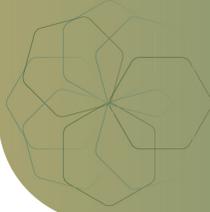


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يسر مركز الأبحاث بمدينة الملك
سعود الطبية بمشاركتكم قائمة
بالأبحاث الذي تم نشرها في عام

2017



Research Title **Giant Thymoma with pressure symptoms: Case Report and Clinical approach**

Author from KSCM Ayman F. Yousef MD, Safa A. Alabdajabbar, MD, Manoj P. Babu, MD, Mohamad Alshakaki, MD.

Abstract Thymoma is a rare neoplasm of the anterior mediastinum; most are discovered incidentally in chest X-ray. Here we report a 62 years old man presenting with shortness of breath and cough due to ignored huge lesion extending into the right chest cavity. The tumor was completely resected through right posterolateral thoracotomy. The postoperative course was uneventful. The pathology report classified the lesion as thymoma type AB stage II.
Key words: Thymoma, Mediastinal Masses, Huge Tumour, Dyspnea, Cough, Right Sided Chest Discomfort.

Journal International Journal of Medical Research Professional

Link [Giant Thymoma with Pressure Symptoms:Case Report and Clinical Approach](#)

Research Title **Isolated eyelid Schwannoma: A rare differential diagnosis of lid tumor**

Authors from KSMC Nabila H. Morsi, Osama Samir Almansouri, Ebrahim Mohammed Almansour

Abstract Primary Schwannomas of the eyelid are extremely uncommon. It accounts for one percent of orbital tumors. We present a case of isolated eyelid Schwannoma in the lateral canthus of the left eye with no systemic diseases associated. Surgical excisional biopsy was done. In two years follow up, no recurrence or malignant conversion was detected.
Keywords: Benign tumors, Eyelid, Histopathology, Schwannoma

Journal Saudi Journal of Ophthalmology

Link [Isolated eyelid Schwannoma: A rare differential diagnosis of lid tumor](#)



Research Title **Role of Human Papilloma Virus Infection in Cancer of Cervix**

Authors from KSMC Rasmy,A. Osama, A. Mashiaki, M.

Abstract Worldwide the Cervical cancer is the second most common type of cancer. This type of cancer that begins in the cervix cells is a sexually transmitted disease. Genital infection having role also in cancer cervix like gonorrhea, herpes simplex virus (type 2) and syphilis. A virus named human papillomavirus (HPV) causes this type of cancer, and it causes transformation in the cervix. The link between HPV infection of the cervix and the cancer is believed one of the significant scientific findings in the last three decades. The transformation zone of the cervix is the most common site in which the cancer is related to it for unknown causes. This transformation zone that is located between different type of epithelium mainly in the oropharynx, cervix and anus has a close relationship to the infection by Human papilloma virus (HPV). Although it is expensive, the primary prevention by the vaccine stills the most effective method for cancer cervix. This vaccine is effective and safe.

Journal Research and Reviews Journal of Medical and

Link [Role of Human Papilloma Virus Infection in Cancer of Cervix](#)



Research Title Knowledge and attitude about pain and pain management among critical care Nurses in a Tertiary Hospital

Authors from KSMC Marwan Rasmi Issa, Adel Musbah Awajeh, and Firas Shehadeh Khraisat

Abstract Background: Pain assessment and management are essential parts of nursing care and two of the most fundamental patient rights. It is unethical to let a patient suffer from pain without taking appropriate measures to relieve his or her pain. Objective: This study aims to explore the ICU staff nurse's knowledge and attitudes towards pain and pain management at King Saud Medical City (KSMC) in Saudi Arabia. The pain management knowledge and attitudes of ICU nurses at KSMC has not been explored in previous research. Methods: A descriptive cross sectional design was utilized using a self-reporting questionnaire tool to obtain information from ICU nurses about their knowledge and attitudes towards pain and pain management. The questionnaire was distributed to 289 nurses employed in King Saud Medical City (KSMC), which is one of the biggest tertiary hospitals in Riyadh, Saudi Arabia. 204 nurses responded to the questionnaire (71% response rate). Results and conclusion: The results showed sever lack of knowledge and poor attitudes among ICU nurses towards pain management when dealing with ICU patients, 60% of the knowledge questions were answered incorrectly by more than 50% of the nursing staff participated in the study, 65% of attitude questions were answered incorrectly by more than 50% of the nursing staff. This study has uncovered both knowledge and attitudes gaps among ICU nurses. Keywords: Pain management; Intensive care unit; Surgical intensive care; Pain

