates. Concurrent administration of herbs may interfere with the effect of drugs. Lack of knowledge of the interaction potential together with an underreporting of herbal use poses a challenge for health care providers and a safety concern for patients. A good understanding of the mechanisms of herb-drug interactions is also essential for assessing and minimizing clinical risks. Examples of herbal medicine-pharmaceutical drug interactions of commonly used herbs are presented. The potential pharmacokinetic and pharmacodynamic basis of such interactions is discussed, as well as the challenges associated with the identification and prediction of herb-drug interactions.
We review the past, present and future state of mental health care in the Kingdom of Saudi Arabia (KSA). The past is reviewed prior to the modern era, discussing early explanations and treatments for mental health illness up through the establishment of the first mental hospital in the 1950s, tracking advances in mental health care over the past 60 years. The present is explored in terms of the current need for mental health care based on the prevalence of mental health problems in KSA. We also discuss the role of the family in caring for the needs of the mentally ill today. Finally, we look forward into the future, discuss the current education system that will produce the next generation of mental health professionals, examine areas of mental health care that need improvement, and provide a research agenda to guide the continued development of the mental health care system in KSA. Our goal is to present a blueprint for the development of a state-of-the-art mental health that may serve as a model for other countries in the Middle East, while taking into account the political, cultural and religious factors that are unique to this region of the world.
ABSTRACT

Unrelieved pain is a worldwide health care problem that can lead to unnecessary complications and increased health care expenditure. The aim of this study was to examine nurses’ knowledge and attitudes toward pain in Saudi Arabia. A descriptive design was employed using the Nurses’ Knowledge and Attitudes Survey regarding pain. The study took place in a tertiary teaching hospital in Saudi Arabia. All nurses employed in the hospital were eligible to participate. A total of 775 questionnaires were distributed to nurses working in acute care, intensive care, and nursing education and administration settings. In all, 593 respondents completed the questionnaires, representing a response rate of 76.5%. Data were analyzed using descriptive and inferential statistics. Most participants were from overseas (97.5%), speaking 23 different languages; 36.5% of nurses held a bachelors of science degree in nursing or the equivalent. The mean score of correctly answered items in was 16.9 (95% confidence interval, 16.6-17.31) out of a total possible score of 40. Nurses demonstrated some misconceived attitudes such as not giving the required dose of morphine to a smiling patient despite the patient being in pain. It is of concern that the findings identified problems of inadequate knowledge and inappropriate attitudes regarding pain assessment and management in Saudi Arabia. Considering these problems, the development of pain programs and policies affecting national and international nurses is highly imperative.
The objectives of the current study were to assess the pattern of hospital admissions among Systemic lupus erythematosus SLE patients, to identify prognostic factors for survival, and causes of mortality among these patients. The current study involved a retrospective record review for all admitted SLE patients over 2 years (from April 2010 to April 2012), King Abdul Aziz University Hospital, Saudi Arabia, Jeddah. The results indicated that, a total of 95 admission episodes of 60 patients, belonging to different racial origins, were included 6 of the total patients sample [representing 6.3%] male and 89 [93.7%] female admissions; where the samples origins are as follows: Arabs 51 [53.7%), Blacks 28 [29.5%] and others 15 [4.3%]). Mean systemic lupus erythematosus disease activity index (SLEDAI) score was 11.56 (range 0-38). The mean duration of admission was 13.65 days (range 1-64), 48 admissions (50.5%) were due to active SLE and 47 (49.5%) due to other causes. Eleven patients (11.6%) were transferred to the intensive care unit (ICU). A total of 8 (8.4%) deaths were recorded. The results concluded that the renal disease continues to remain one of the most common serious organ involvements in SLE. Infection is a common cause of death among SLE patients. Thrombocytopenia and low hematocrit are independent risk factors for SLE related death. SLE related mortality is higher among the non-White and Black populations.
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ABSTRACT

Background: To evaluate the perception of cancer patients toward treatment services and influencing factors and to inquire about the use of complementary alternative medicine (CAM).

Materials and Methods: Information was obtained through pre-tested structured questionnaires completed by cancer patients during treatment at King Abdulaziz University Hospital, Jeddah, Saudi Arabia.

