The 11th Annual Research Day of the Health Colleges

Programme and Abstracts

Monday 16/11/1436 H (31/8/2015 G)
الأثنين ١٦/١١/١٤٣٦ هـ (٣١/٨/٢٠١٥ م)
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The executive summary

گرامیداشت

الحمد لله رب العالمین، بالسلام على أشرف المرسلین، وبعد: نحنكم وبیوم البحث العلمی الحادی عشر للكلیات البحتیة. وقد بدا قبل أكثر من عقد من الزمان حيث بدأ عمل الکتیبіةیة عندما كانت الکتیبیة البحتیة الیة زیة، الکتیبیة الیة. واليوم، هناك تسکیب الکتیبیة البحتیة الیة. والمیزة من جامعات الکتیبیة البحتیة الیة. ویجاید لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لіلیة الکتیبیة البحتیة الیة. والکتیبیة البحتیة الیة. رکن أساسي للامضاءة الالتماسة الیة. حيث أن التقدم في الپی القیاس بما تولده من أهمیة الکتیبیة البحتیة الیة.这样做

الکتیبیة البحتیة الیة. نحنكم وبیوم البحث العلمی الحادی عشر للكلیات البحتیة. وقد بدا قبل أكثر من عقد من الزمان حيث بدأ عمل الکتیبیةیة عندما كانت الکتیبیة البحتیة الیة زیة، الکتیبیة الیة. واليوم، هناك تسکیب الکتیبیة البحتیة الیة. والمیزة من جامعات الکتیبیة البحتیة الیة. هذا آلیة تعاونیة ثم وіحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیة تعاونیة ثم ویحكم حکومتنا الیرضاءة لیم، المناeiط البحتیة الیة. هذا آلیا

أ.م.د. فهید بن حسن آل هاشم

رئيس مركز البحوث في الكلیات البحتیة
### Scientific Program:

**Monday, 16 Thul Qadah 1436H (31.08.2015G)**

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<tr>
<td>07:30 – 08:15</td>
<td>Registration</td>
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<tr>
<td>08:15 – 08:45</td>
<td>OPENING CEREMONY</td>
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<td>08:45 – 09:00</td>
<td>Tea Break and Poster Session</td>
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<td>09:00 – 10:30</td>
<td><strong>First Scientific Session</strong>&lt;br&gt;“Research in Dentistry and Internal Medicine”&lt;br&gt;Chairmen: Dr. Ibrahim Alshahrani and Dr. Nasser Alsabaani</td>
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<td>10:30 – 10:45</td>
<td>Tea Break and Poster Session</td>
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<td>10:45 – 12:15</td>
<td><strong>Second Scientific Session</strong>&lt;br&gt;“Research in Laboratory Sciences”&lt;br&gt;Chairmen: Dr. Khalid Alahmari and Dr. Mubaral Shuraim</td>
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<td>12:15 – 13:00</td>
<td>Prayers</td>
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<td>13:00 – 14:30</td>
<td><strong>Third Scientific Session</strong>&lt;br&gt;“Research in Surgery, Physiology, Pathology, Biochemistry and Pharmacy”&lt;br&gt;Chairmen: Prof. Abdullah Assiri and Dr. Abdulrahman Alsaaari</td>
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<td>Closing Session</td>
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### Oral Presentation

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<td>09:00 – 10:30</td>
<td>First Scientific Session&lt;br&gt;“Research in Dentistry and Internal Medicine”&lt;br&gt;Chairmen: Dr. Ibrahim Alshahrani and Dr. Nasser Alsabaani</td>
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<td>09:00 – 09:10</td>
<td>A NOVEL APPROACH TOWARDS DIGITIZATION OF PALATAL RUGAE PATTERN USING AUTODESK MAYA STUDIO SOFTWARE&lt;br&gt;SYED SADATULLAH, IBRAHIM S AL-SHAHRANI, ALI AZHAR DAWASAZ, RAFI A TOGOO, KHALED M ADDAS</td>
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<td>09:00 – 09:20</td>
<td>RETENTION OF TEETH VERSUS EXTRACTION AND IMPLANT PLACEMENT IN AESTHETIC ZONE: OPINION OF TREATMENT OPTIONS AMONG DENTISTS IN ASIR REGION, KSA&lt;br&gt;M�폲سان ABDUL KHADER, MOHAMMED A. ALQARNI, MOHAMMED ALSHARIF, ABDULLAH ALSHAHRANI</td>
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<td>09:00 – 09:30</td>
<td>EFFECT OF CARBONATED BEVERAGES ON PRIMARY AND PERMANENT TOOTH&lt;br&gt;NASIM V.S., OSAMA FAHMI, ABDULLAH DAFER AL SHEHRI, ALI ABDULLAH AL QISI, NAIF ASSIRI</td>
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<td>09:00 – 09:10</td>
<td>HOW IN SHAPE ARE YOU? AN ASSESSMENT OF THE AWARENESS OF THE DENTAL PRACTITIONER ABOUT ERGONOMIC PRACTICES&lt;br&gt;ANGELINE DEEPTHI, SHAHEEN VS, VINOD BABU MATHEW, JIMLY JAMES KUNJAPPU</td>
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<td>09:00 – 09:30</td>
<td>UNIVERSITY STUDENTS ORIENTATION ABOUT BRAIN DEATH AND ORGAN DONATION&lt;br&gt;ALI ALBHASHBE, MUHAMMED ALBASHYABA</td>
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<td>09:00 – 09:10</td>
<td>THE DECLINE OF HCV AND HBV INFECTIONS AMONG MALE HAEMODIALYSIS PATIENTS IN ABHA CITY, SAUDI ARABIA&lt;br&gt;Mohamed Elbagir K Ahmed, Ibrahim Jibrin, Hyder Ali Omer, Haitham Hyder Omer, Suliman Al-Humayd</td>
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<td>09:00 – 09:10</td>
<td>SEROEPREVALENCE OF HEPATITIS B AND C VIRUS INFECTIONS IN ASEER REGION, SOUTHWESTERN SAUDI ARABIA&lt;br&gt;SULIMAN AL-HUMAYED, AWAD EL-MEKKI, AHMED MAHFOUZ</td>
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<td>09:00 – 09:10</td>
<td>DISCUSSION</td>
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A NOVEL APPROACH TOWARDS DIGITIZATION OF PALATAL RUGAE PATTERN USING AUTODESK MAYA STUDIO SOFTWARE

AUTHOR(S): 1SYED SADATULLAH, 2IBRAHIM S AL-SHAHRANI, 3ALI AZHAR DAWASAZ, 4RAFI A TOGOO, 5KHALED M ADDAS

AUTHOR'S AFFILIATION: 1,3Department of Maxillofacial Surgery and Diagnostic Sciences, 2,4Department of Preventive Dental Sciences, 5Department of Substitutive Sciences, College of Dentistry, King Khalid University

PRESENTING AUTHOR: SYED SADATULLAH

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OBJECTIVES: This is an ongoing research project with the following objectives. 1. To create a digital database of 3D scanned palatal rugae area. 2. To digitize the palatal rugae pattern using 3D software. 3. To convert the digital data into a scannable QR code.

METHODS: 24 healthy individuals with normal palatal anatomy were randomly selected for the study. 3D scanning of the maxillary arch was carried out for all the study individuals using 3Shape Trios Intra Oral Scanner at KKU College of Dentistry Clinics. The scanned 3D images were analyzed for strength (in millimeters), characteristics (modified classification of Thomas and Koetze) and number of palatal rugae using AutoDesk Maya Studio 2015 software and code written in Python programming language. The resultant data was entered in Microsoft Excel and converted into an alphanumeric code and subsequently converted into a scannable QR code.

RESULTS: It was possible to scan and upload all 24 3D images into a website created solely for the purpose of digitization of palatal rugae pattern. AutoDesk Maya Studio was capable of analyzing all the 273 (133 right and 140 left) rugae from the 24 3D images. The rugae were identified manually by drawing a line across it and the software estimated the strength and characteristic. The strength and characteristics were converted into 24 alphanumeric codes and QR code. 10% of the analysis was repeated manually using 3Shape software and an insignificant difference was noted.

CONCLUSIONS: The digitization of palatal rugae pattern using 3D animation software can be useful in human identification and biometric analysis.

RETENTION OF TEETH VERSUS EXTRACTION AND IMPLANT PLACEMENT IN AESTHETIC ZONE: OPINION OF TREATMENT OPTIONS AMONG DENTISTS IN ASIR REGION, KSA

AUTHOR(S): MOHASIN ABDUL KHADER, MOHAMMED A. ALQARNI, MOHAMMED ALSHARIF, ABDULLAH ALSHAHRANI

AUTHOR'S AFFILIATION: Division of Periodontics, College of Dentistry, King Khalid University; Department of Restorative Dental Sciences, College of Dentistry, King Khalid University, Interns, College of Dentistry, King Khalid University.

PRESENTING AUTHOR: MOHASIN ABDUL KHADER

PRESENTING AUTHOR e-mail: mohasin1@gmail.com

OBJECTIVES: To determine the current treatment preferences among dentists in Asir region, KSA: (i) for retention of teeth by endodontic and restorative treatment or (ii) for extraction and implant placement.

METHODS: Dentists working in Asir region, KSA was selected for the study after getting consent. A questionnaire was designed and standardized, which consisted of 2 parts. First part contained personal information and the second part had a set of questions which the participants had to select the treatment preferences according to various clinical situations such as treatment for single teeth, treatment for multiple teeth, treatment for abutment teeth, direct endodontic treatment, endodontic treatment through a crown restoration, endodontic retreatment and endodontic surgical treatment. Data was electronically tabulated and statistically analyzed using the SPSS system.

RESULTS: Among all of the participant groups, there was a higher rate of selection for endodontic and restorative treatment over extraction and implant placement. There was a higher rate of selection for endodontic and restorative treatment over extraction and implant placement by all the participant groups for each of the prosthetic and endodontic case complexity categories. All of the participant groups selected endodontic treatment more frequently than implants for patients with a compromised medical history and selected an implant more frequently for the replacement of a single missing tooth with no difference between the groups.
CONCLUSIONS: Dental faculty and dental students generally favored endodontic and restorative treatment over extraction and implant placement; however, the selection of extraction and implant placement was progressively greater as the educational exposure to implantology became more recent. The selection of extraction and implant placement increased within each group (less recent faculty graduates, more recent faculty graduates, and dental students) as the complexities of prosthetic and the endodontic cases increased.

AUTHOR(S): NASIM V.S., OSAMA FAHMI, ABDULLAH DAHER AL SHEHRI, ALI ABDULLAH AL QISI, NAIF ASSIRI

AUTHOR’S AFFILIATION: Division of Pedodontics, College of Dentistry, King Khalid University; Department of Biochemistry, College of Medicine, King Khalid University; Interns, College of Dentistry, King Khalid University.

PRESENTING AUTHOR: NASIM V.S.

PRESENTING AUTHOR e-mail: drnasimvs@yahoo.com

OBJECTIVES: To estimate the amount of phosphorus and calcium which is eroded and leached into the carbonated beverages.

METHODS: 6 brands of carbonated beverages randomly according to the popularity in the Saudi Arabian local market. Freshly extracted natural primary and permanent teeth were collected. These teeth were free of any type of enamel defects or dental caries. Ten samples of each carbonated beverage were kept in small glass containers exposing to drinks for One hour at a temperature of 37 degrees Celsius. Then the Calcium and Phosphate content dissolved into the beverage sample were estimated using colour Spectrophotometer.

RESULTS: Before exposing the tooth with the carbonated beverages, Calcium & Phosphorus level of the same sample of beverages was estimated. The concentration of calcium and phosphorus which is estimated in the various individual beverages after exposing with the teeth was estimated. Statistical analysis was done with students unpaired t test using statistical software. Analysis of calcium concentration in the carbonated beverages with tooth exposure gave statistically significant results with P-value 0.0211. Analysis of phosphate concentration in the carbonated beverages with tooth exposure gave results without statistical significance P-value 0.0710.

CONCLUSIONS: The present study shows that carbonated beverages are likely
to be a major factor in causing dental erosion. Constant exposure to carbonated beverages can potentially cause irreversible loss of tooth structure, especially in children and adolescents. These results link beverage ingredients, possibly refined carbohydrates and/or acids are the main triggers for demineralization of tooth, although the effects of saliva on beverage dissolution of tooth structure were not explored.

Author(s): Angeline Deepti, Shaheen VS, Vinod Babu Mathew, Jimly James Kunjappu

Author's Affiliation: Division of MDS, College of Dentistry, King Khalid University; Division of Orthodontics, College of Dentistry, King Khalid University; Division of RDS, College of Dentistry, King Khalid University; Division of Periodontics, College of Dentistry, King Khalid University

Presenting Author: Angeline Deepti

Presenting Author Email: deepthimds@yahoo.co.in

Objectives: To assess the knowledge, attitude, and practice of ergonomics among dental practitioners and dental students in dental college, King Khalid University

Methods: A cross-sectional study was carried out among dental practitioners and dental students in King Khalid University. Data collection was done by the means of a structured questionnaire for ergonomic factors. The variables evaluated were a) Gender b) Age c) Awareness d) Relaxation while working e) Work environment f) Presence of pain g) Problems due to adoption of inadequate posture h) Measures taken to prevent the injury or pain

Results: 85% reported some form of muscular pain and did not know the right type of exercise to be followed in clinical practice and rest 15% did not report any kind of pain.

Conclusions: Ergonomics-related health hazards are a common affliction in dentists which begins at the time they start their professional studies and it stays with them during their professional practice affecting various parts of the body.
UNIVERSITY STUDENTS ORIENTATION ABOUT BRAIN DEATH AND ORGAN DONATION

AUTHOR(S): ALI ALBSHABSHE, MUHAMMED ALMASHYABA

AUTHOR'S AFFILIATION: Department of Internal Medicine, College of Medicine, King Khalid University Abha, Saudi Arabia

PRESENTING AUTHOR: ALI ALBSHABSHE

PRESENTING AUTHOR e-mail: albashshe@yahoo.com

OBJECTIVES: To study the general information and attitude of university students in their primary basic science stage, while they did not receive special education regarding the Act of Brain Death, Organ Donation in our country in Saudi Arabia. As they were from different cities with different cultures and values we may be able to assess the educational needs of future doctors and paramedical ones to help them enough competency for solving the concerns of the population at large. Furthermore, we may find how they can be strong advocate of the program.

METHODS: The present study is a secondary analysis of a survey conducted in King Khalid University, Abha, Saudi Arabia, from March through May, 2014, about the knowledge of and attitudes toward brain death, organ donation, and transplantation in a sample of university students. The study was approved by our university ethics committee, and oral consent was obtained from all participants. The nonrandom sampling method was used. 873 university students participated in the survey, which was completed and conducted via a written questionnaire interview. The survey included 20 items, selected after a review of the literature that measured knowledge and attitudes toward brain death, organ donation, and organ transplantation. They were evaluated about personal aspects of deceased organ donation and the factors, which may affect their willingness to donate their own, or their family’s organs, their confidence in the diagnosis of brain death, knowledge about the process of brain dead organ donation in the country. We report only findings from the questionnaire interviews with university students from medical and allied health science colleges. And the results were not compared with those in the general population or graduate health care personnel.

RESULTS: 873 university students participated in the survey from college of medicine, dentistry, pharmacy and applied medical sciences. The Mean age was (S.D = 21.2 ± 3.45). 93% from the cohort heard about brain death. 85% of them get their information about brain death from the multiple media recourses (35.75 % where from T.V, 8.35 % from radio, 41.28% from the internet and 14.62 % were from friends). 22.57% from them know some body who had brain death, at the same time around 22% only think brain death is really a death on the other hand 20% had the idea that it is not a death at all while the majority had no conclusive idea. 22.57% think the brain dead person might recover and 34.82% had the impression of no recovery. Also 73.42 % of the cohort gets the impression that there is no difference between brain death and natural death. When we ask about what they think the cause of brain death in Saudi Arabia the highest percentage had no idea about the cause of brain death in the kingdom (34.36 %), car accidents, heart attacks and strokes were 26.8%, 11%, 27.84% respectively. To our surprise 92.44% did not know the religious point of view from brain death and did not hear any FATWA in brain death although 20% of them thinks the brain death is a fact in Islamic law. Almost half of the group (49.1%) will accept the idea of brain death if one of their relatives had it and this percentage increased to 74% once the relative transferred to higher center and confirmed brain dead. 20% did not ask for to transfer to higher center for confirmation of brain death. 73% likes to get the information about brain death as a group of family members rather than separately and a two third of them need that information to be given to them by senior staff 57.7% (consultant or specialist). 52% think that might take them days to accept the fact of brain death. When the idea came to organ donation 40% hear about it from TV, 12% from radio, 41% from the Internet, minority where from friends 6.27 %. Majority of the cohort 76.29% get the potential and feel that they will donate an organs of relatives in case of brain death. 70% have heard about Saudi center for organ transplantation and 52% would like to have donation cared.