Journal Journal of Intensive and Critical Care

Link Knowledge and attitude about pain and pain management among critical care Nurses in a Tertiary Hospital



**Research
Title**

Correlates of treatment satisfaction and well-being among patients with type II diabetes

**Authors from
KSMC**

RN,PhD,S.L..Holmes,

Abstract

Aim: To examine the impact of patient characteristics, anthropometric measurement and patient clinical variables on their appraisal of treatment satisfaction and well-being.

Background: Treatment satisfaction and well-being are instrumental in achieving diabetes care goals. Nursing practices and healthcare policies may inform interventions in these areas.

Introduction: The prevalence of diabetes is high in the Middle East. An understanding of relationships between clinical and socio-demographic variables and well-being and treatment satisfaction is needed to improve care and patient outcomes.

Methods: A total of 1002 patients completed tools measuring well-being, treatment satisfaction and sociodemographic characteristics. A series of bivariate and multivariate analysis were conducted to identify factors associated with well-being and treatment satisfaction.

Results: Males reported better treatment satisfaction and well-being than females. Older participants, those who were compliant to diet, with controlled diabetes, and no neuropathy reported higher treatment satisfaction scores and well-being scores. Insulin therapy was associated with better treatment satisfaction.

Discussion: Females, participants who were not prescribed diabetic diets and those with complications were more likely to be negatively impacted by diabetes. Individuals with diabetes who were treated with insulin had higher treatment satisfaction than those who used oral hypoglycaemic agents.

Conclusion and implication for nursing and health policy: These findings are important in assisting nurses and other healthcare professionals in identifying patients with diabetes with low treatment satisfaction who may present a greater risk for poor well-being. Additionally, they lend support to developing policies for frequent screenings and special therapeutic interventions that are needed to maximize patients' treatment satisfaction and well-being in the Middle East and elsewhere.

Keywords: Arab Patients, Diabetes Mellitus, Jordan, Treatment Satisfaction, Well-being

Journal International nursing review

Link Correlates of Treatment of Satisfaction and well-being among patients with type II diabetes

Research Title **Complications After Posterior Acetabular Wall Internal Fixation-Avascular Necrosis and Nonunion**

Authors from KSMC Dr. Rehan Zahid Hussain MBBS, Dr. Jesus Palencia MD, and Dr.P.J.Parameaswari PhD.

Abstract Introduction: Serious orthopaedics injuries caused by high impact trauma due to road traffic accidents are more prevalent in Saudi Arabia. Fractures of posterior wall are the most common type of acetabulum fractures. The outcome after surgical management of acetabular fracture is primarily related to the quality of articular reduction. This management is the most challenging task for surgeons. Methodology: A retrospective cohort study was conducted in a tertiary care hospital, Riyadh, Saudi Arabia. All patients who underwent internal fixation for posterior wall acetabular fracture from October 2013 to September 2015 were included in the study. Post-surgical outpatient evaluation was done clinically by Merle D' Aubigne Y Postel - hip functional evaluation score and radiological assessment using Ficat classification for staging of avascular necrosis of femoral head. Principal results: With increase in age, the function of hip declined. The step in fixation was found significantly associated with avascular necrosis ($p = 0.020$) and nonunion ($p = 0.020$). The gap was found significantly associated with nonunion only ($p = 0.001$). Conclusions: Delay in surgery should be avoided if surgical management is decided for posterior acetabular wall fracture. Adequate surgical reduction of fracture of posterior acetabular wall is necessary. Screw seems to be a better choice of implant until further new evidence is received. A randomized controlled trial is needed to evaluate and compare different management options for fracture of posterior acetabular wall and to set standard guidelines for future

Journal International Journal of Advanced Research (IJAR)

Link Complications After Posterior Acetabular Wall Internal Fixation-Avascular Necrosis and Nonunion

Research Title **A Cross-sectional Study on Medical Device-Related Pressure Injuries among Critically Ill Patients in Riyadh, Kingdom of Saudi Arabia**