Results: Of 242 patients, 137 (64.6%) accepted to enter this study. Most were Saudi (n=93, 68%), female (n=80, 58%), educated at university (n=71, 52%), married (n=97, 72%) and with breast cancer (n=36, 26%). One-hundred (73%) patients were satisfied with the services provided; 61% were Saudi. Ninety-four (68%) respondents were satisfied with the explanation of their cancer. Twenty-eight (21.6%) patients received CAM, of them 54.0% received herbal followed by rakia (21.0%), nutritional supplements/vitamins (7.0%) and Zamam water (18.0%), with significant differences among them (p =0.004). Seven (5%) patients believed this therapy could be used alone; 34 (25%) patients believed it could be used with other treatments, regardless of whether they themselves used this therapy. Fifty-three (53%) satisfied patients felt they received enough support; 31 (58%) patients received support from family and friends; 22 (41.6%) patients received support from the health-care team. Patients who received information about their disease from their physicians and those who felt they had enough support were more satisfied. The patients who took alternative treatment were older age, mostly female and highly educated but values did not reach significance.

Conclusions: We stress enhancing the educational and supportive aspects of cancer-patient services to improve their treatment satisfaction and emphasize the need for increasing the educational and awareness programs offered to these patients.
ABSTRACT

Background: Immune thrombocytopenia (ITP) is an acute disease of short duration with mild symptoms and with estimated incidence in children is approximately 1.9 to 6.4 cases per 100,000 per year. The management of acute ITP of childhood has generated controversy for many years. Although most children can be managed by careful monitoring, a small proportion of children will suffer from bleeding.1

Aim: The aim of our study is to characterise bleeding severity, platelets count, the management over the past 2 years.

Material and methods: All patients diagnosed with ITP, with a first visit to King Abdelaziz University Hospital Jeddah, Saudi Arabia during last2 years will eligible for this study. Demographic, laboratory, and treatment data were collected through a questionnaire.

Result: The mean age of the patients was 6.5 years (range, 1 month to 16 years), 18 boys and 14 girls. The mean platelet count at presentation was 22.3 × 10^9/L (range, 1 to 108 × 10^9/L). Bleeding symptoms were found in 22 cases (68.80%). 19 (59.40%) had skin bleeding, 15 (46.9%) had mucosa bleeding, and 4 (12.50%) had organs bleeding. Bone marrow aspiration and laboratory tests (antinuclear antibodies, human immunodeficiency and hepatitis C virus) were performed for 18 (56.30%) children. 26 (81.1%) of patients received Immunoglobulin, and 9 (28.10%) received corticosteroids.

Conclusion: Most children with ITP treated by paediatrician received Immunoglobulin, we recommend that physician should follow the new guideline tools on ITP diagnosis and management to reduce the number of children requiring intervention and possible drug-induced side effects.
ABSTRACT

Background: To determine the proximal risk factors associated with perinatal hypoxic encephalopathy signs and its short-term complications.

Methods: This is a prospective study conducted in women in labor with medical and obstetrics risk factors at King Abdulaziz University Hospital, Jeddah, Saudi Arabia from May 1, 2010 to May 1, 2011. The abnormal umbilical arterial base deficit levels (≥ 12 mmol/L), compared with a normal base deficit level (< 12 mmol/L) and the neonatal outcomes were studied in both groups.

Results: The frequency of fetal acidosis with a cord pH ≤ 7 or a base deficit level of ≥ 12 mmol/L at birth was 31 (5.6%) versus 59 (10.7%), respectively. The intrapartum proximal risk factors were abnormal fetal heart rate patterns (n = 18, 30.5%); prolonged labor duration, vacuum delivery (n = 12, 20.3%); pregnancy-induced hypertension (n = 10, 17%); fetal growth restriction (n = 4, 6.8%); and abruptio placentae (n = 3, 5.1%). The neonatal encephalopathy signs with an abnormal base deficit and proximal risk factors were umbilical arterial cord blood pH (n = 24, 40.7%); low Apgar score at 5 minutes (n = 10, 17%); admission to the neonatal intensive care unit (n = 20, 33.9%); and intubation (n = 9, 15.3%).

Conclusion: Fetal metabolic acidemia may predict neonatal encephalopathy signs in association with intrapartum proximal risk factors.
ABSTRACT

Background: Drug addicts constitute a high-risk group for the transmission of HIV and other Sexually Transmitted Infections (STIs). The aim of the study was to screen inmates at a drug rehabilitation center for the presence of commonly occurring STIs. We also aimed to correlate the prevalence of STIs with injecting and non injecting drug use and awareness about the prevention of STIs.

Methods: This cross-sectional study was conducted on a convenience sample of 115 inpatients at Al Amal Hospital for the Treatment of Addiction and Rehabilitation between September 1, 2011 and November 1, 2012. Demographic data, use of intravenous and other addictive drugs, and awareness about condom use for protection against STIs were documented. Blood samples were collected, and serum and DNA were extracted to test for HIV and Hepatitis B Virus (HBV) using enzyme-linked immunosorbent assay and for syphilis using polymerase chain reaction. The data were analyzed using the Statistical Package for the Social Sciences.