CONCLUSIONS: The Organ Transplant Law in saudia, must be remodulated for the purpose of increasing and encouraging the number of organ donors, includes the family-oriented priority donation policy that allows people to prioritize a close relative to receive their organs after death including brain death. Thus far, a kidney and a cornea donation from cadavers were reported under the priority policy, but no priority donation from a brain-dead donor has been reported. The priority donation policy is a measure intended to appeal emotionally to the public so that more Saudi people will think positively about organ donation. Some critics assert that this prioritization policy involves an ethical problem; that is, fairness may be compromised in organ allocation. The sense of fairness of the Saudi people may be explained by the theory of ethics of unity. The prioritization policy may serve as an example that the interpretation of the fair opportunity rule, a basic rule of organ transplantation, may differ between cultures. In addition our society in general, in urgent need for more advanced orientation about the policy and the beneficial results of organ transplantation either from the religious point of view or from the basic ethics of Saudi culture rules.
THE DECLINE OF HCV AND HBV INFECTIONS AMONG MALE HAEMODIALYSIS PATIENTS IN ABHA CITY, SAUDI ARABIA

AUTHOR(S): MOHAMED ELBAGIR K AHMED, IBRAHIM JUBRAN, HYDER ALI OMER, HAITHAM HYDER OMER, SULIMAN AL-HUMAYED

AUTHOR’S AFFILIATION: College of Medicine, King Khalid University; Aseer Central Hospital

PRESENTING AUTHOR: MOHAMED ELBAGIR K AHMED

PRESENTING AUTHOR e-mail: mohamedelbagir@live.com

OBJECTIVES: To estimate the prevalence of HCV and HBV markers among male haemodialysis patients in a large center in Abha and to compare this with previous reports.

METHODS: A retrospective cross-sectional study among male haemodialysis patients in Abha city, Saudi Arabia. The charts of all 200 patients registered in the center were reviewed to record the presence of HCV antibodies and HBs Ag as well as liver functions and demographic factors. Simple statistics were used for analysis.

RESULTS: Out of the 200 men undergoing dialysis, 20 have HCV infection (10%), and only one patient has positive HBsAg (0.5%). The mean duration of haemodialysis was 10 years (range 1 to 29 y). Only 8 patients received treatment for HCV infection.

CONCLUSIONS: Compared to the prevalence of HCV among general Saudi population (1.8%), haemodialysis patients still have a very high prevalence of HCV and very low HBV prevalence. (1.5-3% in general population). This is due to the application of strict measures such as having separate dialysis machines for patients who are discovered to have HCV, and also to vaccination against HBV.

SEROPREVALENCE OF HEPATITIS B AND C VIRUS INFECTIONS IN ASEER REGION, SOUTHWESTERN SAUDI ARABIA

AUTHOR(S): SULIMAN AL-HUMAYED1, AWAD EL-MEKK12, AHMED MAHFOUZ3

AUTHOR’S AFFILIATION: Internal Medicine Department, Microbiology Department, Family & Community Medicine Department, College of Medicine, King Khalid University

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OBJECTIVES: The present study aims to determine, in a large cross-sectional study, the seroprevalence of Hepatitis B (HBV) and hepatitis C (HCV) virus infection in Aseer region, southwestern Saudi Arabia.

METHODS: Venous blood was collected from 10,234 individuals (males and females) attending different hospitals in Aseer region, southwestern Saudi Arabia. A comprehensive questionnaire was given to all participants and written consents were obtained. Sera were tested for HBsAg and HCV antibodies by sensitive enzyme-linked immunosorbent assays (ELISAs). Equivocal results obtained in HCV testing were confirmed by Reverse-transcription polymerase chain reactions (RT-PCR). Results were then coded, fed in a computer and statistically analysed.

RESULTS: Of 10,234 individuals, there were 605 (5.9%) positive for HBsAg and 224 (2.2%) were positive for markers of HCV infection. The questionnaire results have documented weak knowledge and low awareness of HBV and HCV infections in the population sample in Aseer region.

CONCLUSIONS: There is a substantial three-fold drop in the prevalence of HBV infection in Aseer region since the early introduction of HBV vaccination and the subsequent compulsory pre-marital screening for blood born and sexually transmitted diseases in the Kingdom as a whole. HCV infection rate did not show a decline. Therefore, a structured health education programme to raise the awareness of the population in this region seems mandatory.
**SS1**

### Title
SEROPREVALENCE OF CELIAC DISEASE IN AT-RISK SUBJECTS AT THE MAIN TERTIARY HOSPITAL SOUTHWESTERN OF SAUDI ARABIA

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**OBJECTIVES:** The aim of the current study is to check the prevalence of celiac disease in at-high risk subjects in Aseer region, Southwestern of Saudi Arabia and to investigate associated presentations.

**METHODS:** A retrospective case-finding study of the laboratory records for a period of three years (2009 to 2012) at the main tertiary hospital in the area, Aseer central hospital. Serum anti-tissue transglutaminase (atTG), and endomysial (EmA) antibodies were checked along with small intestinal histopathology.

**RESULTS:** 18.4% (58/315) turned out to be positive for at least one celiac antibody marker. 40 cases in the time period of analysis underwent endoscopic examination, 22 cases were confirmed for celiac disease. The individual antibody positivity for atTG and EmA were 17.5% and 15.6% respectively. The most common clinical condition (47%) associated with these markers was type 1 diabetes mellitus (T1DM). Interestingly gastrointestinal presentations were only 11.5%.

**CONCLUSIONS:** The rate of celiac disease among hospital requests in Aseer main tertiary hospital seems to be high and includes non-gastrointestinal symptomatic patients. More screening studies are required to determine the prevalence of celiac disease and pinpoint the high risk group commonly affected by celiac disease.
CORD BLOOD STEM CELLS - CREATING AWARENESS THROUGH SOCIAL NETWORKS

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OBJECTIVES: The hinge in acquiring the required stem cells lies in donor’s acceptance, which is highly influenced by ethics, practicing religions, customs and largely as not informed. The best way to achieve and ensure the availability of stem cells to biomedical research and therapy are by educating individuals via social networking sites, media & internet etc on the therapeutic potentials of stem cells in medicine and research.

METHODS: 1. To investigate whether the social networking sites have the power to create awareness to stop the disposal of cord blood and cord products stem cells as biomedical waste; 2. Do the networking sites persuade public/private or state/industrial partnerships to successfully ascribe the availability of economically affordable stem cells to therapy and research?; 3. A detailed in silico analysis on the use of the cord blood stem cells in medical research and therapy.

RESULTS: Increased awareness was noticed among expected parents to store the umbilical cord blood or donate for research irrespective of developed or developing countries. Many social media contributed to such success was possible only via education and advertisements. Recently we observed new conceptual ideas for public umbilical cord banks with special reference to utilize the private owned autologous cord blood units on the requirement. Many cord blood banks and stem cell research sites have called for enabling both public and private banks along with state or industrial funding to establish huge cord blood banks as a source for stem cells for therapies and research. Huge storage facilities of stem cells would be adequate to cover the mosaic of HLA signatures with regional specificities, which answers a big question among the cord blood banking advocates especially in Middle East.

CONCLUSIONS: We conclude that the education through social networking sites will be one of the best ways to create awareness to stop the disposal of easily available stem cells and to save it for future use through public or private cord blood banks. Utilizing the child’s cord blood and cord products under public donor setup might look as huge investment and may not even sound ethical or can be considered as interference of individual’s right, but still a humanitarian need gets fulfilled and a real public/private endeavor would be achieved.
NEWLY EMERGED ACINETOBACTER ISOLATES; 16s AND 23s RNA ITS MOLECULAR IDENTIFICATION AND DRUG RESISTANCE EVALUATION FROM ASSER REGION

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OBJECTIVES: 1. To study the clinical, demographic and epidemiology of Acinetobacter isolates in Assir region; 2. To evaluate sensitivity and resistance of Acinetobacter towards the commonly used antibiotics; 3. To perform molecular typing of Acinetobacter isolates in Assir region.

METHODS: Study design: It is a cross sectional study of Acinetobacter clinical isolates in Assir region. This study is funded by the college of scientific research, King Khalid University, Abha, Saudi Arabia. Ref. KKU-MED-11-017 (The first scientific research funded program of KKU). Study period: Dec. 2011- Dec. 2012. Sample size: A total of 150 Positive Acinetobacter isolates were collected from different wards in Assir hospital. These samples were identified by microbiological including antibiotic sensitivity test and biochemical including API 20 NE system (bioMérieux Vitek, Marcy l’Etoile, France) tests done in the laboratory of Assir Central Hospital and confirmed in the department of microbiology KKU. Molecular tests were performed in the PCR lab. department of microbiology KKU and The PCR product was sequenced by Macrogen Inc., (Seoul, Korea).

RESULTS: Gender distribution; 58.7% were males and 41.3% were females. Most of the patients (45%) their age were from age group 16-60 years. Around 97% were Saudi. One third of the patients were unemployed. Majority of the employed, 18% worked in military and only 3.3% worked as health personnel. Samples collected were from; sputum 47.3%, blood 22.7%, skin 14%, urine 6% and less samples were eye swab, endotracheal tube and wound swap. 41.3% of patients were from medical ward and 22.7% were from intensive care unit (ICU). The average of in-patients hospital day stay was around 4 days. All isolates showed 100% sensitivity to: Meropenem and Colistin. The higher resistant ones were; Nitrofurantoin 87% and Cefoxitin 85%. The least resistant antibiotics; Imipenem 3% and Ticarcillin 7%. Percentage of antimicrobial susceptibility of 15 antimicrobial agents tested by MIC against A. baumannii species in this study compared with previous two studies. 47 patients (31.3%) have used antibiotics prior to this study, the high rate of usage occurred in elder patients. PCR products of the 16s and 23s rRNA ITS specific primers have detect 145 positive isolates from all 150 Acinetobacter clinical isolates, detection rate of 96.7%. Electrophoretic analysis of the rRNA PCR products. Based on using the 16s-23s (ITS) of ribosomal RNA sequences, all isolates tested were identified as Acinetobacter baumannii. The PCR products analysis by phylogenetic tree. Newly emerged Acinetobacter baumannii strain was discovered in Asser region and have been added to the Gene bank.

CONCLUSIONS: Acinetobacter calcoaceticus baumannii complex bacteria are important cause of the nosocomial infections. The risk factors for Acinetobacter species infections involved using invasive procedures and excessive uses of broad-spectrum antimicrobials. The frequency of Acinetobacter calcoaceticus baumannii complex multi-drugs resistance ABCMDR is rising including almost all commonly used antibiotics. Only few antibiotics exert 100% sensitivity towards these bacteria. The rapid and accurate identification of clinically significant Acinetobacter strains by molecular tools will improve insight into their epidemiology and allow for targeted therapeutic and infection control measures. Raising clinicians awareness plus treatment regime and preventive measures should be established and updated by the infection control units.
CONCLUSIONS: The study concluded that bench tests are limited as they categorized yeasts into Candida albicans and non-albicans only. Vitek 2 system is extremely successful by providing identification to 96.4% of the yeasts. Identification of unknown strains (3.6%) can be done phylogenetically in case an accurate identification is planned.
OBJECTIVES: 1. To study the nutritional status of female adolescents aged 16-18 years and early adults aged 18-20 years in schools and colleges in Aseer region, Abha district; 2. To study the frequency of food consumption of the selected adolescents and early adults. 3. To study the details of physical activity, skipping breakfast and snacking habits of the selected adolescents and early adults.

METHODS: Female adolescents aged 16-18 years were selected from randomly sampled schools and early adults aged 18-20 years were selected from randomly sampled colleges of Aseer region, Abha district. Their height, weight, waist circumference and hip circumference were collected using standard equipment along with details of physical activity, skipping breakfast and snacking habits. Body mass index and waist hip ratio were computed. A validated food frequency questionnaire was administered to the respondents to collect data on frequency of food consumption of the selected subjects. The data was loaded into SPSS 17 software and analysed.

RESULTS: A pre validated questionnaire was prepared to include details of height and weight, physical activity, skipping of breakfast, snacking and frequency of food consumption of the selected subjects. The questionnaire was administered to all the subjects and their anthropometric measurements were taken. The results of the study revealed that according to the Body mass index, 14.9 percent of the subjects were underweight and 18.6 percent of the subjects were overweight. A majority of the subjects were of normal weight. Mean waist circumference was 73.3. Mean Waist hip ratio was 0.8 in the female subjects. No significant association was found between parental education, income and food frequency parameters. No significant association was found between Body mass index, Waist hip ratio and the remaining food frequency parameters.

CONCLUSIONS: In the long run, chronic diseases because of overweight and underweight and poor food consumption practices will occur. Preventing these diseases is the need of the hour.
DETECTION OF MULTIDRUG RESISTANT MYCOBACTERIUM TUBERCULOSIS STRAINS BY GENOTYPE ANALYSIS

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OBJECTIVES: To develop the tools for the detection of Multidrug Resistant Mycobacterium tuberculosis strains by genotype analysis.

METHODS: In a population-based study, we sequenced specific genes of M. tuberculosis that were associated with resistance to rifampin and isoniazid in 242 phenotypically MDR isolates and 50 phenotypically pan-susceptible isolates from tuberculosis (TB). We estimated the sensitivity and specificity of the mutations, using the results of conventional, culture-based phenotypic drug susceptibility testing as the standard.

RESULTS: We detected mutations within the 81-bp core region of rpoB in 96.3% of phenotypically MDR isolates. Mutations in two structural genes (katG and inhA) and two regulatory regions (the promoter of mabA-inhA and the intergenic region of oxyR-ahpC) were found in 89.3% of the MDR isolates. In total, 98.0% of the phenotypic MDR strains were confirmed by mutations in the sequenced regions. Mutations in embB306 were also considered a marker for MDR and significantly increased the sensitivity of the approach.

CONCLUSIONS: Based on our findings, an approach that prospectively screens for mutations in 11 sites of the M. tuberculosis genome (rpoB531, rpoB526, rpoB516, rpoB533, and rpoB513, katG315, inhA-15, ahpC-10, ahpC-6, and ahpC-12, and embB306) could detect 86.8% of MDR strains. This study lays the foundation for the development of a rapid, reliable molecular genetic test to detect MDR strains of M. tuberculosis.

NORMAL Q-ANGLE VALUES IN ASYMPTOMATIC YOUNG ADULTS IN ABHA, ASEER REGION, KINGDOM OF SAUDI ARABIA

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OBJECTIVES: To establish a baseline reference value for normal Q-angles among asymptomatic young adults in Abha, Kingdom of Saudi Arabia.

METHODS: The subjects selected for the study were normal healthy asymptomatic college students from King Khalid University, College of Applied Medical Sciences, Abha, Saudi Arabia of age 18-25 years of age. The procedure was explained to all the subjects who then signed an informed consent form. Ethical clearance for the study was obtained from the University. A total of 100 male subjects were selected for this study. The sample included healthy male subjects without any history of pathological conditions of lower extremities, spine, any history of surgery of knee and elite level sports persons. All the measurements were taken only once by a single investigator.

RESULTS: Data analyzed by using the SPSS and Mean, Standard deviation of the Q-angle was determined. The average Mean Q angle and S.D for 100 subjects who participated in the study was 13 ± 2.16.