Authors from KSMC Mohammad Faisal Amirah (RN,MSN,IIWCC), Akram Mohammad Rasheed (RN,MSN),Parameaswari PJ (PhD), Owais Sabri Nu'man (RN,MSN), Dr. Muteb Al Muteb

Abstract Pressure injury prevalence is higher among critically ill patients. Being bedridden along with multiple comorbidities makes this problem one of the biggest quality issues that health care providers face in the intensive care unit (ICU) setting. Many protocols and guidelines have been developed to help with this issue. However, these quality improvement tools do not cover the prevention of pressure injuries that happen secondary to medical devices. By increasing the hospital length of stay and associated costs, medical device-related pressure injuries (MDRPI) raises the burden on health care services

Journal World Journal of Gastrointestinal Surgery

Link [A Cross-sectional Study on Medical Device-Related Pressure Injuries among Critically Ill Patients in Riyadh, Kingdom of Saudi Arabia](#)

Research Title **Double-Low Dose Protocol of Computed Tomography Pulmonary Angiography (CTPA) in the Diagnosis of Pulmonary Embolism: A Feasible approach for Reduction of Both Contrast Medium and Radiation Doses**

Authors from KSMC Sultan Aldosari, MSc; Mansour Al Moudi, PhD

Abstract This article discusses a hot topic on double low-dose protocol of computed tomography pulmonary angiography (CTPA) in the diagnosis of pulmonary embolism, with a special focus on a recent paper published in the British Journal of Radiology about the feasibility of this technique. Three aspects will be discussed in this review: First, both kVp and contrast medium can be reduced without affecting image quality when compared to the standard CTPA protocol; second, a low-pitch protocol is comparable to the high-pitch spiral image acquisition with similar image quality achieved, but at lower radiation dose; and finally, the double low-dose CTPA protocol can achieve diagnostic images in patients with body mass index up to 35 kg/m². **KEYWORDS:** Computed tomography pulmonary angiography; Contrast medium; Optimization; Image quality; Pulmonary embolism; Radiation dose.

Journal Heart Research

Link [Double-Low Dose Protocol of Computed Tomography Pulmonary Angiography \(CTPA\)](#)

**Research
Title**

An automated Method for Segmenting Brain Tumors on MRI Images

**Authors from
KSMC**

P.J.Parameaswari, PhD, Muteb A. Muteb, PhD

Abstract

We present a method for segmenting images of tumors on MRI images of the brain based on an algorithm developed for automated determination of segmentation and outlining thresholds. Testing was performed by generating two databases of real MRI images of the brain, with radiology reports. Criteria for assessment of the quality of the segmentation results were: the Dice score, the Jaccard index, sensitivity, and specificity. Analysis of results obtained using this algorithm to solve the brain tumor MRI image segmentation task showed levels of sensitivity and specificity of 89% to 99%, which is evidence that assessment of the position and boundaries of brain pathology is highly effective.

Journal

Meditsinskaya Tekhnika,

Link

An automated Method for Segmenting Brain Tumors on MRI Images



Research Title Operative time, blood loss, hemoglobin drop, blood transfusion, and hospital stay in orthognathic surgery

Authors from KSMC Bishi Abdullah Al-Garni

Abstract Purpose: This study was conducted to evaluate the operative time, blood loss, hemoglobin drop, blood transfusion, and length of hospital stay in orthognathic surgery.
Methods A 10-year retrospective analysis was performed on patients who underwent bilateral sagittal split osteotomy (with or without genioplasty), Le fort I Ostcotomy (with or without genioplasty), or any combination of these procedures. A total of 271 patients were included.
Results: The age range was 17 to 49 years, with a mean age of 24.13 ± 4.51 years. Approximately 62% of patients underwent double-jaw surgery. The most common procedure was bilat-eral sagittal split with Le Fort I(37%). The average operative time was 3.96 ± 1.25 h. The mean estimated blood loss was 345.2 ± 149.74 ml. Approximately 9% of patients received intraoperative blood transfusion. The mean hemoglobin drop in the non-transfusion cases was 2.38 ± 0.89 g/dl. The mean postoperative hospital stay was 1.85 ± 0.83 days. Only one patient was admitted to the ICU for one night. Conclusions in orthognathic surgery, blood loss is relatively minor, blood transfusion is frequent, and ICU admission is unlikely. Operative time, blood loss, blood transfusion, and the complexity of the surgical procedure can significantly increase the length of hospital stay. Males may bleed more than females in orthognathic surgery. Hemoglobin drop can be overestimated due to hemodilution in orthognathic surgery. Which may influence the decision to use blood transfusion.