Results: Of the total participants, 18 had one or more STIs, including syphilis (n=11), HIV (n=5), HBV (n=5) and combined HBV and syphilis (n=3). The prevalence of STIs was higher among injecting drug users than among non injecting drug users. Compared to the group that did not have STIs, very few participants who were positive for STIs were aware that condoms provided protection against STIs.

Conclusions: The prevalence of HIV, HBV and syphilis among male drug addicts in Saudi Arabia is very high. Healthcare providers should focus on raising awareness and providing treatment and counseling to this high-risk population.
This study was conducted to estimate the frequency of Cryptosporidium infections in Taif (Saudi Arabia). Stool samples from children under 10 years by modified Ziehl-Neelson staining and two PCR techniques were used for genotyping experiments. The microscopic examination showed that, eleven samples were positive for presence of Cryptosporidium. With 11 of 100 samples, DNA extraction and subsequent genotyping was successful. By means of RAPD technique, the genetic similarity among the collected isolates was 55%. The 18S rRNA gene sequences confirmed that all Cryptosporidium-isolates belonged to Cryptosporidium parvum. In comparison with reference strains from different species of Cryptosporidium species from GenBank, all collected isolates belonged to Cryptosporidium hominis and C. parvum clade. The fact that only human genotypes were detected suggests that cryptosporidiosis must primarily be considered as a non zoonotic disease in Taif region.
ABSTRACT

Objectives: To assess the prevalence of epidemiologically defined chronic obstructive pulmonary disease (COPD) in Saudi Arabia.

Methods: This cross-sectional, observational, population-based survey of COPD was conducted between June 2010 and December 2011 across the country of Saudi Arabia. A total of 56,000 randomly selected telephone numbers were called, which identified 10,001 eligible subjects; of whom 9,779 agreed to participate. A screening questionnaire included 6 questions related to cigarette consumption and water-pipe use was administered to each participant. Subjects with positive screening results were invited to provide input for a detailed COPD questionnaire.

Results: The adjusted proportion of subjects who reported a current, or past smoking history was 27.9%. Gender-specific smoking rates adjusted by age were 38.7% (95% confidence interval [CI]: 37.5-39.9%) in men, and 7.4% (95% CI: 6.58.3%) in women. The epidemiological definition of symptomatic COPD was met by a total of 249 subjects. The age and gender-adjusted prevalence of COPD was 2.4% (95% CI: 2.1-2.7%). Overall, COPD was more frequently documented (p<0.0001) in men (3.5% [95% CI: 3-4%]) than in women (1% [95% CI: 0.7-1.3%]).

Conclusion: The prevalence of epidemiologically defined COPD in the general population of Saudi Arabia is 2.4%, which is lower than that reported in industrialized countries.
ABSTRACT

Purpose: Primary school teacher's knowledge and attitudes toward epilepsy can have significant impact on the performance and psycho-social development of the child with epilepsy. Our objectives were to study teacher's knowledge and attitudes and identify areas in which further teacher training and education are required.

Methods: A stratified random sample survey involving a group of primary school teachers in Jeddah, Saudi Arabia included private/public schools designated for male and female students. A structured 37-item questionnaire was used to examine their demographics, knowledge, attitudes, and experience with epilepsy.

Results: Six hundred and twenty primary school teachers working in public (58%) or private (42%) schools were included with ages ranging between 21 and 59 years (mean 36). Most teachers (79%) were of Saudi Arabian nationality and 66% had a college or university degree. Their years of experience ranged from 1 to 35 (mean 13.5). Only 17% of the teachers felt very well informed about epilepsy. Teachers with higher education were more likely to have good knowledge (p=0.009). Teachers of Saudi nationality were also more likely to report good knowledge, independent of their educational level (p=0.013). Overall, teachers with good knowledge were less likely to have negative attitudes including minding to have an epileptic child in their class (p=0.028) or thinking that they should be placed in a special classroom (p=0.029).

Conclusions: Primary school teacher's knowledge about epilepsy needs improvements. Their attitudes correlated highly with their knowledge. Educational campaigns about epilepsy are needed to develop a well informed and tolerant community.
ABSTRACT

Objective: To examine public awareness and attitudes toward epilepsy in Riyadh, the capital city of Saudi Arabia.

Methods: A focused 10-item questionnaire was designed to survey public awareness and attitudes toward epilepsy. Personal interviews were conducted randomly by one author in preselected public places in Riyadh, Saudi Arabia during March and April 2011.