CONCLUSIONS: The present study showed normal baseline reference value of Q angle values in asymptomatic young adults. These findings are important because they provide objective evidence that Q-angle measurement will be considered as an important tool in the knee assessment and plan of physical therapy treatment. Therefore Q-angle is also a suitable clinical measure which can be used to assess the patello femoral pain syndrome and other patellar instabilities.
EVALUATION OF CHRONIC POSTOPERATIVE PAIN AFTER HERNIA REPAIR USING SELF FIXATING MESH FOR MANAGEMENT OF PRIMARY INGUINAL HERNIA IN ADULT MALES

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OBJECTIVES: To evaluate the self gripping mesh in treating primary inguinal hernia in adult males for chronic post operative pain.

METHODS: Forty patients underwent open Lichtenstein hernia repair with self fixating mesh. Post operative pain as measured by a modified visual analogue scale (VAS) was the primary study endpoint. It was measured at day 0 (base line) and at 3, 6, and 12 months (at rest and with movement). Recurrence, time to regain domestic and work activities, early post operative complications as well as operative time were also documented. Surgeons’ opinion as regard handling and fixation quality was also reported.

RESULTS: No recurrence was encountered in this study. Visual Analog Scale showed very low results. At rest, it was 1.93±1.67 after 6 months and 0.43±0.68 after 12 months. With movement, Visual Analog Scale was 2.25±1.79 after 6 months and 0.53±0.68 after 12 months. The operative time was 41.35 ± 7.22 minutes. Time to return to domestic activity was 1.40± 0.55 days while time to return to work activity was 6.23± 1.44 days. The surgeons opinion showed improvement as regards handling and fixation quality with time.

CONCLUSIONS: Upto one year follow up, the use of self fixating semi absorbable mesh has good results as regards chronic post operative pain and recurrence.
EFFECTS OF BARIATRIC SURGERY ON METABOLIC VARIABLES IN SAUDI OBESE SUBJECTS IN ASEER PROVINCE OF KINGDOM OF SAUDI ARABIA

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OBJECTIVES: To evaluate: 1. the inflammatory biomarkers, serum electrolytes, serum copper and zinc levels; 2. Hepatic enzymes and cardiovascular risk factors (CVRF); 3. Oxidative stress and status of antioxidant enzymes; 4. Levels of thyroid-stimulating hormone (TSH), throxine (T4) in the healthy controls and in obese patients before and after one year of Bariatric Surgery-induced weight loss.

METHODS: This study was carried out in the Abha Private Hospital of Asir Province of Kingdom of Saudi Arabia, between January 2012 and January 2013. Fifty normal (BMI=22 - 25 kg/m²) healthy controls, 10 men and 40 women, aged between 25 and 40 years, and fifty obese (BMI=45-50 kg/m²) patients, 10 men 40 women, aged between 20 and 45 years participated in this study. Blood samples were taken from healthy controls and in obese patients before and after 1 year of Bariatric Surgery-induced weight loss. Systemic blood cell counts were determined by Beckman coulter Unicel analyzer, serum hepatic enzymes, CVRF, oxidative stress, antioxidant enzymes, serum sodium, potassium, copper and zinc levels were determined by spectrophotometric procedures, TSH and T4 were analyzed by Siemens Immunoassay System

RESULTS: Effects of Obesity: In obese subjects compared with healthy controls inflammatory biomarkers were significantly (p<0.05) increased. Hepatic enzymes were significantly (p<0.05) raised. Serum total bilirubin was significantly (p<0.05) decreased. Concentration of serum total cholesterol (TC), triacylglycerides (TG), low density lipoprotein cholesterol (LDLc) and fasting blood glucose (FBG) were significantly (p<0.05) increased, but HDL-cholesterol (HDLc) was significantly depleted (p<0.05). Serum urea and creatinine contents were significantly (p<0.05) decreased. Serum malondialdehyde, stress an index, was significantly (p<0.001) elevated and significantly (p<0.001) lower levels of total antioxidant status, superoxide dismutase (Cu-Zn SOD), glutathione peroxidase (GPx), glutathione –S-transferase (GST), glucose-6-phosphate dehydrogenase (G6PDH), and vitamin C. Effects of Bariatric Surgery: After 1 year of Bariatric surgery in obese subjects, profound reduction in body weight (-32%) and BMI (-29%) was measured. Deranged metabolic variables exhibited improvements approaching toward normality. Inflammatory biomarkers in blood and hepatic enzymes in serum were significantly (p<0.001) decreased. Serum albumin and total bilirubin concentration were significantly increased (p<0.001). Serum TC, TG, LDLc, FBG and HDLc exhibited significant (p<0.05) reductions reversal toward normality. Serum sodium, potassium, copper, zinc, and SH levels were significantly (p<0.001) decreased. Serum MDA levels were significantly (p<0.001) decreased with remarkable (p<0.001) increase in total antioxidant status, Cu-Zn SOD, GPx, GST, G6PDH, enzymes and vitamin C.

CONCLUSIONS: This study unraveled that obesity deranges whole metabolism in the tissues. It is speculative these perturbations were associated with a decrease in protective antioxidants in the body and enhancement of oxidative stress. Bariatric surgery, by contrast, resulted in sustained weight loss. The abnormal metabolism, oxidative stress and total antioxidant status in tissues was improved following one year of Bariatric surgery-induced weight loss.
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OBJECTIVES: To test and tryout the QMP tool with level three medical biochemistry students in the College of Medicine, King Khalid University during semesters I and II (2013/2014). In particular the tool will be tested to provide analysis on the final theory exam and the items used in assessment according to medical education guidelines.

METHODS: QMP was used to prepare the question papers for two exams conducted for level three medical biochemistry students in the medical college during semesters I and II (2013/2014) wherein 291 students (193 boys and 98 girls) took the exam. Questionmark® Perception® provides a collaborative authoring environment for learning professionals, educators, test publishers and subject matter experts (SMEs) to create surveys, quizzes, tests and exams. QMP authoring manager was used to collect the required questions for the exam. The offline version of software was used in order to make sure questions remain on a private personal computer until such a time when they are needed for the exam online. It also allows the staff exam committee of the department to discuss each question in detail and amend an edit questions as deemed appropriate. The type of questions for the final exams was multiple choices with one best answer. Selected questions were then used to create the assessment and randomized both in terms of the stem and the choices at the time of delivery. The exams were conducted in two different campuses, simultaneously and were totally online. QMP reporter was used to provide statistical analysis of the questions and student performance.

RESULTS: The exam went smoothly without any problem. All the students completed the online exam well in time. No offline, on-paper examinations were required. The online electronic exams represented 35% of the total grade. The overall results (continuous assessments and final practical and theory exams) for semester I and II were as follows: Grade A, 24 (8.2%), Grade B (21.0%), Grade C, 100 (34.4%), Grade D, 84 (28.9%), Grade F, 22 (7.6%). QMP questions statistics and item analysis for the two online exams were very similar with most of the questions being moderately difficult and Cronbach’s Alpha reliability index of 0.88.

CONCLUSIONS: Question mark perception (QMP) is a very helpful tool in conducting exam at university level, either online or offline. It also provides excellent analysis of the questions, students’ performance and reliability of the assessments. Although our data does not fall within the preview of the recommended discrimination index still we feel that these exams being an assessment of the level of understanding by undergraduate students and not a competitive exam, QMP is a valid and advantageous tool for assessment in medical college.
**OBJECTIVES:** The aim of this study was to investigate the effect of valsartan on the cardiac oxidative stress as well as apoptosis and anti-apoptosis gene expression in doxorubicin induced cardiomyopathy rats.

**METHODS:** One hundred and twenty rats were randomly assigned into six groups each of twenty: (1) control, (2) control and valsartan, (3) doxorubicin treated, (4) valsartan followed by doxorubicin, (5) valsartan with doxorubicin and (6) doxorubicin followed by valsartan. The end of treatment, surface ECG, isolated heart and tissue oxidative stress and lipid peroxidation experiments were carried out on the hearts of all groups. Also, the gene expression of Bcl-2, Bax as well as SMP-30 gene were assayed by real time PCR.

**RESULTS:** Doxorubicin alone or after valsartan inhibited the cardiac contractile parameters significantly by about 50% as compared with the contractile groups with significant increase in TBARS. Also, doxorubicin upregulated the expression of both SMP-30 gene and Bax gene expression and downregulated the expression of Bcl-2. Valsartan with doxorubicin or after it increased the TAC protein significantly with significant reduction in the TBRS. Also it preserved the contractile parameters, with significant increase in the expression of Bcl-2 and significant reduction in bax and SMP-30 gene.

**CONCLUSIONS:** Doxorubicin could induce cardiomyopathy through increased cardiac apoptosis and oxidative stress. Valsartan opposes the apoptotic effect of doxorubicin and improves the cardiac dysfunction produced by doxorubicin.
LDH into the culture medium. Pretreatment of cultures with the dopamine receptor antagonist sulpiride and protein synthesis inhibitor cycloheximide significantly inhibited the protective effect of pergolide and not PPX on dopaminergic neurons indicating the role of receptor stimulation and synthesis of de novo proteins in neuroprotection afforded by pergolide.

CONCLUSIONS: Both pergolide and PPX protect dopaminergic neurons against FeSO4-induced cell death in primary mesencephalic cell culture. Dopamine receptor stimulation and de novo protein synthesis mediate the neuroprotective effect of pergolide, not of PPX.

COMPARISON BETWEEN THE EFFECTS OF EXTRACT FROM THE LEAVES OF MEDICINAL PLANT "OLEA EUROPEA" (ZAITHOON) AND CIMETIDINE ON THE VOLUME AND ACIDITY OF STIMULATED GASTRIC SECRETION IN FASTING RABBITS

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OBJECTIVES: To find out a safe & cost effective drug from medicinal plant for the treatment of peptic ulcer & related diseases and to compare its effects with Cimetidine.

METHODS: Thirty rabbits of local breed were selected for the present study. Healthy animals of both sexes weighing 1-1.5 kg were used in the study. All the animals were kept fasting for 48 hours with free availability of water before they were subjected to experimental procedure. The animals were divided into 3 groups each containing 10 animals. Group A was Carbachol treated, Group B was Olea europea+ Carbachol treated and Group C was Cimetidine + Carbachol treated. The operative procedure was the one adopted by Vischer et al.(1954). Animals were anaesthetized with ether, abdomen was opened and pylorus was ligated with silk suture. Then abdominal wall was closed with suture clamps and intraperitoneal (I.P) injection of Carbachol 600µg/Kg body weight were administered to group A, 500mg/ Kg body weight of Olea europea to group B and 2.5 mg/ Kg body weight of Cimetidine to group C, followed by Carbachol 600 µg/ Kg body weight after 15 minutes to group B and C. The rabbits were deprived of water for four hours after administration of drugs. Then the rabbits were sacrificed, thorax and abdomen were opened, oesophagus was ligated and the stomach was removed quickly. The contents of the stomach were collected. The volume of gastric juice was measured. Then the contents were centrifuged, filtered and subjected to titration for estimation of free and total acidity by the method described by Varley (1962). One ml of centrifuged and filtered gastric secretion was titrated against 0.1 N NaOH using Topfer's reagent as an indicator for determination of free acidity and 1% phenolphthalein for combined acidity. The sum of the two titrations was total acidity. The data was analyzed statistically using student “t” test.

RESULTS: The volume, free acidity and total acidity of gastric secretion in group A (Carbachol treated group) was 28.7±0.650ml, 6.39±0.408 m.Eq./dl and 7.64±0.408
m.Eq./dl respectively. The volume, free and total acidity in group B was 16.5±0.763 ml, 3.15±0.375 m.Eq./dl and 4.02±0.353 m.Eq./dl respectively. Similarly the volume, free and total acidity in group C, was 13.12±0.326ml, 2.04±0.150m.Eq./dl and 3.21±0.312 m.Eq./dl respectively. These reductions noticed in all parameters were found to be highly significant when compared with Carbachol (P<0.001). When we compared the mean values of volume, free and total acidity for extract and Cimetidine, it was observed that these differences in all the three parameters between groups B and C were found to be significant(P<0.05).

CONCLUSIONS: The extract can be used effectively and safely in the treatment of peptic ulcer & other hyper acidity conditions after evaluation of its effect in human.

INTRODUCTION: RNA-seq technologies have provided significant insight into the transcription networks of mycobacteria. However, such studies provide no definitive information on the translation landscape.

METHODS: We use a combination of high throughput transcriptome and proteome-profiling approaches to more rigorously understand protein expression in two mycobacterial species. RNA-seq and Ribo-seq in Mycobacterium smegmatis, and transcription start site (TSS) mapping and N-terminal peptide mass spectrometry in Mycobacterium tuberculosis, provide complementary, empirical datasets to examine the congruence of transcription and translation in the Mycobacterium genus.

RESULTS: We find that one-quarter of mycobacterial transcripts are leaderless, lacking a 5' UTR and Shine-Dalgarno ribosome-binding site. Our data indicate that leaderless translation is a major feature of mycobacterial genomes and is comparably robust to leadered initiation. Using translational reporters to systematically probe the cis-sequence requirements of leaderless translation initiation in mycobacteria, we find that an ATG or GTG at the mRNA 5' end is both necessary and sufficient. This criterion, together with our ribosome occupancy data, permit identification of hundreds of small, unannotated proteins encoded at the 5' ends of transcripts. The conservation of small proteins in both mycobacterial species tested, suggests that some play important roles in mycobacterial physiology. Our translational-reporter system further indicates that mycobacterial leadered translation initiation requires a Shine-Dalgarno site in the 5' UTR and that ATG, GTG, TTG, and ATT codons can robustly initiate translation.
CONCLUSIONS: Our combined approaches provide the first comprehensive view of mycobacterial gene structures and their non-canonical mechanisms of protein expression.

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OBJECTIVES: The present study aimed to evaluate the impact of designed nursing intervention program on lifestyle modification of the patients with chronic hepatitis C.

METHODS: Quasi-experimental design was used in this study to evaluate the effect of nursing intervention on modified the lifestyle of patients with chronic hepatitis C. The study was conducted in El-Nasser outpatient hospital clinic, which patients come to follow up. Convenient sample was composed of 90 patients with hepatitis C were selected from out patients follow up clinic of El-Nasser hospital. The researchers designed a self-administered which including: Socio-demographic data consisting of questions related to the age, sex, residence, education, marital status, family size, occupation, and occupation loss due to disease, frequency of hospitalizations, etc. Pre-posttest questionnaire was applied with several questions to assess patients’ knowledge about viral hepatitis and lifestyle habits and self care practices.

RESULTS: The results found that significantly higher proportion of life styles control from pre to post intervention in all lifestyle items as sleep control (0.22 ± 2.3 to 4.1 ± 0.5), exercise control (from 0.92 ± 1.8 to 7.0 ± 0.4), treatment control (0.92 ± 1.9 to 3.2 ± 0.6), diet control (2.2 ± 1.1 to 7.5 ± 0.3), excretion (0.40 ± 2.1 to 6.2 ± 0.5), with highly statistically significant in all items between before and after program (P =0.001). The results also indicate that statistically significant relation was detected between patients’ good level of life style and all their socio-economic after intervention (p=0.01).
CONCLUSIONS: this study concluded that the nursing intervention had an improving effect on lifestyle change of patients with chronic hepatitis C. So it recommended that action plan must be taken to educate caregivers and those individuals newly diagnosed with Hepatitis C about the complexities associated with this disease.

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OBJECTIVES: The purpose of this study was to determine the prevalence of malocclusion in deciduous dentition of Saudi children as occlusal characteristics of the primary dentition vary among populations and ethnic groups.

METHODS: The subjects of this cross-sectional study are the patients attending the Department of Pediatric Dentistry at College of Dentistry King Khalid University, Abha. Seven hundred (700) children below 6 years were included with all deciduous teeth present and were divided into 4 age groups as 2-3 years (44), 3-4 years (323), 4-5 years (227) and 5-6 years (106) shown in Table 1. The clinical examinations were performed by experienced clinicians in those children who fulfilled the required inclusion criteria. The examiners received training and were calibrated against each other prior to this study. Collected data was statistically analyzed and expressed in percentage. The study was approved by ‘Research and ethics committee of the Department of Pediatric Dentistry at College of Dentistry King Khalid University, Abha’.