Journal Oral Maxillofacial Surgery

Link Operative time, blood loss, hemoglobin drop, blood transfusion, and hospital stay in orthognathic surgery



Research Title	Knowledge and Perception of Asthmatic Patients and their family towards asthma disease and management in King Saud Medical City, Riyadh, KSA
Authors from KSMC	Dr. Aziza Abdullah Donques, Dr. Emadia Alaki, Dr. Wasan Almazayad, Dr. Abdulaziz Almutairi
Abstract	<p>Background: Despite of the major effort to improve asthma management, there are still poor public knowledge and perception among patients with asthma and their family in the Kingdom of Saudi Arabia.</p> <p>Methods: Across sectional descriptive study was conducted last May 20, 2015 during World Asthma Day at Medical Tower ground floor in King Saud Medical City in Riyadh, Kingdom Saudi Arabia with more than 100 participants in the said activity from different area of Riyadh. Questionnaires were distributed to the participants after given asthma awareness by healthcare providers.</p> <p>Results: A total of 55 participants during Asthma day responded to the questionnaire, Majority are male (50.94%) and Saudi nationality (67.92%). After intervention and awareness given to the participants, most of them are aware that asthma is shortness of breath and coughing (87%) which considered being the major signs and symptoms of asthma. Furthermore they don't believe that abdominal pain causes asthma (25%). Participants are aware that most of the common risk factors of asthma is exposure to smoke (94%) followed by exposure to polluted air (91%). The knowledge and perception of the participants towards the medication needs to be used for asthma, most of them answered ventolin spray (77%) and followed by oxygen (72%).</p> <p>Conclusions: Different model of educational activity for bronchial asthma helps in improving the knowledge and awareness of patients and family about asthma disease.</p>
Journal	Clinical Respiratory Diseases and Care
Link	Knowledge and Perception of Asthmatic Patients and their Family towards Asthma Disease and Management in King Saud Medical City, Riyadh, KSA



Research Title**Quality of Life transfusion-dependent Thalassemia Patients****Authors from KSMC**

Rizqallah A. Alzahrani,

Abstract

Objectives: Thalassemia is the most common genetic disorder in the Mediterranean region. Despite recent advances in the management of thalassemia, people living in developing countries do not receive satisfactory treatment. For such chronic conditions, not only is patients' survival important but their quality of life (QOL) is also important, which is primarily driven by psychological and social constraints. This study explores various factors that affect QOL in transfusion-dependent thalassemia patients. Methods: This case control study included children with thalassemia major who received regular transfusions for the last five years. Controls were matched for age, gender and socio-economic status and included only healthy children. Different types of QOL were assessed using the World Health Organization (WHO) Quality of Life Assessment tool. Results: Our study included 90 cases (8 dropouts) and 98 controls (0 dropouts), with an average age of 8.3 4.4 in cases and 12.2 4.7 in the control group. The total mean aggregate score of all patient questions was 82.04 15.54; in the control group, the score was 87.86 12.9. In nearly all factors, differences between cases and controls were most significant in males. There were no significant differences for the variables of physical pain, appearance and relations with others in both groups. Conclusion: Although there was no significant difference in the QOL score in thalassemia children, a more significant difference was observed in male patients than in females. The implications of this finding must be explored in further case-control studies.

Journal

Journal of Taibah University Medical Sciences

Link[Quality of Life transfusion-dependent Thalassemia Patients](#)