Results: Seven hundred and forty-nine interviews were completed during the study period. Most participants (77.4%) had prior knowledge of epilepsy, and 52% believed that epilepsy is an organic disease. This correlated with their educational level, as those with higher levels of education were more likely to link epilepsy to organic causes (p=0.008). However, 15% also linked epilepsy to evil spirit possession, and up to 37% preferred spiritual rituals and religious healing to medical treatments. Although most respondents (61%) would accept an epileptic patient in a regular job, 71% (particularly males) reported reservations in marrying someone with epilepsy (p=0.001).

Conclusions: The awareness and attitudes of the Saudi public toward epilepsy are showing some improvement. However, it is still thought to be linked to evil spirit possession by some, and spiritual rituals and religious healing are commonly believed to be effective treatments. Targeted areas for focused education were identified.
ABSTRACT

Objectives: To evaluate the health-related quality of life (HRQoL) of patients' pre- and post-otolaryngological surgery.

Methods: We conducted a cross-sectional study of patients who underwent otolaryngological surgery in the western region of Saudi Arabia between March and October 2013. We administered the Arabic version of the World Health Organization Quality of Life assessment instrument to all patients before surgery, and 2-4 weeks after surgery. The demographic details such as age, gender, level of education, marital status, patients’ incomes, otolaryngology diagnosis, and type of otolaryngology surgery were analyzed.

Results: A total of 99 patients (43 males and 52 females), ranging from 1-75 years of age (mean: 21.6 years), were included in this study. The most frequently diagnosed conditions were chronic tonsillitis and obstructive sleep apnea due to adenoid enlargement. Adenotonsillectomy was the most frequently performed surgery, followed by septoplasty and myringotomy with grommet tube insertion. For all domains, patients had significantly higher scores post-surgery. The highest score was obtained for the social relationship domain, and the lowest for the physical health domain. However, the highest differences between the pre- and post-surgery scores were for physical health (7.9), psychological (5.1), environmental (2.5), and social health (2.3) domains.

Conclusion: The HRQoL of patients improved significantly after otolaryngology surgery.
**ABSTRACT**

**Background:** Osteoporosis remains a major health problem in all developed countries and is a condition in which several dietary factors have been implicated.

**Objective:** To assess the nutritional status and levels of adiposity of postmenopausal women in relation to bone mineral density.

**Design:** A cross-sectional study in which dietary intake was estimated by a food frequency questionnaire in 300 Saudi postmenopausal women aged 46-88 years. Bone profile biochemistry (serum calcium, phosphate, parathyroid hormone [PTH], vitamin D) and bone mineral density (BMD) in 3 skeletal sites were determined for all participants.

**Results:** Overweight and obesity were highly prevalent among the study population. No significant correlation was found between dietary calcium and vitamin D and bone mass at any site. Dietary intake of calcium and vitamin D was significantly less than the recommended levels for a large proportion of the cohort. Energy-adjusted intakes of carbohydrates, fat, protein, and unsaturated fatty acids were associated with BMD in the postmenopausal women. Age, body weight, and residency type were predictors of BMD at all sites. Serum-intact PTH was a predictor of BMD at lumbar spine and femoral neck. Waist: hip ratio (WHR) was a predictor for BMD at femoral neck.

**Conclusions:** These results suggest that BMD is influenced by dietary factors other than calcium and vitamin D. However, nondietary factors such as age, WHR, PTH, and body weight may be important determinants of BMD in postmenopausal women.
Patients on hemodialysis experience considerable psychological and physical stress due to the changes brought on by chronic kidney disease. Religion is often turned to in order to cope with illness and may buffer some of these stresses associated with illness. We describe here the religious activities of dialysis patients in Saudi Arabia and determined demographic, psychosocial, and physical health correlates. We administered an in-person questionnaire to 310 dialysis patients (99.4 % Muslim) in Jeddah, Saudi Arabia, that included the Muslim Religiosity Scale, Structured Clinical Interview for Depression, Hamilton Depression Rating Scale, Global Assessment of Functioning scale, and other established measures of psychosocial and physical health. Bivariate and multivariate analyses identified characteristics of patients who were more religiously involved. Religious practices and intrinsic religious beliefs were widespread. Religious involvement was more common among those who were older, better educated, had higher incomes, and were married. Overall psychological functioning was better and social support higher among those who were more religious. The religious also had better physical functioning, better cognitive functioning, and were less likely to smoke, despite having more severe overall illness and being on dialysis for longer than less religious patients. Religious involvement is correlated with better overall psychological functioning, greater social support, better physical and cognitive functioning, better health behavior, and longer duration of dialysis. Whether religion leads to or is a result of better mental and physical health will need to be determined by future longitudinal studies and clinical trials.
## ABSTRACT

**Objective:** Religious involvement may help individuals with chronic medical illness cope better with physical disability and other life changes. We examine the relationships between religiosity, depressive symptoms, and positive emotions in persons with major depression and chronic illness.