RESULTS: The prevalence of malocclusion in a group of Saudi school children were as follows: Alignment: 80.7% of children had spaced dentition and 13.3% and 6% of children had closed dentition. Edge to edge relation was present in 1.5% (11), openbite in 0.3% (2) of children and anterior crossbite in 0.7% (5) of them.

CONCLUSIONS: Occlusal development in the primary dentition is the early recognition of incipient occlusal disharmonies which may necessitate orthodontic intervention. Occlusion constitutes one of the important objectives of pedodontic treatment whether it is preventive, interceptive, or corrective. In our study concluded that spaced dentition was seen more in males when compared to...
females depicting that the frequency of developing malocclusion was more in females than in males. One important aspect of occlusal development in the primary dentition is the early recognition of incipient occlusal disharmonies which may necessitate orthodontic intervention.

OBJECTIVES: This study aimed to assess factors affecting compliance of diabetic patients toward therapeutic management and providing guidelines for the patients to improve their compliance toward therapeutic management.

METHODS: A descriptive correlation design was used to conduct this study. The subjects sample of 80 patients with type 2 diabetes mellitus, (23 males and 57 females). The study was carried out at outpatient clinic in Ain Shams University Hospital. Tools for data collection included a questionnaire interview sheet, to assess the factors affecting their compliance to treatment regimens of diabetic patients.

RESULTS: The study results revealed that, most of diabetic patients had unsatisfactory knowledge scores about the disease and its treatment regimen. But despite of their poor knowledge, they had inadequate compliance scores. There were a highly statistical significant positive correlation between knowledge and compliance of the study sample.

CONCLUSIONS: The study concluded that most type-2 diabetic patients in the study setting have inadequate compliance and unsatisfactory knowledge regarding management of DM. Compliance is influenced by patients’ income, disease characteristics, perceived barriers, as well as knowledge. The low compliance is reflected in high prevalence of obesity, DM complications, and high blood sugar levels.
COPING STRATEGIES AND STRESSORS IN PATIENTS WITH HEMODIALYSIS

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OBJECTIVES: To study the stress related to undergoing hemodialysis (HD) and the relationship between these stresses and the coping strategies used by patients with end-stage renal disease.

METHODS: This study was conducted at hemodialysis unit affiliated to Abha Hospital on 50 patients a structured questionnaire consisting of three major sections. The first section covered demographic data as well as the characteristics of dialysis treatment (length of time receiving dialysis, major reasons for the dialysis, Hem dialysis Stressor Scale and the Jalowiec Coping Scale. The kind of coping strategies they use also depends on their personal experience, social support system, individual beliefs, and availability of resources. The most common coping methods used by patients with ESRD include “accepting the situation because very little could be done,” followed by “telling oneself not to worry because everything would work out fine” and “telling oneself that the problem was really not that important.”

RESULTS: The results show that the duration of Hemodialysis was negatively associated with stress from fluid and food restriction and role ambiguity. However, the duration of Hemodialysis was positively correlated with coping strategies. The highest sources of stress were physical symptoms and blood vessel problem. Most of patients tended to use emotion-oriented coping (avoidance or isolated thoughts) coping strategies in response to daily activity-related stressors. However, patients receiving Hemodialysis were less likely to cope by seeking support from professionals.

CONCLUSIONS: The results of present study conclude that most of patients use emotional oriented coping methods in managing daily living stressors. The results revealed that there is a need of psychosocial counseling intervention at dialysis unit for enhancing patient coping strategies.

EFFECT OF AN EDUCATIONAL ASTHMA MANAGEMENT PROGRAM DURING PREGNANCY ON WOMAN’S SELF-CARE

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OBJECTIVES: This study looked at enhancing pregnant woman’s self-care of asthma.

METHODS: Design: randomized control trial. Setting: antenatal clinics at Kasr El Aini maternity hospital- Cairo University. Sample: total of three hundred primiparapregnant woman, read and write, suffer from acute asthma and without any other medical disorders are randomly included in the present study. Tool: antenatal mother classes, guidelines brochures, asthma control/monitoring scale and partographs. Procedure: asthma control was enhanced by ensuring access to education about asthma, asthma triggers, routine booking appointment, the skills necessary to manage it such as self-monitoring, correct use of inhalers, and following a long term plan for handling signs of worsening asthma.

RESULTS: Pregnant woman who received the educational program demonstrated careful self-monitoring (80.0% vs. 65.0%), early seeking help and medical follow-up (75.0% Vs. 69.0 %), proper usage of the described medications (88.0% Vs. 77.0%). In addition, there is no statistically significant difference between both groups related to their gestational age on labor, mode of delivery, newborn Apgar and weight.

CONCLUSIONS: An educational guidelines program for asthma management may enhance pregnant woman’s self-care and decrease the cost of medical management in consequence of decrease the incidence of complications.
CLINICAL EVALUATION THE EFFECT OF LOCAL DELIVERED MINOCYCLINE HYDROCHLORIDE (ARESTIN)® IN THE TREATMENT OF LOCALIZED CHRONIC PERIODONTITIS AMONG QAT CHEWERS PATIENTS

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OBJECTIVES: The present study was performed to evaluate the clinical effect of local delivered minocycline hydrochloride (ARESTIN)® in the treatment of localized chronic periodontitis among qat chewers patients.

METHODS: Fifteen subjects patients were selected from out patients clinics, collage of dentistry, King Khalid University. They were suffering from moderate to severe localized chronic periodontitis, with clear medical history were included in the study. Subject was classified as non qat chewing side and qat chewing side and they regularly qat chewers more than 5 years. Subjects with no history of any periodontal treatment 6 months prior to the study and with no systemic diseases. The test sites received minocycline after root debridement in one side and only root planning in the other side. The clinical parameters included the plaque index, gingival index probing pocket depths, and attachment levels were evaluated at the baseline, and after 4, 6 and 12 weeks.

RESULTS: The table and figure of plaque Index, gingival index, Periodontal pocket depth, and clinical attachment level showed improvement in both treated sides after 4, 6 and 12 weeks intervals, when compared to the baseline data. There were slight differences in all clinical parameters in the side treated with scaling and root planning plus minocycline Hydrochloride (ARESTIN)® 12 weeks when compared to the side treated with scaling and root planning alone.

CONCLUSIONS: the sub gingival application of minocycline microspheres (ARESTIN)® is more efficacious than SRP alone in the treatment of localized periodontitis patients.

SURGICAL SAFETY CHECKLIST: OUTCOME AND CHALLENGES OF SIX YEARS IMPLEMENTATION IN TWO HEALTHCARE FACILITIES

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OBJECTIVES: To assess the impact of implementing the surgical safety checklist on patient safety outcome in two hospitals: Aseer Central and Abha Private Hospitals, Abha, Kingdom of Saudi Arabia, to estimate the level of compliance with implementation, and the incidence of non-compliance and its reasons.

METHODS: Retrospective study over 6 years (01.07.2008 – 30.06.2014) following an educational and training program of staff in the implementation of the World Health Organization (WHO) surgical safety checklist utilizing audiovisual means. Incidents of non-compliance were treated as sentinel events and were audited by the process of root cause analysis (RCA).

RESULTS: There were 62860 elective surgical cases in both hospitals in which the surgical safety checklist was utilized over the 6-year period of the study. Average compliance rate was 98.7%. Reasons of non-compliance included staff shortage, turn-out of staff, excessive workload, communication problems, and presence of existing process.

CONCLUSIONS: The implementation of the safety checklist was a substantial leap in efforts towards surgical patients’ safety. It has been compulsorily embedded in the healthcare system in many countries round the world. Such progress in healthcare improvement can be accomplished with the commitment of the operating suite staff by spending few moments checking facts and establishing an environment of teamwork for the benefit of the surgical patient.
POTENTIAL HEPATOTOXIC EFFECTS OF HAWTHORN (Crataegus aronia syn. Azarolus (L)) WHOLE PLANT AQUEOUS EXTRACT IN WISTAR RATS

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OBJECTIVES: However Hawthorn (Crataegus spp.) products are nowadays widely used as an alternative medicine for hypertension, angina and arrhythmia, there are no reports investigated whether Hawthorn products have potential hepatotoxic effect or not. Accordingly, the current study was carried out to track any hepatotoxic effect of the shrub Hawthorn in Wistar rats.

METHODS: Twenty-eight adult male Wistar rats aged 6 months and weighed 200 – 250 g were obtained from the animal house of College of Medicine, King Khalid University, Abha, Saudi Arabia. Rats were randomly divided into four groups (seven rats each). The first group served as control and received distilled water by special gavage needle. Groups 2 to 4 received daily 500, 1000 and 2000 mg/kg b.w. of the aqueous extract of Crataegus aronia by gastric gavage. After 7 days of treatment, rats were sacrificed, and blood samples and liver specimens were obtained for biochemical analysis and morphological examination, respectively.

RESULTS: The aqueous extract of Crataegus aronia showed normal serum alanine (ALT) and aspartate (AST) aminotransferases activities, and normal liver histology. At ultrastructural level, there were milder cellular changes at the dose of 2000 mg/kg b.w. of the aqueous extract of Crataegus aronia compared to control rats. These changes include irregular shaped hepatic nuclei, formation of lipid droplets and increased lysosomal activity. There were also glycogen deposits, increasing the number of peroxisomes and dilatation of bile canaliculi with loss of microvilli.

CONCLUSIONS: The aqueous extract of Crataegus aronia seems to be well-tolerated by rats. There are no histological changes by light microscopy however milder hepatocellular changes are seen with transmission electron microscopy.
The gastrocnemius muscle of STZ-induced diabetic rats was decreased significantly which it was increased significantly by endurance exercise when compared to diabetic rats. Also our results showed significant decrease in mRNA of PGC-1a, ERRa, Mitofusin2, GLUT4, CPT-1, citrate synthase in gastrocnemius muscles STZ-induced diabetic rats in comparison to normal control rats. Diet restriction caused insignificant increase in PGC-1a, ERRa, mitofusin2, GLUT4, CPT-1. Endurance exercise in STZ-induced diabetic rats caused significant increased in gene expression of PGC-1a, ERRa, mitofusin2, GLUT4, CPT-1 and insignificant increased in citrate synthase. Combining effect of Diet restriction and endurance training caused insignificant increased in PGC-1a, Mitofusin2, GLUT4, CPT-1, citrate synthase in comparison to exercise alone.

CONCLUSIONS: Diet restriction and/or endurance training in diabetic rats induces mitochondrial bioenergetics in skeletal muscle, and enhances mitochondrial function and improve glucose metabolism by skeletal muscle possibly due to increase PGC-1a and ERRa. Therefore represent a key strategy in the prevention and treatment of type 1 diabetes and in those at increased risk for this disorder.

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OBJECTIVES: In spite of the multiple potential therapeutic modalities for the management of refractory chronic immune thrombocytopenia (ITP), still there are no solid protocols in this respect. The presented case fulfills the recent international consensus of refractory chronic ITP. It has lastly showed sustained partial response to therapy with the thrombopoietin-receptor agonist (Tpo-RA), romiplostim or Nplate.

METHODS: The present article reports the sequence of events for a case that fulfills the recent definition of the refractory chronic immune thrombocytopenia (refractory chronic ITP) from here first presentation at Aseer Central Hospital (ACH) to here sustained partial response to thrombopoietin-receptor agonist-romiplostim. Romiplostim or Nplate is one of the new therapeutic agents for patients with ITP that promote platelet synthesis, rather than minimize platelet breakdown that have been effectively maintained safe margin of platelet counts in patients titled as refractory chronic ITP.

RESULTS: Sustained partial response refractory chronic ITP to thrombopoietin-receptor agonist-romiplostim.

CONCLUSIONS: In spite of the outstanding many research on pathogenesis of ITP we are still in great need for more declaration of pathogenesis which will facilitate better patient-specific approaches to diagnosis and management. Further recent studies on immunopathogenesis of refractory chronic ITP are still going on, the principal target is to provide more alternative therapeutic modalities. It is still insisted that consideration of accessory spleen in the differential diagnosis of refractory ITP or relapse after splenectomy is advisable.
EFFECTIVENESS OF APPLE CIDER VINEGAR IN MANAGEMENT OF OBESITY: A RANDOMIZED CONTROLLED TRIAL

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OBJECTIVES: To explore the effectiveness of daily intake of apple cider vinegar (300mg, tablets 3 times daily) on lowering body mass index (BMI) among obese subjects.

METHODS: A total of 100 obese subjects were randomized into either an intervention group (who received 300mg apple cider vinegar tablets three times daily in addition to their prescribed routine management protocol) or a control group (who received their prescribed routine management protocol only). The researchers met all participants in both groups once monthly to measure their body weight, inquire about any health complaints related to their followed protocol, and to provide health education. In addition, each participant in the intervention group was given his/her monthly doses of apple cider vinegar tables (90 tablets).

RESULTS: By the start of the study, there was no significant difference between participants in the invention group and those in the control group regarding their BMI (33.72±6.24 kg/m² and 33.60±5.00 kg/m², respectively, p=0.916). However, by the end of the study observation period (5 months), there was a significantly lower mean BMI among the intervention group than the control group (29.38±5.70 kg/m² and 31.59±4.68 kg/m², respectively, p=0.037), which was not sex- or age-dependent. Reported side effects were in the form of mild heart burn (12%) or transient diarrhea (10%).

CONCLUSIONS: Apple cider vinegar can be safely prescribed for a short-term body weight reduction. Further studies are needed to explore the mechanism by which its intake is associated with weight loss and to identify its long-term side effects.

STUDENT’S PERCEPTION ON OBJECTIVE STRUCTURED PRACTICAL EXAMINATION IN COLLEGE OF APPLIED MEDICAL SCIENCES

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OBJECTIVES: The objective of this study is to evaluate student’s response for OSPE in College of Applied Medical Sciences Khamis Mushaiyat and to correlate responses of the students from three different levels.

METHODS: It is institutional based cross sectional study. The responses were collected by using self-administered questionnaire based on Likert scale. Student’s feedback for OSPE was assessed from 79 students of 3 different levels (level 3, 6 & 7). The questionnaire was divided into three parts; structure/format of examination, conduct of examination and evaluation of the examination. The perception of students were statistically analyzed and then compared among different levels.

RESULTS: OSPE stations were properly organized 58 (74.4%), OSPE eliminates factor of luck 40 (52.1%), time allocation was appropriate 39 (49.4%) and assessment was fair 54 (48.6%). Students from all three level agrees and showed significant association (p<0.001) that OSPE eliminates factor of luck among them. There was also a significant association (p<0.001) between students of different level for the presence of examiner on each station facilitated their exam.

CONCLUSIONS: It can be concluded from the study that OSPE is an effective/ unbiased and authentic mode of assessment and can be extended to other level of students.
**P13**

**INSULIN AND EXERCISE PROTECT FROM DIABETES-INDUCED OSTEOARTHRITIS IN RATS**

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**OBJECTIVES:** To determine whether insulin and exercise can also ameliorate diabetes-induced osteoarthritis condition.

**METHODS:** Using basic histological staining, we studied the morphological changes in the articular cartilage of diabetic rats with swim exercise and insulin treatment, comparing it to non diabetic rats (control). In addition, the blood levels of the proinflammatory cytokines, IL-6 and TNF-α that are known to be elevated in osteoarthritis were measured in these rats using enzyme-linked immunosorbent assay (ELISA).

**RESULTS:** Compared to the control group, induction of type I diabetes mellitus (T1DM) in Wistar rats caused a profound damage to the knee joint cartilage as demonstrated by disrupted lacunae, condensing of the matrix and enlargement of the chondrocytes and its nucleus with the disappearance of both, the euchromatin staining and the discrete cytoplasmic vacuoles. Furthermore, there was an increase in IL-6 (four-fold) and TNF-α (one-fold) in the T1DM group that was significantly (p<0.01) reduced in the diabetic groups with insulin and exercise treatments. More interestingly, insulin and exercise resolved diabetes-induced cartilage damage by restoring the chondrocytes spherical intact nucleus and vaculated cytoplasms with regular lacunae.

**CONCLUSIONS:** We have generated a reliable model of diabetes-induced osteoarthritis in rats and found that combining insulin with swim exercise were able to ameliorate both articular cartilage damage and inflammatory biomarkers in T1DM rats to a level comparable to control rats.