Research Title	Magnitude and Characteristics of Clinical Trials in the Kingdom of Saudi Arabia: A Cross-Sectional Analysis
Authors from KSMC	Sheraz Ali, Mesfer Ali Alghamdi, Jasser Ali Alzahrani
Abstract	<p>The clinical trial is an important type of research design in the spectrum of translational research. The extent to which clinical trials are conducted is a reflection of the level of advancement that exists within a healthcare system. This study aims at describing the clinical trial activity within the Kingdom of Saudi Arabia since 2000 through reviewing those trials that have been registered with clinicaltrials.gov in that time period. Since February 2000, 405 trials have been registered. These trials fall into one of 22 different ICD-10 codes, and with the top four being neoplasms (92), diseases of the circulatory system (57), endocrine, nutritional and metabolic diseases (46), and diseases of the respiratory system (25). About half (200) were classified as trials with both safety and efficacy endpoints. 52% were phase IV and 28% were phase III. About 64% were randomized, and with about equal numbers of those coming from industry (86) and university sponsors (85), and smaller numbers coming from hospitals (51) and other sponsors. A total of 24 phase III university- or hospital-sponsored trials have been registered during the 15-year time period. With a population approaching 30 million and very large annual healthcare expenses, it would appear that the level of clinical trial activity within the Kingdom during the past 15 years has been rather paltry. The emphasis has been on post-marketing phase IV trials. The academic setting (i.e. universities and hospitals) has seen a new trial registered every 11 months on average.</p>
Journal	Contemporary Clinical Trials Communications
Link	Magnitude and Characteristics of Clinical Trials in the Kingdom of Saudi Arabia: A Cross-Sectional Analysis



Research Title Use and Education of Point-of-Care Ultrasound in Pediatric Emergency Medicine in Saudi Arabia

Authors from KSMC Abdullah Saad Alzayedi MD, Hamad A. Almadi MD, Ahmed M. Althehair MD, Dimitrios Karakitsos MD,

Abstract Objectives- Point-of-care ultrasound (US) is an emerging tool used by pediatric emergency physicians in the last decade. Currently in the Middle East, point-of-care US use and education are at an early stage, with no designed curriculum or guidelines for its implementation in pediatric emergency medicine (EM). The objective of this article is to describe the clinical and educational uses of point-of-care US among certified pediatric EM physicians. Methods- A 19-question survey was sent to all certified pediatric emergency physicians and fellows in pediatric emergency fellowships in Saudi Arabia in February 2016. Reminders were sent weekly for 4 weeks. Results-The response rate was 84 of 88 (95%). Fifty-one of 84 (61%) reported using point-of-care US. Focused assessment with sonography for trauma was the most frequent use of point-of-care US (37%), followed by procedures (19%). The most common barrier for not using point-of-care US was limited training (86%). The most preferred tool for point-of-care US teaching was courses by EM physicians. Currently, there is no specific curriculum designed for pediatric EM in the Middle East. Conclusions-Despite the multiple applications of point-of-care US in pediatric EM, its use is still limited. Formal point-of-care US training with bedside sessions and courses was the most preferred method of education. A designed curriculum needs to be implemented in pediatric emergency fellowships in Saudi Arabia. Key Words-bedside ultrasound; emergency medicine; pediatric emergency; point-of-care ultrasound; ultrasound education

Journal Journal of Ultrasound in Medicine

Link [Use and Education of Point-of-Care Ultrasound in Pediatric Emergency Medicine in Saudi Arabia](#)



Research Title **New Homozygous Mutation in ALPL Gene in Saudi Patient with Infantile Hypophosphatasia**

Authors from KSMC Dr. Maha Alotaibi, Dr. Amal Al Qassmi,

Abstract Hypophosphatasia (HPP) is a rare genetic disorder characterized by the abnormal development of bones and teeth. These abnormalities occur due to defective bone and tooth mineralization associated with low serum and bone alkaline phosphatase activity. Which caused by a number of loss-of-function mutation in the ALPL gene leading to diminished activity of the enzyme in bone, liver, and kidney. The clinical presentation of this disease is extremely variable. Ranging from extreme life-threatening forms revealed at birth in young infants presenting with severely impaired bone mineralization, seizures, and hypercalcemia, to young adults with premature exfoliation of their teeth without any other symptom. Herein, we report a case of HPP who presented with pyridoxine-responsive seizures in the early neonatal period and was found to have hypercalcemia, low alkaline phosphate and skeletal demineralization.