**Methods:** 129 persons who were at least somewhat religious/spiritual were recruited into a clinical trial to evaluate the effectiveness of religious vs. secular cognitive behavioral therapy. Reported here are the relationships at baseline between religious involvement and depressive symptoms, purpose in life, optimism, generosity, and gratefulness using standard measures.

**Results:** Although religiosity was unrelated to depressive symptoms \( (F = 0.96, p = 0.43) \) and did not buffer the disability-depression relationship \( (B = -1.56, SE 2.90, p = 0.59) \), strong relationships were found between religious indicators and greater purpose, optimism, generosity, and gratefulness \( (F = 7.08, p < 0.0001) \).

**Conclusions:** Although unrelated to depressive symptoms in the setting of major depression and chronic medical illness, higher religious involvement is associated with positive emotions, a finding which may influence the course of depression over time.
ABSTRACT

Background: Nowadays, Cardiovascular Diseases (CVDs) represents an escalating worldwide public health problem. Providing consistent data on the magnitude and risk factors of CVDs among young population will help in controlling the risks and avoiding their consequences.

Objective: The objective was to estimate the prevalence of risk factors of Coronary Heart Disease (CHD) among medical students during their clinical clerkship (4th - 6th years).

Methods: A cross-sectional study was done during the educational year 2012-2013 at King Abdulaziz University (KAU), Jeddah. Ethical standards were followed and a multistage stratified random sample method was used for selection of 214 medical students. Data was collected through an interviewing questionnaire, measurements and laboratory investigations. Both descriptive and analytical statistics were done by SPSS version 21. CHD risk percent in thirty years was calculated using Framingham algorithm for each student, then the risk among all students was determined.

Results: The commonest risk factors of CHDs were daily intake of high fat diet (73.4%), physical inactivity (57.9%), overweight/or obesity (31.2%) and daily consumption of fast food (13.1%). Hyper-cholesterolemia (17.2%) and hypertension (9.3%) were also prevalent risk factors. Smoking prevalence was low (2.8%). Males had significantly higher mean scores for most of CHD risk factors compared to females (p < 0.05). Systolic Blood pressure was higher among males (119.47 +/- 11.17) compared to females (112.26 +/- 9.06). A highly statistical significant difference was present (Students't test = 4.74, p < 0.001). Framingham Risk Score revealed that CHD risk percent in thirty-years among all students was 10.7%, 2.3% and 0.5% for mild, moderate and severe risk, respectively.

Conclusion: An alarmingly high prevalence of CHD risk factors was prevailed among medical students, especially among males. However, a low prevalence of smoking may indicate the success of “Smoke-free Campus” program. Screening risk factors of CHD among medical students and implementation of intervention programs are recommended. Programs to raise awareness about CHD risk factors, encourage young adult students to adopt a healthy dietary behavior and promote physical exercise should be initiated.
ABSTRACT

To determine the presence of rubella immunity among pregnant women attending their first prenatal visit in Jeddah, Saudi Arabia, a retrospective, descriptive, cross-sectional, hospital-based study (prevalence study) was undertaken. A total of 10276 women attending prenatal clinics between January 1, 2008, and December 31, 2011 were included. Rubella screening tests (immunoglobulins: IgG and IgM), rubella antibody titer levels, patient age, gravidity, parity, and the number of previous abortions were analyzed. No patients tested IgM positive, and 9410 (91.6%) were immune (IgG positive); the remaining 866 (8.4%) were susceptible. There were no significant differences in gravidity, parity, or the number of previous abortions between immune and nonimmune groups. In contrast, the immunity rate decreased with increasing age, with a significant difference between the youngest age group (15-19 years) and the oldest age group (40-49 years) (P = 0.0005; odds ratio, 2.86; 95% confidence interval, 1.7-4.7). Rubella immunity among pregnant women was high (91.6%) but decreased significantly with increasing age. A possible explanation for this is the change in the rubella vaccination policy in Saudi Arabia in 2002, from 1 dose to 2 doses. In addition, antibody levels begin to decline after vaccination and natural infection.
ABSTRACT

Objective: To assess the role of preoperative serum 25 hydroxyvitamin D as predictor of hypocalcemia after total thyroidectomy.

Study Design: Retrospective cohort study.

Setting: University teaching hospital.

Subjects and Methods: All consecutively performed total and completion thyroidectomies from February 2007 to December 2013 were reviewed through a hospital database and patient charts. The relationship between postthyroidectomy laboratory hypocalcemia (serum calcium ≤2 mmol/L), clinical hypocalcemia, and preoperative serum 25 hydroxyvitamin D level was evaluated.