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**THE EFFICACY OF THE CALCIMIMETIC CINACALCET IN CONTROLLING MODERATE TO SEVERE SECONDARY HYPERPARATHYROIDISM IN HEMODIALYSIS PATIENTS**

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**OBJECTIVES:** To investigate the efficacy and tolerance of a low dose of the calcimimetic agent cinacalcet on patients with long term hemodialysis having moderate to severe secondary hyperparathyroidism.

**METHODS:** Twenty-five adult male patients on hemodialysis for more than 3 years were included in the study. All had moderate to severe secondary hyperparathyroidism serum intact parathyroid hormone (iPTH >50 pmol/L) resistant to conventional treatment. We used the targets of Chronic Kidney Disease: Outcomes Quality Initiative (K/DOQI) clinical guidelines as optimal target of serum iPTH, calcium and phosphate. Patients were administered cinacalcet as a single oral daily dose of 30 mg and were followed up for 6 months.

**RESULTS:** Cinacalcet treatment resulted in significant reduction in serum iPTH levels. 36% of the patients attained the recommended serum iPTH levels, 40% achieved significant reduction of their serum iPTH levels, but 24% showed no favorable response (Figure 1). Only one patient dropped out because of severe gastrointestinal symptoms. While Figure 2 showed the percentage reduction of serum intact parathyroid hormone (iPTH) in the different response groups after 6 months of cinacalcet therapy with complete response (about 75%), partial response (about 38%) and with no response (about 6%).

**CONCLUSIONS:** This study suggests that the treatment of chronic kidney disease patients, having moderate to severe secondary hyperparathyroidism, with low dose cinacalcet, is effective and well tolerated. Further studies are needed, with variations in the dose, to formulate clinical practice guidelines that establish the balance between the risks and benefits of this drug.
EFFECT OF BLENDED LEARNING APPROACH ON STUDENT NURSES’ ATTITUDES AND ACADEMIC ACHIEVEMENT

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OBJECTIVES: To examine the effect of blended learning approach on student nurses’ attitudes and academic achievement in Medical Surgical Nursing course compared to traditional teaching method modules.

METHODS: The sample consisted of 62 female students their age range from 19 to 20 years at 5th., level recruited from 5th., level in faculty of nursing, King Khalid University Tools: 3 tools used to collect data for the study: 1. student attitude scale toward blended learning approach 2. A Constructed Motivational Scale and The Achievement Test, they are developed by the researchers.

RESULTS: The study findings revealed that, the Study Group subjects (blended learning Group ) had higher Mean Of attitude Subscales And Total Scores, achievement test Scores, and Mean Of Motivational Subscales And Total Scores than Control Group (traditional), in addition, there were statistically significant differences were found between the two groups in relation to previously mentioned variables.

CONCLUSIONS: This study recommended an educational program for academic staff for teaching using blended learning approach.

STUDY OF THE IMPACT OF DNA METHYLATION ON THE EXPRESSION OF CELL CYCLE REGULATORS IN BLADDER CARCINOMA

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OBJECTIVES: To evaluate the DNA methylation status and expression of different cell cycle regulators during multistage carcinogenesis of rat urinary bladder.

METHODS: This experimental study included 64 male (fisher 344) rats (6 weeks old). They were divided into experimental group (n= 48) and control group (n= 16). Urinary bladder carcinogenesis was induced in rats of the experimental group by N-Ethyl N-Butane Nitrosamine (EBN) in their drinking water for 10 weeks. At the 10th, 14th, 20th, and 24th week from the time of induction of carcinogenesis, rats were sacrificed. Pathological and normal urinary bladder tissue specimens from experimental and control rats were excised and divided into 3 samples to be used for histopathological analysis, the expression of both cyclin D1 and E, and for methylation changes.

RESULTS: The results of our study showed that the expression of both cyclin D1 and cyclin E were very highly significantly increased in hyperplasia, dysplasia, and carcinoma compared with the control group. The overexpression of both cyclin D1 and cyclin E may be indicative that cyclin D1 and cyclin E may cooperate in driving proliferation in early stages of tumor progression. The results of our study, also, revealed a gradual and important methylation changes during urinary bladder carcinogenesis. In hyperplasia stage there was a moderate change in DNA methylation in the form of moderate hypomethylation in both internal and external cytosine. However, in dysplasia samples the pattern was more markedly different as compared to the control samples. As regards the carcinoma stage, a large amount of methylation change was present.
CONCLUSIONS: Multiple stepwise progressive changes in methylation patterns are observed during EBN induced rat urinary bladder carcinogenesis. These methylation changes occur early during oncogenesis and are detectable prior to the appearance of clinically evident tumor. Overexpression of cyclin D1 and cyclin E is an important and frequent molecular event, at relatively early stage during the development of urinary bladder cancer. Both cyclin D1 and E could become useful biomarkers to identify precancerous lesions in the early stage of urinary bladder cancer.

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OBJECTIVES: To assess the prevalence and determinants of khat chewing, and explore its social, economic, work impacts and examine its relation with road traffic accidents (RTA) among professional drivers in Jazan region.

METHODS: A cross-sectional study was conducted on 215 drivers recruited from transport stations in Jazan region by random cluster sampling. Participants were interviewed personally and responded to specially designed anonymous questionnaire.

RESULTS: About 47.4% of drivers were currently khat chewers. In logistic regression, the independent predictors of khat chewing were being Saudi, divorced or widowed, worked for less than 4 hours/day, and non-seatbelt users. Khat chewing was associated with impaired working ability in the day next to khat chewing session in 47.1% of them and about one third reported family conflicts because of khat chewing. Khat chewing was significantly associated with shorter working hours; higher average number of significant RTA and higher frequency of traffic rules violation. Inadequate drivers’ knowledge about its hazards was detected.

CONCLUSIONS: Khat chewing habit affected almost half of the professional drivers in Jazan area, Saudi Arabia. Khat chewing was associated with impaired working ability and productivity, family conflicts and violation of traffic rules.
PARENTS' KNOWLEDGE AND PRACTICE ON THEIR CHILDREN'S FIRST DENTAL VISIT IN SOUTHERN SAUDI ARABIA

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OBJECTIVES: To assess the parents' Knowledge and practice on their children's first dental visit, importance of primary teeth and the need for behavior modification during their first dental visit.

METHODS: A cross-sectional questionnaire survey was carried out to assess the knowledge and practice of Saudi parents about the timing of first dental visit for their children. The study was carried out between March and September 2014 in Abha, Khamis Mushayt, Najran and Jazan.

RESULTS: Out of 1850 questionnaires, 1628 were returned with a response rate of 88%. Of these 1628 questionnaires, 222 were excluded as the questionnaire was not completely filled. Hence only 1442 questionnaires were analyzed. Regarding timing of first dental visit, 45.63% of parents reported it should be at 2-3 years of age, while 35.79% felt it should be from 4-6 years. While only 11.65% felt that first dental visit should be when first primary tooth erupts. 59.91% were not in favor of first dental visit to be before first year of birthday, while 40.08% were in favor of Dental visit to be before age 1. 49.23% of parents reported that since the child's teeth are not fully erupted they didn't visit the dentist before age 1.

CONCLUSIONS: The study reveals there is real dearth in knowledge among Saudi parents regarding the timing of Child's first dental visit. The commonest reason for visiting dentist was found to be pain and dental caries. A very few number of parents prefer behavior modification in First dental visit. This indicates that there is a real need to improve the parents knowledge on First dental visit timing, its importance and periodic checkup.

CANTHARIDIN POISONING IN TWO MONTH OLD INFANT: CASE REPORT

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OBJECTIVES: To report a case of systemic cantharidin toxicity in 2 month old infant secondary to cutaneous cantharidin toxicity which was managed conservatively and discharged in good health after 6 days.

CASE REPORT: A 2-month old Saudi girl previously healthy presented with one attack of generalized tonic clonic convolution for 5 minutes. Convulsion was associated with high grader fever and irritability which started 2 days before. The girl had 3 attacks of coffee ground vomitious and 3 to 5 attacks of watery diarrhea with mucus but no blood. Her oral intake was poor. Her urine was concentrated and the color was dark yellow. There was no history of skin rash or contact with sick patient. She has no history of previous seizures or other medical problems. She is developmentally normal. Family history is noncontributory. The family lives in Khamis Mushayt city (Aseer region) in the Southwest of Saudi Arabia. On arrival to pediatric emergency, she was in hypovolomic shock with Glasgow coma scale of 11/15. Capillary refill time was more 3 seconds. She was hypotensive with blood pressure of 70/32 mm Hg. Pulse rate was 160/minutes. Respiratory rate was 54/minutes and temperature was 39°C. She was maintaining normal oxygen saturation at room air. The examination of the heart, respiratory system, gastrointestinal system was normal. She had hypertonia and hyper-reflexia for both upper and lower limbs with no apparent skin rash initially. Immediately, resuscitation was started with normal saline boluses and she showed response after the second bolus of normal saline inforns of improving her blood pressure but she continued to be irritable. Her initial complete blood count showed leukocytosis (29000/cc), normal hemoglobin level (12.3 mg/dl) and normal platelets count (238000/cc). Blood urea nitrogen was 161 mg/dl and creatinine was 2.3 mg/dl.

PARENTS' KNOWLEDGE AND PRACTICE ON THEIR CHILDREN'S FIRST DENTAL VISIT IN SOUTHERN SAUDI ARABIA

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OBJECTIVES: To assess the parents' Knowledge and practice on their children's first dental visit, importance of primary teeth and the need for behavior modification during their first dental visit.

METHODS: A cross-sectional questionnaire survey was carried out to assess the knowledge and practice of Saudi parents about the timing of first dental visit for their children. The study was carried out between March and September 2014 in Abha, Khamis Mushayt, Najran and Jazan.

RESULTS: Out of 1850 questionnaires, 1628 were returned with a response rate of 88%. Of these 1628 questionnaires, 222 were excluded as the questionnaire was not completely filled. Hence only 1442 questionnaires were analyzed. Regarding timing of first dental visit, 45.63% of parents reported it should be at 2-3 years of age, while 35.79% felt it should be from 4-6 years. While only 11.65% felt that first dental visit should be when first primary tooth erupts. 59.91% were not in favor of first dental visit to be before first year of birthday, while 40.08% were in favor of Dental visit to be before age 1. 49.23% of parents reported that since the child's teeth are not fully erupted they didn’t visit the dentist before age 1.

CONCLUSIONS: The study reveals there is real dearth in knowledge among Saudi parents regarding the timing of Child's first dental visit. The commonest reason for visiting dentist was found to be pain and dental caries. A very few number of parents prefer behavior modification in First dental visit. This indicates that there is a real need to improve the parents knowledge on First dental visit timing, its importance and periodic checkup.

CANTHARIDIN POISONING IN TWO MONTH OLD INFANT: CASE REPORT

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Her serum sodium was 156 mmol/l, potassium 4.8 mmol/l, calcium was 6.7mg/dl and serum ammonia was 157 mmol/l. Alkaline phosphatase was 351 u/l, serum alanine aminotransferase (ALT) was 275 u/l, Serum aspartate aminotransferase (AST) was 279 u/l and lactate dehydrogenase was 1215. Total bilirubin was 1.8 mg/dl. Her blood gases showed severe metabolic acidosis, PH:7.0, PCO2:27 and HCO3:10. Blood gases were normalized after 24 hours. After stabilization she was shifted to pediatric ICU for close monitoring and management. Full sepsis screening was done including cerebrospinal fluid analysis and culture and was started on broad spectrum antibiotics. In the second day, her hemoglobin dropped to 7.2 mg/dl and here urine analysis showed numerous RBCs with 2 plus proteins and he was transfused with packed RBCs. During physical examination on day 2, a oval shape raised redness was observed on the lower part of the neck on the right side (Figure 1). It was about 1.5 by 1.0 cm in size in the middle of the redness there were 2 small ulcers with dirty sloughing base and ragged edges. The family did not notice this redness before but they mentioned that a beetle was seen in the clothes of the girl near to the site of redness earlier before the girl got sick. The family was asked if they can bring the beetle, which was brought in an empty water bottle (Figure 2). From here the beetle was identified to be Hycleus maculiventris (the family Meloidae) and the girl sickness was explained. The girl was continued on supportive care and she was improving with time and discharged on day 6 with completely normal clinical status and laboratory results. The sepsis screening which was done and came to be normal.

CONCLUSIONS: Cantharidin toxicity is difficult to diagnose and cases can be missed especially in young infants in the absence of history about contact with the insect. Awareness about such kind of presentation and high index of suspicion is highly needed.

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OBJECTIVES: The present study was planned to investigate the effect of folic acid administration on renal function, inflammatory cytokines and associated histological changes in renal tissue. In addition, we examined the possible protective effect of curcumin on a rat model of folic acid (FA)-induced acute kidney injury (AKI).

METHODS: Rats were divided into 3 groups; (FA) folic acid treated group rats were exposed to FA (250 mg/kg) i.p. injection as a single dose. (FA+CUR) folic acid plus curcumin treatment group rats were given curcumin (200 mg/kg) administered by gavage daily for 11 days prior to folic acid (250 mg/kg) i.p injection and the last dose of curcumin was given one day after folic acid injection. Control group are given distilled water by gavage daily for 12 days and saline i.p. as a single dose on the 11th day. Animals were scarified one day following i.p. injection in all groups. Deterioration of kidney function was detected by blood urea and creatinine levels. Inflammatory response was monitored with blood levels of interleukin-6 (IL-6), interleukin-10 (IL-10), and tumor necrosis factor (TNF-α).

RESULTS: We found that FA treatment significantly raised blood urea, creatinine, IL-6, IL-10, TNF-α levels and caused marked structural changes of the kidney. CUR treatment for 12 days significantly reduced blood urea, IL-6, IL-10, TNF-α, and protected partially against renal structural damage.

CONCLUSIONS: These findings suggest that curcumin is a promising protective agent against AKI induced by FA.
RELIABILITY OF INFANIB AMONG NORMAL AND HIGH RISK TERM NEONATES: A CROSS SECTIONAL STUDY

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OBJECTIVES: To establish intra-rater and inter-rater reliability of Infant Neurological International Battery between normal and high risk term neonates

METHODS: In this cross sectional study a convenience sample of term neonates was included. Rater one administered INFANIB on all the neonates and the assessments were being videotaped. The videos were anonymized and were viewed by two independent raters so they were blinded from knowing the groups from which each neonate belonged to. Rater three viewed 50 videos randomly for assessment of intra-rater agreement after one month. For intra- as well as inter-rater reliability, two-way mixed, absolute agreement and single measure ICC was calculated.

RESULTS: 112 neonates (normal=56; high risk=56) with mean (SD) gestational age of 39.1 (1.1) and 38.9 (1.1) weeks respectively on mean post natal day of 4 were assessed. For intra-rater agreement the ICC was 0.42 (0.05-0.7) for normal neonates and 0.33 (0-0.63) for high risk neonates. For inter-rater agreement the ICC was 0.1 (0-0.26) for normal neonates and 0.28 (0.05-0.5) for high risk neonates.

CONCLUSIONS: The intra-rater and inter-rater reliability of INFANIB proved to be poor between thernormal and high risk term neonates. Formal training should be given to any profession or healthworkers who are planning to use INFANIB as a screening tool for early neurodevelopmental delays among neonates to improve the inter-rater agreement.

RELAPSED SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) PATIENT MAY BE RELATED TO ASSOCIATED UNDERLYING DISEASE: CASTLEMAN’S DISEASE (CD); CASE PRESENTATION & REVIEW OF LITERATURE

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OBJECTIVES: Although the association of Castleman’s disease (CD) with autoimmune connective tissue disease is rare, few cases had been reported with Systemic Lupus Erythematosus, Rheumatoid Arthritis, Myasthenia gravis and Sjogren Syndrome. We present a case that fulfills the ACR criteria for SLE that responded to medical therapy but when flared with generalized lymphadenopathy proved to have CD.

METHODS: SLE is an autoimmune disorder which affects mainly young adult females and characterized by well known clinical criteria with diversity of presentatrions. Many organs can be affected in SLE like renal, musculoskeletal, central nervous system and others with apparent constitutional symptoms. Lymph node enlargement is another common manifestation in active lupus. We present a case that fulfills the clinical, radiological & laboratory criteria of ACR for SLE. The patient responded to medical therapy but when flared with generalized lymphadenopathy, the detailed investigations proved the association with CD.