Journal Clinical and Medical Investigations

Link [New Homozygous Mutation in ALPL Gene in Saudi Patient with Infantile Hypophosphatasia](#)



Research Title	Analysis of Medication Errors at a Large Tertiary Care Hospital in Saudi Arabia: A Retrospective Analysis
Authors from KSMC	Dr. Sheraz Ali, Dr. Nourah Ibrahim Aboheimed, Dr. Dalal Salem Al-Dossari
Abstract	<p>Background Medication errors (MEs) are common in health care settings and pose a threat for the hospitalized population. Therefore, aspects of MEs were explored in a tertiary setting serving a diverse population. Objective To examine the occurrence, severity and reporting of MEs in hospitalized patients. Methods This retrospective analysis included 10,683 ME report forms that were received by the Medication Safety Unit of King Saud Medical City (KSMC) in 2015. ME outcomes were determined according to the National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP) Index for categorizing MEs algorithm. Results A total of 13,677 MEs in 912,500 prescriptions were reported. The incidence rate of MEs was 1.5% (13,677/912,500). The highest percentage (42.2%) of MEs occurred during the transcription stage, and 70.0% of MEs were reported as near misses. Wrong frequency and wrong concentration accounted for nearly half of the MEs. Conclusion We found 1.5 MEs per 100 prescriptions; more than two-thirds of the MEs were preventable and were intercepted before reaching the patients. Most MEs reported by pharmacists occurred at the transcription stage while wrong frequency was the most common error type encountered. Further studies should explore the clinical consequences of MEs at a healthcare institution.</p>
Journal	International Journal of Clinical Pharmacy
Link	Analysis of Medication Errors at a Large Tertiary Care Hospital in Saudi Arabia: A Retrospective Analysis



Research Title	Case Report: A Rare Homozygous Missense Mutation of ADAT3 Gene in Intellectual Disability in A Saudi Patient
Authors from KSMC	Dr. Maha Al Otaibi, Dr. Amal Al Qassmi,
Abstract	<p>Intellectual disability (ID) is defined by significant limitations in intellectual functioning and adaptive behavior with an age of onset being less than 18 years.</p> <p>The prevalence of intellectual disability/development delay is 1 ~ 3 % in the general population. The definition of mental retardation/intellectual disability shift from "mental retardation" to "intellectual disability" in the 2002) {1} suggested will"remain in effect for now and in the future."defines intellectual disability as: characterized by significant limitations both in intellectual functioning and in adaptive behavior as expressed in conceptual, social, and practical adaptive skills. The disability originates before age 18></p> <p>The ADAT3 gene encodes one of two eukaryotic proteins that necessary for the deamination of adenosine at position 34 to inosine in t-RNA. The first human mutation in the t-RNA editing machinery and expand the landscape of pathways involved in the pathogenesis of ID.</p> <p>Keywords: Intellectual Disability; ADAT3 Gene, Adenosine Deaminase</p>
Journal	Ecronicon Open Release – EC Neurology
Link	Case Report: A Rare Homozygous Missense Mutation of ADAT3 Gene in Intellectual Disability in A Saudi Patient



Research Title

Identification of ISO 22870:2016 Conformance Requirements for Medical Laboratory Internal Auditing

Authors from KSMC

Dr. Sharfuddin Chowdhury,

Abstract

Objectives: The main aim of this study was to quantify the conformance requirements in ISO 22870:2016 that are connected to internal auditing. The contributing objectives include the identification of conformance requirements in ISO 22870:2016 for quantification purposes as well as determination of relative effort required for each subclause to be considered by internal auditors in a process-based quality management system framework.

Methods: The conformance requirements were identified and located in Clauses 4 and 5 of ISO 22870:2016 by conducting a comprehensive content analysis. The identified conformance requirements were then allocated to the process-based quality management system framework, which consists of four major stages for distribution analysis: 'strategic management', 'process control, design and planning', 'analytical processes' and 'process evaluation and improvement'.

Results: A total of 1,604 conformance requirements were identified in Clauses 4 and 5 of ISO 22870:2016. Clauses 4 and 5 contained 668/1,604 (41.6%) conformance requirements and 936/1,604 (58.4%) conformance requirements respectively.

The overall percentage ranged from 4/1,604 (0.2%) conformance requirements in Subclause 4.8 to 333/1,604 (20.8%) conformance requirements in Subclause 5.3. Extensive cross-referencing of ISO 22870:2016 to ISO 15189:2012 was also identified; a total of 1,308/1,604 (81.5%) conformance requirements were from ISO 15189:2012.