Results: Two hundred thirteen patients were analyzed. The incidence of postoperative laboratory and clinical hypocalcemia was 19.7% and 17.8%, respectively. The incidence of laboratory and clinical hypocalcemia among severely deficient (<25 nmol/L), deficient (<50 nmol/L), insufficient (<75 nmol/L), and sufficient (≥75 nmol/L) serum 25 hydroxyvitamin D levels was 54% versus 33.9%, 10% versus 18%, 2.9% versus 11.6%, and 3.1% versus 0%, respectively. Multiple logistic regression analysis revealed preoperative severe vitamin D deficiency as a significant independent predictor of postoperative hypocalcemia (odds ratio [OR], 7.3; 95% confidence interval [CI], 2.3-22.9; P = .001). Parathyroid hormone level was also found to be an independent predictor of postoperative hypocalcemia (OR, 0.6; 95% CI, 0.5-0.8; P = .002).

Conclusion: Postoperative clinical and laboratory hypocalcemia is significantly associated with low levels of serum 25 hydroxyvitamin D. Our findings identify severe vitamin D deficiency (<25 nmol/L) as an independent predictor of postoperative laboratory hypocalcemia. Early identification and management of patients at risk may reduce morbidity and costs.
ABSTRACT

Background: To reduce the incidence of HIV and sexually transmitted infections (STIs), it is necessary to target high-risk populations such as prison inmates. This study aims to explore the range of knowledge on HIV and STIs, sexual behaviors, and adoption of preventive measures among women inmates.

Methods: This was a survey conducted between July 1, 2012 and July 29, 2012 among women inmates at Briman Prison, Jeddah, Saudi Arabia. The author gave an educational lecture on STIs in a conference room at the prison. Educational material was distributed to the attendees after the lecture, and the survey was conducted one week later. All the participants were asked to complete an anonymous 40-item self-administered questionnaire in the presence of a professional health assistant and a translator, for non-Arabic speakers. Data collected included the personal data of the respondent, her alleged criminal background, penal status, accumulative time in prison, history of smoking, alcohol or drug addiction, knowledge about the seven most common STIs, symptoms, modes of transmission, prevention, sexual activity, addiction, and means of protection. Descriptive analysis was performed using Microsoft Excel.

Results: We interviewed 204 women aged 16-60 years (mean, 33.3 years). Most of the respondents (n=170; 83 · 0%) were not aware of STIs; 117 respondents (57 · 4%) did not undergo screening for STIs before marriage or intercourse, while only 59 (28 · 9%) did. Over half of the respondents (n=107; 52.5%) thought they knew how to protect themselves from STIs. Nevertheless, 87 (42.6%) were uncertain about the role of condoms in protection from STIs and (n=41; 20.1%) thought condoms provide 100% protection against STIs, while 72 respondents (35.3%) thought condoms did not confer 100% protection against STIs. Only 10 respondents (4.9%) used condoms to protect themselves from STIs. Saudi women (P=0.033) and those with a higher level of education (P < 0.01) were significantly more likely to have better knowledge.

Conclusion: Women inmates at Briman Prison have poor knowledge of STIs as well as risky sexual behaviors. Campaigns aimed at increasing awareness of STIs should also target prison inmates, who in general constitute high-risk populations.
Human life expectancy has increased over the past 50 years due to scientific and medical advances and higher food availability. However, overweight and obesity affect more than 50% of adults and 15% of infants and adolescents. There has also been a marked increase in the prevalence of metabolic syndrome in recent decades, which has been associated with a reduction in nocturnal pineal production of melatonin with aging and an increased risk of coronary diseases, type 2 diabetes mellitus (T2DM) and death. Melatonin is currently under intensive investigation in experimental animal models of diabetes, obesity and MS at pharmacological doses (between 5 and 20 mg kg(-1) body weight), demonstrating its capacity to ameliorate the total metabolic profile and its potential as an alternative to conventional drug therapies for the disorders associated with the MS, i.e. elevated systolic blood pressure, and impairment of glucose homeostasis, plasma lipid profile, inflammation, oxidative stress, and increased body weight. An especially significant finding is the induction by melatonin of white adipose tissue browning, which may be related to its effects against oxidative stress, uncoupling the mitochondrial bioenergetic process by enhancing the expression of uncoupled-protein-1 (UCP-1), which has been related to body weight reduction in experimental animals. Further research is required to improve knowledge of this mechanism. Clinical studies are needed with the administration of pharmacological melatonin doses, because the dose has ranged between 0.050 and 0.16 mg kg(-1) bw in most studies to date. Melatonin is a natural phytochemical, and it is also important to test its beneficial metabolic effects when consumed in functional foods.
ABSTRACT