RESULTS: Lymph node biopsy from left axillary node revealed giant lymphoid follicles with germinal centre showing hyalinized vessels. Immunophenotyping with CD20, CD3, CD23, CD21, CD10, BCL-6 was consistent with CD hyaline vascular type (HVCID).

CONCLUSIONS: The association of the CD with SLE is rare but because of the complexity of SLE and its broad differential diagnoses, those SLE patients who showed atypical presentation or those with progressive adenopathy, another underlying disease should be considered and one of them is Castleman’s disease.
ULTRASTRUCTURAL STUDY AND IMMUNOHISTOCHEMICAL DETECTION OF HEAT SHOCK PROTEIN AND GENE EXPRESSION OF LEUKOTRIENEHYDROLASE AND 5 LIPOOXYGENASE IN PSORIATIC SKIN BEFORE AND AFTER PUVA IN COMPARISON TO NORMAL SKIN: CASE CONTROLE STUDY

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OBJECTIVES: To investigate the role of Langerhan's and inflammatory dendritic cells and the expression of heat shock protein (HSP-70) and Gene expression of Leukotriene A4(LTA4) hydrolase and 5 lipooxygenase (5LO) in psoriatic skin before and after PUVA in comparison to normal skin.

METHODS: Forty two patients with chronic plaque psoriasis not received active local or systemic treatment 4 weeks prior to PUVA and 20 healthy subjects were included in this study. From each patients punch skinbiopsies were obtained before and after PUVA treatment. Detection of Langerhan's (LCs) and inflammatory dendritic cells(IDCs) was done by electron microscope and HSP-70 expression was detected by immunohistochemistry with mouse monoclonal antibodyNCL-HSP70 and with Westring blotting. Gene expression of LTA4 hydrolase and 5LO in skin was done using RNA extraction and RT-PCR.

RESULTS: Before PUVA IDCs exhibited numerous coated vesicles suggested a high endocytotic activity and after PUVA these cells were absent or less evident with decrease of endovesicles. LCs before treatment was more active than that after treatment. HSP70 showed significant increase before PUVA as compared after PUVA and controls. However there was significant increase after PUVA as compared to control. The expression of LTA4 hydrolase and 5LO were decreased in patients after PUVA.

CONCLUSIONS: HSP70 has non specific but with apregnostic value in psoriatic patients and may have a potential role in cytoprotection and autoimmunity. Downregulation of gene expression of LTA4 hydrolase and 5-LO after PUVA may explain its phototherapeutic effect and may be used as potential targets for molecular therapeutic agents in treatment of psoriasis.
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**INFLUENCE OF PERSONALITY ON TOOTH SHADE SELECTION**

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**OBJECTIVES:** To evaluate the influence of personality on the tooth selection capability.

**METHODS:** The two metal ceramic discs were fabricated and reference shade was determined by the easy-shade spectrophotometer and the personalities were identified by Myers-Briggs Type Indicator (MBTI) questionnaire. The volunteers visually identified the shade of metal ceramic discs under controlled light source. The mean color difference between the visual and spectrophotometer values was determined. The obtained data was statistically analyzed with Kruskal-wallis and post-hoc comparison test to understand the difference between the groups.

**RESULTS:** The Groups performed better in colour selection were ISTJ, ENFJ, ENTJ and ESTJ. The Kruskal-Wallis test showed lower mean rank for group ENTJ, ENFJ, and ISTJ. The Post-hoc specific comparison test showed statically significant difference between ISTJ with ISTP, ISFP, ESFJ and INTJ.

**CONCLUSIONS:** Within the limitation of the study, it was concluded that there was a statistically significant difference between the colour selection performances between different personalities.

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**SELF-PERCEPTION OF PERSONAL ORAL HEALTH IN SAUDI POPULATION - A SOCIAL MEDIA APPROACH**

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**OBJECTIVES:** To assess self-perceived personal oral health status among the Saudi Arabia population who could be accessed through social media.

**METHODS:** A pre-tested questionnaire for completion online was designed to assess self-perceived oral health via 13 items in 4 domains with weighted scores from 1–3. The questionnaire was uploaded to the Internet and the link to it was made available through popular social networking sites in Saudi Arabia.

**RESULTS:** With respondents recruited by snowball methods a total of 4618 people (57.2% males, 42.8% females) completed the questionnaire. The total mean score for the participants was 23.0 (SD 5.0) (scale range 13–39). Self-perceived oral health was rated as poor by 24.2% of respondents, average by 50.6% and good by 25.2%. Educational level, age and region but not sex were significantly associated with self-perceived oral health.

**CONCLUSIONS:** The results of our survey suggest a large proportion of the Saudi Arabian population with access to the Internet perceived their oral health as poor to average. We recommend effective use of social media to spread oral health awareness in the country. SPOH status is a potentially important outcome measure, especially for policy-makers, and better understanding of it may be used to improve oral health services and national oral health.
OBJECTIVES: To investigate the proper apicectomy procedural sequence to obtain the best apical seal in realseal/epiphany SE obturated root canals.

METHODS: Sixty recently extracted single canalled mandibular premolars were used in this study, their crowns were removed and their root canals subjected to step-back preparation and obturation using laterally condensed realseal points and epiphany SE sealer. Roots were divided randomly into six equal groups (N=10) according to the obturation and apicectomy procedural sequence. G.1: roots were immediately apicectomized after obturation followed by Compoglass F retrograde filling, G.2: roots were apicectomized after twenty four hours from obturation without retrograde filling. G.3: roots were immediately apicectomized after obturation followed by light curing of the sealer at the apical cut end, G.4: roots were immediately apicectomized after obturation without apical light curing of the sealer, G.5: roots were apicectomized first followed by root canal obturation and apical light curing of the sealer & G.6: roots were apicectomized first followed by root canal obturation and then rubbing and light curing a thin layer of the Realseal SE adhesive sealer on the resected root surface followed by apical light curing. The apicectomized roots were subjected to dye leakage and longitudinal sectioning testing.

RESULTS: Statistical analysis of the results revealed that G.1 showed the best apical seal but not significantly better than G.6. Also G.3 & G.5 showed a comparable apical seal that was better than both G.2 & G.4.

CONCLUSIONS: From the results of the present study we can claim that the best procedural sequence for apicectomy to gain the best apical seal is to do apical root resection either immediately after root canal obturation followed by retrograde filling with Compoglass or to do root canal obturation immediately after apical root resection followed by rubbing and curing a thin adhesive sealer layer on the apicectomized root surface.

EFFECT OF APICECTOMY PROCEDURAL SEQUENCE ON THE APICAL SEAL OF REALSEAL/EPIPHANY SE OBTURATED ROOT CANALS

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OBJECTIVES: To explain binding specificity of SLE autoantibodies with recombinant alpha interferon 2b (hrIFN α-2b), commercially available interferon (IFN α-2b) and the gene (cIFN α-2b) encoding this interferon. Utilization of anti-hrIFN α-2b antibodies as a probe for estimation of interferon α-2b concentration in the serum of SLE patients was also aim to explain.

METHODS: Binding specificities of autoantibodies from the sera of SLE patients and controls subjects was studied by direct binding, inhibition ELISA and quantitative precipitin titration. Inhibition ELISA was also used to estimate interferon α-2b concentration in the serum of SLE patients.

RESULTS: hrIFN α-2b showed higher binding with naturally occurring SLE autoantibodies as compared to IFN α-2b (p<0.05) or cIFN α-2b gene (p<0.001). The relative affinity of SLE autoantibodies for hrIFN α-2b, IFN α-2b and cIFN α-2b gene was in the order of 1.13 x 10^-7, 1.38 x 10^-6 and 1.22 x 10^-6 respectively. Significantly higher IFN α-2b concentration in the sera of SLE patients was found as compared to the healthy controls (p<0.001)

CONCLUSIONS: hrIFN α-2b shown to have unique epitopes that would explain possible antigenic role of hrIFN α-2b in the generation of SLE autoantibodies. Anti-hrIFN α-2b antibodies have been shown to represent an alternative immunological probe for the estimation of interferon alpha 2b in SLE patient's sera.

HIGH BINDING OF SLE AUTOANTIBODIES TO RECOMBINANT INTERFERON

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OBJECTIVES: To explain binding specificity of SLE autoantibodies with recombinant alpha interferon 2b (hrIFN α-2b), commercially available interferon (IFN α-2b) and the gene (cIFN α-2b) encoding this interferon. Utilization of anti-hrIFN α-2b antibodies as a probe for estimation of interferon α-2b concentration in the serum of SLE patients was also aim to explain.

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The Influence of Titanium Surface-Induced Macrophage Secretion on Osteoblast Gene Expression

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**OBJECTIVES:** Titanium surface properties modulate osseointegration through altering the behaviour of cells involved in the healing process, such as macrophages and osteoblasts. Macrophages arrive to the implant site well ahead of osteoblasts. They release various proteins that influence other cells including osteoblasts. The objective of this study was to investigate the influence of titanium surface-induced macrophage secretion on TGFβ/BMP signaling pathway genes in osteoblast in a co-culture model.

**METHODS:** 84 genes related to the TGFβ/BMP signaling pathway were assessed in a human osteoblasts cell-line (hFOB) that were co-cultured, without direct contact, with macrophages derived from human monocytes cell-line (THP-1) that were exposed to three different surfaces: polished (SMO), micro-rough sand-blasted and acid-etched (SLA), and hydrophilic SLA (SLActive), for 1, 3 and 7 days.

**RESULTS:** The effect of titanium surface micro-roughness (SLA compared to SMO): At day one the gene expression of FKBP1B, HIPK2 and STAT1 was significantly up-regulated whereas TGFβR2 was significantly down-regulated. By the third day BMPER was significantly up-regulated while PDGFB was significantly down-regulated. By the seventh day only the PLAU gene expression was significantly down-regulated. The effect of titanium surface hydrophilicity (SLActive compared to SLA): By the first day no significant change was observed. By the third day only the BMPER gene expression was significantly down-regulated. By the seventh day there was a significant up-regulation of the expression of 8 genes (AMHR2, BMP3, BMP5, GSC, LEFTY1, TGFBR2, TGFBR3 and TSC22D1).

**CONCLUSIONS:** This study showed that the macrophage response to different titanium surfaces influences osteoblast behaviour in a surface-specific manner. This indicates that macrophage-associated inflammation is a potential target for manipulation by engineered titanium implant surfaces in order to enhance osseointegration.

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A Comparison of Student Performance in Multiple-Choice and Modified Long Essay Questions in the MBBS Pediatrics Examination at the College of Medicine, King Khalid, KSA

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**OBJECTIVES:** To investigate the relation between the students’ scores in MCQs and LEQs of the summative assessment in pediatrics at the College of medicine KKU.

**METHODS:** This is a quantitative, observational retrospective study enrolling 50 students who completed the final MBBS examination in pediatrics in 2015. The medical students’ scores in MCQs and LEQs in the final MBBS pediatrics examination were collected. KKU College of medicine was established in 1980. The pediatrics course is taught in the 5th and 6th years with final examination in pediatrics as perquisite for graduation. The total mark is 45 and the grading system adopts letter grading as follows: A for score above 40 marks, B from 35-39, C 30-34, D 25-29 and F which is failure below 25.

**RESULTS:** 52% of the student scored A and B, 46% scored C and 2% scored D and nobody scored F, the overall means of the percentage scores in MCQs, LEQ and total are 75.03%, 79.99% and 76.68% respectively. The standard deviation (SD) for MCQs, LEQ and total are 0.0753, 0.0763 and 0.0559 respectively without any significant differences in means and SD. The correlation between MCQs and LEQs over all is -1.73%. The correlation between MCQs and LEQs for those who score A and B is 7.38% that could indicate there is weak +ve CR but significant between them where p value 0.017, 0.0144 and 0.001 respectively (table 3). Obtaining A and B grade have mean good achievement in MCQ as well as in LEQ. For those who score C inverse correlation was observed between MCQs and LEQ CR of -74.38%, For F and D no enough data for analysis.
CONCLUSIONS: The main finding of this study was the weakly negative correlation between students’ performance on MCQs and MEQs. The means good performance in MCQs is not necessary correlated with good performance in LEQs. This negative correlation between performance in MCQs and LEQs are not in agreement with Oyebola et al. and Moqattash et al. who report positive correlation in the performance of their students. This difference and disagreement could be explained by the difficulties in avoiding bias and subjectivity in setting and marking essay questions. The presence of the positive correlation in performance between LEQ and MCQ scores for those who achieved As and Bs students could be easily explained since more intelligent students logically can perform well in any examination format as suggested by Anbar in performance between MCQs and LEQs which agree with other authorities.

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OBJECTIVES: XLF plays a crucial role in nonhomologous end joining (NHEJ) of DNA double strand breaks. It is noteworthy that it has also been established that SNPs of DNA repair genes are not only associated with or increase the risk of certain types of cancer; however they could also affect the patient response to anticancer agents. This promoted us to screen a human population sample to look for polymorphisms of XLF.

METHODS: Standard PCR was carried out to amplify the seven coding exons of XLF from genomic DNA, 94 samples (50% males and 50% females) collected by the West Midlands Regional Genetics Unit, using designed XLF primers. Direct sequencing of the PCR products was performed using the ABI Prism Big Dye Terminator DNA Sequencing kit version 3.1 (Applied Biosystem). The DNA sequencing reactions were sequenced on ABI-3730 DNA capillary sequencer (Applied Bioystems). The results were analysed and printed out using the ABI sequencing analysis v5.2 software. Bioedit alignment software was used to analyse sequence changes in comparison to the wild sequence published in the ensembl database.

RESULTS: Two intronic SNPs already published in the NCBI dbsNP were characterized in the studied sample. The first (rs2030452) is C→G change, 29bp upstream the beginning of the 2nd coding exon of XLF, as shown in Figure 3.3A. The second (rs7585742) is G→C change, 59bp upstream the beginning of the 3rd coding exon of XLF. Moreover, two novel noncoding SNPs were identified in the studied sample. The first is an intronic SNP (G→A change), 28 bp downstream the end of the 6th coding sequence. The second is a novel SNP (T→C change) in the three prime untranslated region (3’ UTR), 39bp downstream the end of this the 7th coding exon.
CONCLUSIONS: Although no XLF coding SNPs were identified in the studied population sample, it is noteworthy that the intronic SNPs, despite being noncoding, might be helpful for gene mapping. They can also influence the control of gene activation and its rate of transcription. In addition, they may affect splicing and the stability of the gene transcripts. Future researches to identify the role of these novel intronic SNPs in the regulation of XLF function assess their functional roles in NHEJ DNA repair machinery.

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OBJECTIVES: To investigate the role of AT1a receptors on cardiac function, and exercise tolerance in response to aerobic exercise using AT1a receptor knockout (AT1aKO) mice.

METHODS: Method: An exercise wheel system was used for the exercise paradigm. Male (C57BL/6) wild type (WT) and AT1aKO mice were randomly assigned to four groups: WT control (n=6), WT exercise (WTEX, n=8), AT1a KO (KO) control (n=5), and AT1a KO exercise (KOEX, n=8). Mice were forced to run at a velocity of 8 m/min for 1 hour, 3d/wk, for 7 wks. Echocardiography was conducted at baseline and 7 wks. Lactate was measured during several exercise sessions. Electrolytes and cardiac histology were assessed post-sacrifice.