The distribution of conformance requirements was then arranged according to the four major stages, and it was found that 404/1,604 (25%) conformance requirements were associated with 'strategic management',

669/1,604 (42%) conformance requirements with 'process control, design and planning', 281/1,604 (18%)

conformance requirements with 'analytical processes' and 250/1,604 (16%)

conformance requirements with 'process

evaluation and improvement'. Among the identified conformance requirements, there were four areas of concern to

which internal auditors need to pay extra attention in order to optimise the internal audit process. Areas include the

authorisation and training processes of operators, electrical safety of medical equipment, compliance of relevant regulations, and the specificity of the internal audit.

Conclusions: The present study contributes to existing knowledge of ISO 22870 application by providing insights

into how ISO 22870:2016 requires the medical laboratory to fulfil relevant management system and technical competence requirements. This enables the medical laboratory to develop a sound internal audit process appropriate to the organisation. An effective and efficient internal audit process is highly likely to provide additional assurance to patients through active management of risks of the medical laboratory.

Keywords: continuous quality management; point-of-care testing; quality control; quality improvement; total quality management.

Journal

New Zealand Journal of Medical Laboratory Science

Link

Identification of ISO 22870:2016 Conformance Requirements for Medical Laboratory Internal Auditing



Research Title	Impact of Carbapenem Restriction on the Antimicrobial Susceptibility Pattern of Pseudomonas Aeruginosa Isolates in the ICU
Authors from KSMC	Dr. Mohammad Abdallah, Dr. Mohammad Badawi, Dr. Mohammad Faisal Amirah, Dr. Akram Rasheed, Dr. Ahmed F. Mady, Dr. Mohammed Alodat, Dr. Abdulrahman Alharthy,
Abstract	<p>Background: Rates of carbapenem-resistant Pseudomonas aeruginosa are increasing. Aggressive prevention strategies, including instituting antimicrobial stewardship programmes, are essential for combating antimicrobial resistance.</p> <p>Objectives: We conducted this study to compare the antimicrobial susceptibility pattern of P. aeruginosa before and after carbapenem restriction.</p> <p>Methods: We conducted a two-phase retrospective study in an adult ICU. The first phase was from May until July 2016 (before carbapenem restriction), whereas the second phase was from September until November 2016 (while implementing carbapenem restriction). The antimicrobial susceptibility pattern of P. aeruginosa was reviewed in August and December 2016. The measure of carbapenem-resistant P. aeruginosa was the proportion of resistant isolates (percentage resistant). The measure of antibacterial consumption in the study phases was DDDs/1000 patient days.</p> <p>Results: The overall carbapenem consumption decreased significantly in the second phase, from 28.44 to 11.67 DDDs/1000 patient days ($P=0.012$). The resistance of P. aeruginosa to imipenem and meropenem decreased significantly from 76.0% to 38.5% ($P=0.019$) and from 74.1% to 30.0% ($P=0.012$), respectively. Susceptibility of P. aeruginosa to other antibacterials was not affected by carbapenem restriction.</p> <p>Conclusions: These data suggest that restricting carbapenems, even for a short duration, may be an effective strategy for managing the problem of carbapenem resistance in P. aeruginosa.</p>
Journal	Journal of Antimicrobial Chemotherapy
Link	Impact of Carbapenem Restriction on the Antimicrobial Susceptibility Pattern of Pseudomonas Aeruginosa Isolates in the ICU



Research Title Chemotherapy-induced Febrile Neutropenia in Solid Tumors: Review Article

Authors from KSMC Dr. Ayman Rasmy, Dr. Mohammed Al Mashiakhi,

Abstract Febrile neutropaenia (FN) is defined as an oral temperature of $>38.3^{\circ}\text{C}$ or two consecutive readings of $>38.0^{\circ}\text{C}$ for 2 hours and an absolute neutrophil count (ANC) of $<0.5 \times 10^9/\text{l}$, or expected to fall below $0.5 \times 10^9/\text{l}$. Fever is one of the characteristic symptoms of FN and is usually associated with the presence of an infection caused by various microorganisms. The incidence and epidemiology of FN are variable based on different factors: (type of cancer, the age/sex of the patient, chemotherapy type /number of cycles). FN remains one of the most common and risky complications of chemotherapy which occurred within 6-8 days with standard chemotherapy and it is occurred as about 7-8/1000 patients receiving treatment with chemotherapeutic agents. There is a clear relationship between the severity of neutropaenia (which directly influences the incidence of FN) and the intensity of chemotherapy. Currently, the different regimens are classified as producing a high risk ($>20\%$), an intermediate risk (10%- 20%) or a low risk ($<10\%$) of FN. The causative organisms including either bacteria, fungi or viruses. The bacteria Gram-positive (currently dominating) and Gram- negative (Dominant in the 1970s), are usually the main microorganisms responsible for FN and cause complicated infections. Although the morbidity and mortality rates of FN have decreased over the years due to use of proper antibiotic treatment, preventive measures and use the standardrisk management plan as per guidelines but it is still one of oncological emergency. FN is responsible for considerable morbidity as 20%-30% of patient's present complications that require in-hospital management, with an overall in-hospital mortality of -10%.
Keywords: Febrile Neutropenia, Cancer, Solid Tumour, Chemotherapy.