Objectives: To evaluate the social consequences of dialysis on children and their parents.
Methods: From January through June 2012 short structured interviews with parents or caregivers of children on peritoneal dialysis (PD) or hemodialysis (HD) who were followed up at King Abdulaziz University Hospital, King Faisal Specialty Hospital and Research Center, or the Kidney Center at King Fahad Hospital were conducted. Data were analyzed using the Statistical Package for the Social Sciences.
Results: Thirty six children (22 boys and 16 girls) and their families were included. The mean (SD) age of the children was 11.5 ± 6.87 y, and the mean (SD) duration of dialysis was 28 ± 11.32 mo. Only one third of the families had the opportunity to choose the modality of dialysis. Both modalities of dialysis had a negative effect on fathers’ jobs in over 50 % of the cases. Similarly, both modalities of treatment had a considerable impact on the quality of care provided by the mothers to other family members. There was no difference between the two modalities on the frequency of admissions.
Conclusions: Both PD and HD had a negative impact on fathers’ jobs and on the level of care provided by mothers to the rest of the family.
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ABSTRACT

Research in the field of mind-body medicine focuses on the complex interaction of psychoemotional, social, spiritual, experiential, and behavioral elements and their impact on health and the handling of disease. Specific approaches intend to investigate and promote patients’ own abilities and resources to manage their respective stressors, that is, coping strategies, relaxation techniques, mindfulness meditation, yoga, rituals, prayer, spirituality, and religiosity. An increasing number of published studies have examined the connection between spirituality/religiosity, health, and quality of life. However, the impact of a person’s religiosity/spirituality on health is multifaceted and is fraught with methodological controversy since one has to deal with cognitive approaches (specific attitudes and beliefs), emotions, practices (spiritual/religious and secular forms), specific behaviors, reactive strategies to deal with illness (coping), and spirituality/religiosity-based interventions (i.e., meditation, mindfulness, and prayer). Because of this complexity, an interdisciplinary perspective is required for research as well as clinical care. We would broadly define spirituality as all attempts to find meaning, purpose, and hope in relation to the sacred or significant (which may have a secular, religious, philosophical, humanist or personal dimension). In particular, spirituality and spiritual practices have commitment to values, beliefs, practices, or philosophies which may have an impact on patients’ cognition, emotion, and behavior. Thus, personal spirituality in this sense may influence patients’ sense of coherence and their ability to cope with stress, loss, and illness. Spirituality can also have an influence on patients’ health behaviors and healthcare decision making, and it can be critically enabling people to reframe their situation. Spirituality can also affect how people relate to meaningful others (i.e., friends, family, and health professionals) who may be significant in their lives. Spirituality can also include people’s understanding of the role and importance of transcendence in their lives; however, they may define the term. This special issue enlisted experts from different disciplines to contribute to new research on the growing body of evidence that spirituality/religiosity impacts health and illness. However, we are aware of the fact that many questions still remain unaddressed and encourage future research.
ABSTRACT

Objective: To assess the relative validity and repeatability of a sixty-four-item FFQ for estimating dietary intake of Zn and its absorption modifiers in Saudi adults. In addition, we used the FFQ to investigate the effect of age and gender on these intakes.

Design: To assess validity, all participants completed the FFQ (FFQ1) and a 3 d food record. After 1 month, the FFQ was administered for a second time (FFQ2) to assess repeatability.

Setting: Jeddah, Saudi Arabia.

Subjects: One hundred males and females aged 20–30 years and 60–70 years participated.

Results: Mean intakes of Zn and protein from FFQ1 were significantly higher than those from the food record while there were no detectable differences between tools for measurement of phytic acid intake. Estimated intakes of Zn, protein and phytate by both approaches were strongly correlated (P<0.001). Bland–Altman analysis showed for protein that the difference in intake as measured by the two methods was similar across the range of intakes while for Zn and phytic acid, the difference increased with increasing mean intake. Zn and protein intakes from FFQ1 and FFQ2 were highly correlated (r>0.68, P<0.001) but were significantly lower at the second measurement (FFQ2). Older adults consumed less Zn and protein compared with young adults. Intakes of all dietary components were lower in females than in males.