RESULTS: Results showed a significant increase in ejection fraction (EF%) in KOEX (72.5±1.5%) vs. WTEX and KO control (63.4±1.2% and 63.2±2.2%, respectively). Mitral valve assessment revealed a marked decrease in E-wave velocity in WTEX compared to WT control at baseline (74±1.9 vs. 90±3.5 cm/s, p<0.05), while E/A wave ratio remained unchanged. Cardiomyocyte diameter was larger in WTEX compared to KOEX (29.5±0.7 vs. 25.8±0.5 μm, p<0.05). Heart to body weight ratio was significantly higher in WTEX vs. KOEX (5.5±0.2 vs. 4.3±0.1 mg/g, p<0.001). Masson’s Trichrome staining revealed higher collagen levels in WTEX myocardium compared to WT control and KOEX (16% vs. 5%). Blood lactate accumulation values were greater at 5 and 60 min of wheel running in WTEX (4.2±0.4 and 3.9±0.5 mmol/l) vs. KOEX (3.0±0.2 and 2.9±0.2 mmol/l). A basic metabolic panel revealed higher [HCO3-] in KOEX vs. WTEX (21.7±0.6 vs. 13.7±1.8 mmol/l). Cl- was lower in KOEX compared to WTEX (102.5±2.5 vs. 113.5±2.7 mmol/l, p<0.05).
CONCLUSIONS: AT1aKO mice exhibited improved cardiac performance without myocardium hypertrophy, greater exercise endurance, and enhanced metabolic activity in response to chronic exercise. These results suggest that the AT1a receptor is an important mediator of exercise induced cardiac dysfunction and acid-base imbalance during exercise training.

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OBJECTIVES: To study the histopathological features of various lesions in nephrectomy specimens; To study the frequency of different pathological lesions, particularly Renal Cell Carcinoma (RCC) in nephrectomy specimens.

METHODS: This is a one year study conducted in histopathology section of Department of Pathology, Aseer Central Hospital from May 2014 to May 2015. Nephrectomy specimens were sent to histopathology section in 10% formalin. Gross examination was done and representative sections were taken and later were embedded in paraffin. Light microscopy technique was used for diagnosis. Special stains and immunohistochemistry were applied where ever required.

RESULTS: A total of 16 nephrectomy specimens were received out of which 9 (56.25%) were females and 7 (43.7%) were males. The peak age of incidence was between 41 to 50 years (4 cases) followed by 21 to 30 years and 51 to 60 years (3 cases each).

CONCLUSIONS: Our study has revealed that the renal tumors are the commonest lesions in nephrectomy specimens and renal cell carcinoma was the predominant malignant tumor of kidney. However, chronic pyelonephritis is also an important factor especially in females. Rare tumors like primary renal lymphoma have been seen.
EARLY AND ADVANCED ALLERGIC FUNGAL RHINOSISUSITIS

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OBJECTIVES: To know the early cases of allergic fungal rhinosinusitis in geographic areas.

METHODS: A prospective study. 28 cases were diagnosed as allergic fungal rhinosinusitis from March 2010 to March 2012 in South of Saudi Arabia (Jazan). All cases treated by surgery and local corticosteroid and local amphotresin B.

RESULTS: Clinical examination and CT scan and high IgE were diagnostic in most cases. IgE dropped after treatment. No intracranial extension cases but there were 3 cases with erosion of medial orbital wall.

CONCLUSIONS: Allergic fungal rhino sinusitis is common in certain geographic areas more than others like Jazan and Tohama. So all cases with sinonasal polyposis should expect allergic fungal sinusitis in these areas.

HISTOPATHOLOGICAL PATTERN OF CENTRAL NERVOUS SYSTEM LESIONS IN ASEER CENTRAL HOSPITAL (ACH)

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OBJECTIVES: To study the frequency of different pathological lesions in nervous system and to study the histopathological features of various lesions in above mentioned specimens.

METHODS: This is an 18 months study conducted in histopathology section of Department of laboratory medicine, ACH from January 2014 to May 2015 on tissue specimens from nervous system. Light microscopy was used for making a diagnosis. Special stains and immunohistochemistry were used for confirmation of diagnosis.

RESULTS: A total of 42 cases were received out of which 22 were males and 20 were females. The age ranged from 5 years to 70 years with highest incidence found between 41 to 50 years (11 cases) followed by 51-60 years (9 cases). The most common site of involvement was posterior fossa followed by frontoparietal region. There were 34 tumors and 8 benign inflammatory lesions (Infections-4, Brain Abscess-2, Cysts-2). Majority of tumors were of meningothelial origin (Meningiomas-14) followed by tumors of neurothelial tissue -12 (Astrocytic tumors-6, oligoastrocytic-1, ependymal-2, choroid plexus-1, neuronal/ mixed neuronal-1, embryonal-1). The remaining belonged to sellar region-4 (Craniopharyngioma-2, Pituitary adenoma-2), hematopoetic origin-2 (Lymphoma), nerves-1 (Schwannoma), others-1 (Hemangioblastoma).

CONCLUSIONS: Our study has revealed that tumors are the commonest lesions in specimens of nervous system received in our hospital and meningiomas were the predominant tumor showing predilection for females. This was followed by tumors of neurothelial origin. Infections like tuberculosis and toxoplasmosis were also seen in our study.
MYCOPLASMA PNEUMONIAE INFECTION WITH BRONCHIAL ASTHMA IN CHILDREN

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OBJECTIVES: To investigate the role of Mycoplasma pneumonia infection and its relationship of bronchial asthma in children.

METHODS: This study is a case-control study in which in which 45 patients with diagnosis of respiratory tract infections and bronchial asthma and 45 normal healthy patients who had no history of respiratory tract infections were included as cases and control group respectively. Presence of IgM antibodies to Mycoplasma pneumoniae was assessed by an ELISA technique in both groups.

RESULTS: In the case group, 4 (9%) cases of 45 children were positive about anti-mycoplasma antibodies and all patients in control groups were negative. All case group patients had symptoms of acute pneumonia with bronchial asthma (100%) including all the four cases diagnosed with Mycoplasma pneumoniae infection. The Relative Risk (RR) for the occurrence of mycoplasma infection was estimated to be 9 with a p value of 0.1366. On applying to tests of significance of isolation from Mycolplasma pneumoniae among cases and controls groups, the result was found not to be statistically significant.

CONCLUSIONS: Infection with M pneumoniae does not have a direct role in the pathogenicity of bronchial asthma in most children. Despite of this, further studies are required to evaluate the risk of the co-infection with other pathogens and to establish a correlation between Mycoplasma pneumoniae and the onset of asthma among children.

CLOSURE OF CHRONIC NON HEALING ANKLE ULCER WITH LOW LEVEL LASER THERAPY IN A PATIENT PRESENTING WITH THALASSEMIA INTERMEDIA: CASE REPORT

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OBJECTIVES: The possible effect of low-level laser therapy (LLLT) was explored in the form of light emitting diodes on a chronic non-healing wound of 6 months duration in an 18-year old male patient suffering from thalassemia intermedia.

METHODS: LLLT in the form of light emitting diodes (LEDs) was commenced with dosage of 17.3 J/cm2 for 8 min for 2 weeks duration followed by proliferative dosage of 8.65-4.33 J/cm2 for 4 min from 3rd week to 6th week for 2 min along with antibiotics vancomycin (15 mg/kg), and a combination of amoxicillin and clavulanic acid (1 g). The frequency of the irradiation was kept to once a day for 3 days/week until 6 weeks, and the dose was 17.3 J/cm2 for 8 min for 2 weeks duration followed by proliferative dosage of 8.65-4.33 J/cm2 for 4 min from 3rd week to 6th week for 2 min.

RESULTS: Pressure ulcer scale for healing score decreased from 3rd week to 10th with a score of 0 on 6th week with complete closure of the wound. There was no recurrence seen at the site of post-irradiation on 6 months of follow-up.

CONCLUSIONS: Irradiation with LED is a novel method of treatment of chronic wound in thalassemia intermedia, as irradiation with LED can result in complete healing.
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OBJECTIVES: Paucity of knowledge about the mechanisms of chemoresistance are major stumbling blocks in the management of advanced prostate cancer (CaP), and progression of tumors to the state of chemoresistance. Therefore, identification of one or more critical molecules involved in conferring chemoresistance would be an important advancement in developing new ways to prevent or treat this deadly form of the disease.

METHODS: Semi-quantitative analysis of BMI1 was performed in prostatic tissues of human CaP patients, and cell-based models representing normal and different CaP phenotypes by employing Immunohistochemistry, Immunoblotting and MTT assays, Luciferase reporter activity, and Cell growth assays. Downstream targets of BMI1 like Bcl2, P16, and Cyclin D1 were also analyzed by performing the same methods as discussed above.

RESULTS: The study provides the compelling evidence that BMI1 polycomb group protein and a stem cell factor (i) Progressively increase during the progression of CaP disease in humans and (ii) plays a crucial role in determining the fate of prostate tumors vis-a`-vis chemotherapy. We also found that BMI1 regulates (i) activity of TCF4 transcriptional factor and (ii) binding of TCF4 to the promoter region of anti-apoptotic BCL2 gene. Notably, an increased TCF4 occupancy on BCL2 gene was observed in prostatic tissues exhibiting high BMI1 levels.

CONCLUSIONS: BMI1 protein could be exploited as a potential molecular target in therapeutic strategy to combat chemoresistant cancer, and BMI1-specific interventions may provide opportunities to enhance the efficacy of chemotherapy in a large group of prostate cancer patients.

STEM CELL PROTEIN BMI1 AS A PROMISING TARGET IN PROSTATE CANCER CHEMORESISTANCE: IMPLICATIONS IN PROSTATE CANCER THERAPY

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OBJECTIVES: Doxorubicin is an actual antineoplastic drug; however, its clinical value is limited by its cardiotoxicity. Valsartan is an angiotensin II receptor blockers that used in treatment of hypertension and hear failure.So, the aim of this study was to investigate the effect of valsartan on the cardiac oxidative stress as well as apoptosis and anti-apoptosis gene expression in doxorubicin induced cardiomyopathy rats.

METHODS: One hundred and twenty rats were randomly assigned into six groups each of twenty: (1)control, (2) control and valsartan, (3) doxorubicin treated, (4) valsartan followed by doxorubicin, (5) valsartan with doxorubicin and (6) doxorubicin followed by valsartan. the end of treatment, surface ECG, isolated heart and tissue oxidative stress and lipid peroxidation experiments were carried out on the hearts of all groups. Also, the gene expression of Bcl-2, Bax as well as SMP-30 gene were assayed by real time PCR.

RESULTS: Doxorubicin alone or after valsartan inhibited the cardiac contractile parameters significantly by about 50 % as compared with the contractile groups with significant increase in TBARS. Also, doxorubicin upregulated the expression of both SMP-30 gene and Bax gene expression and downregulated the expression of Bcl-2 expression. Valsartan with doxorubicin or after it increased the TAC protein significantly with significant reduction in the TBRS. Also it preserved the contractile parameters, with significant increase in the expression of Bcl-2 and significant reduction in bax and SMP-30 gene.

CONCLUSIONS: Doxorubicin could induce cardiomyopathy through increased cardiac apoptosis and oxidative stress. Valsartan opposes the apoptotic effect of doxorubicin and improves the cardiac dysfunction produced by doxorubicin.

EFFECTS ANGIOTENSIN II RECEPTOR BLOCKERS (VALSARTAN) ON CARDIAC APOPTOSIS AND OXIDATIVE STRESS OF DOXORUBICIN INDUCED CARDIOMYOPATHY RATS

EFFECTS ANGIOTENSIN II RECEPTOR BLOCKERS (VALSARTAN) ON CARDIAC APOPTOSIS AND OXIDATIVE STRESS OF DOXORUBICIN INDUCED CARDIOMYOPATHY RATS
A CASE REPORT ON COMMUNITY BASED HEALTH CAMPAIGN IN TEHAMA, (MUHAYEL), ASIR PROVINCE, KINGDOM SAUDI ARABIA

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OBJECTIVES: The Objectives of health campaign were awareness of health, serving community, to identify the need of target area, treatment of acute disorders and to know where to go for further information and treatment of their disorders.

METHODS: After conducting preliminary review of population density in the area of Aseer region (Mohayil) where basics health facilities are lacking, deanship of community services conducted one week duration medical camp. College of Medicine, College of Dentistry, College of Applied Medical Sciences and College of Sharia participated in this campaign. Advertisement in the Aseer region was given in the form of newspaper advertisements, TV ads and posters for free voluntary check-up and treatment.

RESULTS: The result showed that it was very important to organize such campaign for quality of improvement in health care. Our findings suggest that improving health literacy may be an effective strategy to improve health status and to reduce the use of expensive hospital and emergency room services among elderly patients.

CONCLUSIONS: The program was reasonably effective, but more attention should be paid to proactive follow-up interventions and to the selection of participants. These types of program should also be organized for female patients.

CD235α (GLYCOPHORIN-A) IS THE MOST PREDICTIVE VALUE AMONG DIFFERENT CIRCULATING CELLULAR MICROPARTICLES IN THROMBOCYTOPENIC HUMAN IMMUNODEFICIENCY VIRUS TYPE 1

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OBJECTIVES: This study was conducted to assess different cellular microparticles (MPs) in thrombocytopenic human immunodeficiency virus type 1 and their significance as disease activity markers.

METHODS: Thirty-five thrombocytopenic human immunodeficiency diseases and 25 healthy controls with matched age and sex were selected. Viral load was quantitated by COBAS real-time polymerase reaction (PCR) assessment of absolute T-cell subsets CD4, CD8 as a disease progress marker. Platelet MPs, platelet-derived monocyte MPs (CD42a, CD61), erythrocyte MP (CD235a), monocytic MP (CD14), and platelet activity MPs (CD62P, PAC-1) were assessed by multicolor flow cytometry FACSCalibur, while platelet functions were assessed by platelet function analyzer (PFA-100). CD42a, CD61, and platelet activity index represented by PAC-1 and CD62.

RESULTS: P-selectin in HIV-infected patient samples were significantly greater (P < 0.001) than among controls. There was a negative correlation between the proportion of PAC-1 and CD62 P-selectin positive MPs and levels of CD4+ T-cell counts (r = -0.403, P = 0.016; r = -0.438, P = 0.008), respectively. There was a negative correlation between collagen-ADP and levels of CD4+ T-cell counts (r = -0.368, P = 0.03). There was a significant high expression level of CD14 monocyte MPs in patients than controls (P < 0.0001), overexpression of CD235a (P < 0.0001), and no correlation between CD14 and CD64, whereas there was a significant negative correlation with CD235a (r = -0.394, P = 0.019). A linear
regression analysis of CD4 as a disease progression marker with other variable indicators in HIV patients showed that CD235a could be the most sensitive predictor similar to CD4.

CONCLUSIONS: Different cellular MPs and platelets activated in HIV patients could have a role in thrombotic events in these patients.

WITS AND ANB ARE THEY RELATED?

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OBJECTIVES: To find a relationship between ANB and Wits analysis.

METHODS: Cephalometric analysis was performed on 100 patients of Saudi origin attending to Orthodontic clinic at College of Dentistry, King Khalid University, Aseer province. Dolphin Software (Dolphin 3D Imaging System), Version 11.7 was used to perform the analysis. Statistical Analysis was used to find the Correlation between the two.

RESULTS: Significant correlation exist between the two variables. Both wits and ANB is correlated according to the malocclusion present.

CONCLUSIONS: The present study shows that Wits and ANB analysis is an important factor in determining both the dental and skeletal parameters of malocclusion. A further detailed study from different regions of Saudi Arabia needs to be done, with a higher sample size is recommended to know the difference in malocclusion pattern.
EFFECT OF FLUOXETINE AND RESVERATROL ON TESTICULAR FUNCTIONS AND OXIDATIVE STRESS IN A RAT MODEL OF CHRONIC MILD STRESS-INDUCED DEPRESSION

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OBJECTIVES: To investigate the effects of chronic unpredictable mild stress (CUMS) with or without selective serotonin reuptake inhibitor (fluoxetine) and antioxidant (resveratrol) on testicular functions and oxidative stress in rats.

METHODS: Fifty male rats were divided into 2 groups; control and CUMS. CUMS group was further subdivided into 4 subgroups administered water, fluoxetine, resveratrol and both. Sucrose intake, body weight gain, serum corticosterone, serotonin and testosterone levels, sperm count and motility, testicular malondialdehyde, superoxide dismutase (SOD), catalase, glutathione (GSH), and gene expression of steroidogenic acute-regulatory (StAR) protein and cytochrome P450 side chain cleavage (P450scc) enzyme were evaluated.

RESULTS: CUMS decreased sucrose intake, weight gain, anti-oxidants (SOD, catalase, GSH), testosterone, serotonin and decreased anti-oxidants, StAR and cytochrome P450scc gene expression, sperm count and motility, and increased malondialdehyde and corticosterone in stressed rats. Administration of resveratrol increased anti-oxidants, sucrose intake, weight gain, serotonin, StAR and cytochrome P450scc gene expression, sperm count and motility, testosterone, corticosterone in stressed rats with or without fluoxetine.

CONCLUSIONS: CUMS induces testicular dysfunctions and oxidative stress. While treatment of CUMS rats with fluoxetine decreases the depressive behavior, it causes further worsening of testicular dysfunctions and oxidative stress. Administration of resveratrol improves testicular dysfunctions and oxidative stress that are caused by CUMS and further worsened by fluoxetine treatment.
In relation to the obstacles that make physicians reluctant in allowing relatives to be with them during active resuscitation are: 1. 50% increase risk of complaints and litigations, 2. 55% interference with the resuscitation process; 3. 70% misinterpretation of some resuscitation procedures; 4. 100% it will make the space at bedside insufficient during resuscitation. 5. 99% the confidentiality and patient’s privacy might be violated. When we ask about the implementing a hospital policy regarding family presence during resuscitation 80% of the physician agree on the necessity of having a hospital policy that govern and control the family presence.

CONCLUSIONS: Still physician had lots of concern regarding family presence during active resuscitation and invasive procedures, and still there is a lot of room of improvement in physician side related to the need for education about the subject.

INTRODUCTION: Prostate cancer (CaP) has become the most frequently diagnosed, noncutaneous neoplasm and second leading cause of cancer-related deaths among men. It is estimated that in the year 2015, 1,658,370 new cases will be diagnosed and 589,430 men will die from CaP. Thus, developing novel treatment options for CaP has become an important medical need. The use of phytonutrients as anticancer agents has gained considerable importance in recent years. Several studies from various laboratories have suggested that pigmented fruits and vegetables, especially its constituent Delphinidin possess chemopreventive and therapeutic potential against CaP. Tumor necrosis factor (TNF)-related apoptosis-inducing ligand (TRAIL/Apo2L) is a promising candidate for cancer therapy, but, emergence of drug resistance limits its potential use. However, these cells can be sensitized by combination of TRAIL with different chemotherapeutic drugs, indicating that combinatorial approach can be utilized to overcome the resistance of cancer cells to TRAIL. Thus, development of novel strategies to sensitze cancer cells to undergo TRAIL-mediated apoptosis has become an important strategy for effective cancer therapy.

METHODS: Cells were pretreated with Delphinidin (20, 40 or 80 mM) for 24 h; followed by the treatment with TRAIL (100 ng ml−1) for another 24 h. Cells that were used as controls were incubated with the maximum used amount of PBS only. The effect of Delphinidin (20, 40 and 80 mM) and TRAIL (100 ng ml−1) on the viability of cells was determined by 3-(4, 5-dimethylthiazol-2-yl)-2, 5-diphenyltetrazolium bromide (MTT) assay. The annexin V-FLUOS staining kit (Roche Applied Biosciences, Indianapolis, IN, USA) was used for the detection of apoptotic cells. other techniques like protein extraction and western blotting were also used.
RESULTS: Delphinidin sensitizes LNCaP cells to TRAIL-mediated cell growth inhibition and induction of apoptosis. Delphinidin + TRAIL treatment to LNCaP cells resulted in the induction of apoptosis as evident from the morphology of cells as well as from the western blots.

CONCLUSIONS: Here, we report that Delphinidin the major constituent of pigmented fruits and vegetables, sensitizes TRAIL-resistant LNCaP cells to TRAIL-mediated apoptosis through modulation of apoptotic pathway. When combined with Delphinidin, Apo2L/TRAIL exhibited enhanced apoptotic activity in LNCaP cells characterized by major molecular events. These data might have implications for developing new strategies aimed at eliminating prostate cancer cells resistant to TRAIL.

INTRODUCTION: Black widow spiders are one of the most poisonous species to humans knowing that there are more than 30 species of widow spiders, which distributed among the continents, but not all of them are dangerous to humans. The black widow spider’s venom can cause variable clinical manifestations from local damage to very serious conditions including death. In Saudi Arabia there were no much report of black widow spider bites apart from the case series by BUCUR and his group in ALBAHA region.

CASE SERIES: In 2 years period a total of 8 patients were presented to our emergency departments whom were diagnosed to have black widow spider bites based on description by the patients. 100 % (8/8) of the cohort were males; age ranged between 25-58 years. The time between bite and presentation to emergency room was one hour in average ranging between 30 min to 4 hours. All of them (8/8) had one bite only and reported the bite to be at night time in 75% of the times (6/8). In 60% of the occasions a spider is escaped (6/8) and killed in the rest. The average pain score at presentation was 4 /10 ranging between 1-10, majority were less than 5/10. 75% (6/8) occurs during summer season. 100% of the bites were in the lower extremities and almost all progress to have lower back pain (7/8). Systemic distribution of clinical manifestation one had bilateral ptosis, none of them had cardiac or pulmonary complications. Three patients had GI manifestation in form of abdominal cramps and nausea. Local examination was pertinent of redness and mild swelling in two patients only that had lower back and neck muscle spasms. One patient had facial as well as lip swelling suggestive of angioedema, which resolve subsequently. Regarding management among the 5 patients with sever pain the analgesia include variable doses of fentanyl, morphine, pethedineparacetamol and diclofenac with successful control of pain, to notice that cagluconate were given to all of five patients initially with no report of pain relive. In term of out come only one patient had rhabdomyolysis and acute kidney injury, which recovered by day three and discharge. The outcome was great in all of the patient and the average of hospital stay was 2.5 days.
INTRODUCTION: Inhalation of foreign body by no means is an uncommon occurrence. The type of foreign bodies is almost endless and their enumeration is unnecessary. Gustav Killian in 1987 was the first person to remove a foreign body from the lower air passages with a rigid bronchoscope. During the first part of the twentieth century Chevalier Jackson perfected endoscopic techniques and made perioral endoscopy an important part of medical science. Foreign body can only enter the air passage if there is some interference with the normal reflex action, such as sudden inspiration while eating, playing, fright or laughter. In children probably the protective reflex is not as effective as in adults therefore these accidents being more common in children as compared to adults. When the foreign body is first inhaled there is a bout of cough or dyspnea. The absence of a cough strongly rules out the possibility of foreign body having entered the air passage. One of the classifications of thoracic foreign bodies was grouped in three types according to the etiology: Type-I being the ingested/aspirated, Type-II due to trauma/accident and Type-III iatrogenic. Foreign body ingestions or insertions are seen in four broad categories of patients: (a) children, (b) mentally handicapped, (c) adults with unusual sexual behavior, and (d) ‘normal’ adults or children with predisposing factors or injurious situational problems.

CASE REPORT: Here we are reporting a case of a young adult who accidentally aspirated a glass pieces of broken frontal glass of his accidentally crushed car, the aspirated glass pieces were lodged in his tracheobronchial tree and because the patient was deeply comatose and under ventilatory support, the glass pieces were discovered accidentally through our routine brain, cervical and chest CT scan as part of trauma imaging. An emergency fibro-optic bronchoscopy was planned and an informed and written consent was obtained for the procedure. Fibro-optic bronchoscopy was carried out under sedation fentanyl and midazolam. As well as multiple fragments were scattered in his right lower lobe segments. Utilizing the stone retrieval basket (dormia stone extractor, 2.5 fr, 0.8mm) through fibro-optic bronchoscope

CONCLUSIONS: Of the tracheo-bronchial foreign bodies, only 12% will impact in the larynx with most passing through the cords into the tracheobronchial tree. Flexible fibro-optic bronchoscope is more easier and non traumatic for foreign body removal especially in already ventilated patients.
AN INSIGHT INTO ADOLESCENTS’ KNOWLEDGE, ATTITUDES ON LOW BACK PAIN AND ITS OCCURRENCE

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OBJECTIVES: To assess the level of knowledge and attitudes of adolescents towards low back pain as this is required for an effective prevention. Occurrence of LBP in adolescents needs to be identified due to insufficient data. As knowledge and attitude can influence the occurrence, the study correlated the level of knowledge and attitude towards LBP with occurrence.

METHODS: After obtaining the ethical clearance and informed consent, a cross-sectional survey with self-administered questionnaire in English was conducted among 605 students from randomly selected four pre-university colleges to evaluate knowledge, attitude and occurrence of LBP. The mean, median, frequencies, and standard deviations were used to analyze demographic data, level of knowledge, level of the attitude and the occurrence of LBP. Chi square was used to analyze the correlation of occurrence with knowledge and attitudes.

RESULTS: The study revealed a moderate level of knowledge (45.39%) and good attitude (61.95%) towards LBP and the incidence among adolescents is 30.5%. There is no correlation between knowledge and occurrence ($\chi^2=5.025$, $P=0.170$) but there exists a correlation between the attitude and occurrence of LBP ($\chi^2=14.636$, $p=0.002$).

CONCLUSIONS: Even with a moderate knowledge and good attitude, a considerable number of adolescents with LBP exist. Knowledge of LBP has to be further enhanced and prevention strategies need to be initiated. Patient education which imparts knowledge alone is insufficient and methods for behavioral modification are also required.

EVALUATION OF THE USE OF COLOUR TO ALTER THE ATTITUDE OF INDIVIDUALS: A STUDY INTO THE MODULATION OF HUMAN PSYCHOLOGY

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OBJECTIVES: To evaluate the effect of colour on the psychological attitude of individuals.

METHODS: A total of hundred individuals were included in the study. Each of them were placed in a comfortable dark room and was shown a presentation which had included abstract images and colour palettes of four basic colors. They were exposed to each shade of color for ten minutes. They were given a questionnaire which assessed the psychological changes to the color seen. The response was tabulated and evaluated to understand the influence color played in affecting the attitude of individuals.

RESULTS: There is a significant effect that color plays on the psychology of individuals. The changes in attitudes of individuals on exposure to different colors show patterns that transcend their personal variations of character. There are definite statistically significant affinities associated with certain attitudes and colors. This association is not affected irrespective of common variables like age, sex, education, socio-economic and cultural factors.

CONCLUSIONS: This general attitude shift that occurs can be of significant importance when design and décor of environments are planned. It has to be considered as an important variable element that changes the comfort level and performance of individuals.
The present investigation aims to compare the effectiveness of surgical periodontal therapy using the modified Widman’s flap (MWF) with the non-surgical treatment using scaling, root planing and oral hygiene instructions.

Methods: Seventeen patients were selected from those who were complaining of periodontal disease entering Khartoum Dental Hospital and faculty of dentistry periodontal department for treatment. Both males and females having periodontal pockets at least (5-8 mm) in depth and medically healthy without any systemic conditions were included. For each patient oral hygiene instructions followed by scaling and root planing in one sextant and the modified Widman’s flap on the other sextant. Allocation of the sextant for surgical and non-surgical treatment was random. Clinical parameters recorded were Plaque index, Gingival index, Probable Pocket depth and Gingival recession.

Results: Post-surgical data was used to compare changes in plaque index (PLI), Gingival index (GI), Probable pocket depth (PPD) and Gingival recession. The Parameters were recorded at days (0, 7, 21, 35, 54, 71 and 84). During the follow up period there was a decrease in all parameter (The mean and standard deviation) alsosome deterioration were occurring towards the end of the follow up period.

Conclusions: In conclusion both surgical (MWF) and non-surgical scaling and root planing were equally effective in the reduction of periodontal pockets (5-8mm) depth. The gingival recession is apparent following the surgical treatment. Patient motivation and oral hygiene maintenance is important in the success of any type of periodontal therapy. Recommendations: 1- Patients with periodontal pockets (5-8mm) in depth should be treated non-surgically as possible and the decision to go for surgery should be limited to cases where non-surgical treatment
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OBJECTIVES: Diabetes has emerged as one of the world's biggest health problems and its prevalence is increasing at an alarming rate. This study was conducted to find out the magnitude of frank and undetected diabetes mellitus, including impaired glucose tolerance among persons in rural Karnataka, and its relationship with associated risk factors like hypertension and anthropometry.

METHODS: This was a population-based, cross-sectional study on 1370 participants in the field practice area of KBN Medical College, conducted from April 2008 to March 2009.

RESULTS: Diabetes mellitus was noted among 19.8% of the participants, with an additional 12.04% with impaired glucose tolerance. Hypertension observed among participants with diabetes and impaired glucose tolerance was 65.13% and 53.94%.

CONCLUSIONS: Effective primary prevention strategies have to be intensified among high-risk population groups, to promote awareness through behaviour change communication.

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OBJECTIVES: To determine if there are significant differences in postural control between cervical Spondylitis patients and healthy controls.

METHODS: 60 subjects (30 cervical spondylitis subjects and 30 age and gender matched normal subjects) age range 30–60 years were recruited for the study. The subjects were measured for postural control in terms of sway velocity (Mean x, Mean Y and Velocity moment) in two different conditions i.e. 1) Normal standing with eyes open and 2) Normal standing with eyes closed. The postural sway velocities of cervical spondylosis subjects were compared with the age and gender matched normal subjects using independent t test.

RESULTS: Independent t test results showed that there are increased postural sway velocity in cervical spondylosis subjects in Normal standing with eyes open and closed conditions in comparison with age and gender matched normal individuals. The difference is significant (p<0.001) in all the outcome variables (Mean x, Mean Y and Velocity moment).

CONCLUSIONS: Postural control is altered in subjects with cervical spondylosis in comparison with age and gender matched normal individuals.
ANTECEDENTS OF WORK RELATED MUSCULOSKELETAL DISORDERS IN SOFTWARE PROFESSIONALS

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OBJECTIVES: To identify the presence of MSD in software professionals, through questionnaire based survey of software companies and to understand the factors that cause WMSD in software employees.

METHODS: Descriptive study design is employed. Questionnaire for the research is developed by the researcher and the reliability and validity was established after the pilot study. Factor analysis is used to understand the underlying pattern of pain specific areas. T-test is employed to find out the differences of WMSD's and ergonomic interventions among male and female respondents. A discriminant analysis is employed to study the causes of WMSD in software professionals, along with a stepwise hierarchical regression to understand the causative factors of pain.

RESULTS: In the 355 respondents percentage analysis is done in order to understand the cumulative percentage of people with musculoskeletal pain. In order to determine the underlying pattern of the pain specific areas a factor analysis was done.

CONCLUSIONS: It can be concluded from the study that neck is the most common pain area for software professionals. Software professionals continue to have a lot of problems including RSI, obesity, poor fitness and stress. It is mandatory to provide multi-disciplinary intervention of corrective measures of office ergonomics, posture correction, and preventive exercise programmes could reduce the symptoms in these professionals.

SYDENHAM’S CHOREA: IS VITAMIN D HAVING ANTI-INFLAMMATORY ROLE

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INTRODUCTION: Sydenham’s Chorea is one of the diagnostic criteria of acute rheumatic fever. Even the criteria for diagnosis are well known but the diagnosis is easily missed if a good history and appropriate investigations are not carried out at the same time.

CASE PRESENTATION: A 14 years old girl, suffered from “involuntary movement”. One week prior to this presentation she had anxiety and emotional disturbances. Examination showed hyperkinesis, pronator drift, hypotonia, left upper and lower limbs weakness and milk maid grip. Grade 2/4 AR murmur was discovered on cardiac auscultation. She developed severe form of migratory polyarthritis then she sought medical advice at private hospital and found that she was having vitamin D deficiency. The diagnosis of ARF with Sydenham’s chorea was made based on the presence of SC and elevated Anti streptolysin O titre. Adequate management, biochemical and radiologic follow up is continuing for her.

CONCLUSIONS: Questions raised about the association of GABHS in cases with dramatic exacerbations of tics and OCD, but is lacking with choreiform St. Vitus’ dance, fleeting arthritis and silent (pan)carditis. Autoantibodies (D1R and D2R), anti-tubulin, anti-lysoganglioside-GM1 and (CaMKII) activity elevation in children with SC with suggestions that VDR allele activity support a model wherein the 1alpha,25-(OH)2D3 may augment the function of suppressor T.cells, that maintain self tolerance to organ-specific self antigens. Raising a question about Vit.D deficiency roles in patients with SC.