Conclusions: The FFQ developed and tested in the current study demonstrated reasonable relative validity and high repeatability and was capable of detecting differences in intakes between age and gender groups.
We investigated the survival of a pandemic strain of influenza A H1N1 on a variety of common household surfaces where multiple samples were taken from 4 types of common household fomite at 7 time points. Results showed that influenza A H1N1sw virus particles remained infectious for 48 hours on a wooden surface, for 24 hours on stainless steel and plastic surfaces, and for 8 hours on a cloth surface, although virus recovery from the cloth may have been suboptimal. Our results suggest that pandemic influenza A H1N1 can survive on common household fomites for extended periods of time, and that good hand hygiene and regular disinfection of commonly touched surfaces should be practiced during the influenza season to help reduce transmission.
**ABSTRACT**

**Background:** Ultrasound examination is very frequently used for the evaluation of abnormalities in various organs of the body. Our aim was to determine whether the requests by family physicians (FPs) for ultrasound examinations were appropriate. Our secondary objective was to enumerate positive and negative ultrasound reports for various diagnostic indications.

**Materials And Methods:** This cross-sectional study was conducted during the period of month between June and August 2010, at the Family Medicine Department of North West Armed Forces Prince Salman Hospital, Tabuk. We reviewed the ultrasound requests of all patients included in this study and the findings of the procedure. Data were analyzed using the Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL), version 16.0.

**Results:** The requests and reports of 815 patients for ultrasound were reviewed. Females comprised 58.7% of the referred cases. The mean age of the sample at referral was 30 ± 18.5 for females and 34 ± 20.7 for males. Only 46% of the request forms contained conclusive information and instructions. Abdominal/pelvic ultrasounds were the most frequently requested; Nearly 71.2% of the ultrasound scans were normal. Abdominal/pelvis ultrasound was more likely to be reported as normal than ultrasound scans of other regions (P = 0.007). Patients aged 41-60 years were more likely to have an abnormal ultrasound (P = 0.02).

**Conclusion:** Our findings suggest that FPs have to be educated about imaging referral protocols in order to achieve better outcomes.
**ABSTRACT**

**Background:** This study was conducted to determine characters and risk factors of Helicobacter pylori infection and its relationship with recurrent abdominal pain and other gastrointestinal symptoms at the main children’s intermediate school in Rabigh, Saudi Arabia.

**Methods:** A cross-sectional study was conducted at a boys’ intermediate school. A questionnaire for the gastrointestinal (GI) symptoms and relevant personal and socioeconomic risk factors related to H. pylori infection was distributed followed by H. pylori IgG antibody assay and 14C urea breath test to detect active infection.

**Results:** H. pylori was diagnosed by positive urea breath test in 51.5% of students. H. pylori infection was symptomatic with at least one upper GI symptom in 89.7% of infected students which was higher than symptomatic cases reported in any other study. H. pylori-infected students had significantly more association with the presence of any upper GI symptom (p < 0.001), recurrent abdominal pain (p < 0.001), anorexia (p < 0.001), nausea (p < 0.026), family history of peptic disease (p < 0.001), drinking desalinated municipal water (p < 0.001), lower income (p = 0.02), and eating outside home (p = 0.003) than uninfected students. Logistic regression analysis showed that the most significant predictors of H. pylori infection were presence of any upper GI symptom (OR 5.3, 95% CI 2.32–15.71), family history of peptic disease (OR 2.2, 95% CI 1.11–3.9), and drinking desalinated municipal water (OR 2.1, 95% CI 1.09–3.2).

**Conclusions:** This study presented unique features and risk factors of H. pylori infection in 12–15-year-old Saudi boys in Rabigh, and mainly supported the role of H. pylori in causing recurrent abdominal pain.
Aims: To investigate misoprostol use as a self-administered medical abortifacient and to explore the knowledge and availability of misoprostol and attitudes towards it among Saudi women.

Methods: A questionnaire-based cross-sectional study was conducted in obstetric and gynecological outpatient clinics at private and teaching institutions between January 1 and June 29, 2012.

Results: Of the 678 respondents, 40% (271/678) were aware of misoprostol use as an abortifacient and 7.4% (50/678) reported personal use of it as an abortifacient. Misoprostol users were more likely to have had previous abortions (96%, 48/50; p < 0.01), had a relative/friend working in the medical field (70%, 35/50; p < 0.01) and known someone else who had used the drug (82%, 41/50; p < 0.01). The majority responded incorrectly that higher misoprostol doses are required with more advanced gestational age (96%, 48/50) and that misoprostol use confers no fetal risks (100%, 50/50).

Conclusion: The proportion that reported personal use of misoprostol in the current study (7.4%) exceeded that in similar samples in Brazil (2.2%) and the USA (5%). One concerning finding was the users’ poor knowledge about misoprostol. Increased awareness about the inherent risks associated with unsupervised misoprostol use as an abortifacient is needed.