Journal The Gulf of Journal of Oncology

Link [Chemotherapy-induced Febrile Neutropenia in Solid Tumors: Review Article](#)



Research Title	Glycemic Control in Diabetic Patients in Saudi Arabia: The Role of Knowledge and Self-Management – A Cross-Sectional Study
Authors from KSMC	Dr. Abdullah A. Alwabel,
Abstract	<p>Introduction: Diabetes mellitus (DM) is serious healthcare concern in Saudi Arabia, with the disease's prevalence in the country being one of the highest worldwide. This study examines various factors which affect outcomes of patients with DM; namely, medication adherence, diabetes knowledge, self-management behaviours, and glycemic control.</p> <p>Methods: This is a cross-sectional survey-based study. Participants were patients with a DM diagnosis at King Saud Medical City in Riyadh, Saudi Arabia.</p> <p>Results: Positive associations were found between medication adherence and diabetes knowledge; self-management behaviours (glucose management and healthcare use) and diabetes knowledge; self-management behaviours (dietary control) and fasting blood glucose levels; and age and blood glucose levels (both fasting and HgA1c). No associations were found between diabetes knowledge and glycemic control; or between self-management behaviours and HgA1c levels.</p> <p>Conclusion: Having good knowledge of diabetes is associated with medication adherence and healthcare self-management. Healthcare practitioners should consider educating DM patients an integral part of the treatment process.</p> <p>Keywords: diabetes mellitus, glycemic control, patient knowledge, self-management</p>
Journal	Global Journal of Health Science
Link	Glycemic Control in Diabetic Patients in Saudi Arabia: The Role of Knowledge and Self-Management – A Cross-Sectional Study



Research Title	Review of 48 Cases of Motor Neuron Disease seen at Groote Schuur Hospital: A Pilot Study
Authors from KSMC	Dr. Sharfuddin Chowdhury
Abstract	<p>Background: Motor neuron disease (MND) is a rare neurodegenerative disorder that causes progressive weakness of the limb, bulbar and respiratory muscles and results in the death of the patient. The demography of MND in South Africa, in particular, was not studied previously. The study aimed to describe the demographics and clinical characteristics of MND seen at Groote Schuur Hospital (GSH).</p> <p>Methods: It was a retrospective review of the patients with MND presented to GSH from January 2005 to December 2010. El Escorial diagnostic criteria were used to check the validity of the diagnosis of MND. Mortality data were obtained from the Medical Research Council of South Africa.</p> <p>Results: Forty-eight patients met the El Escorial criteria. The median age of onset of the disease was 54-year {IQR 47-63}, and the median duration of the disease from the earliest symptoms to death was 2-year (IQR 1-3). There was no significant difference between the bulbar and limb-onset disease sub-types. There was a male preponderance (60%). and the majority of the patients (60%) were smokers. Exposure to chemicals was disproportionately represented in the MND patients compared to the general population. Baseline CSF-protein and serum Creatine Phosphokinase levels were not associated with disease duration</p> <p>Conclusion: The characteristics of MND cases seen at GSH are similar to those in the Europe or North America. This pilot study will serve as the basis for future larger prospective studies on MND prevalence and etiology in South Africa.</p>
Journal	Journal of Neurology & Stroke
Link	Review of 48 Cases of Motor Neuron Disease seen at Groote Schuur Hospital: A Pilot Study



Research Title	KSA-Self Assessment of Pain Management Medication Safety for Hospitals
Authors from KSMC	Dr. Eman Kamal Ibrahim
Abstract	<p>Pain management program is essential and required the program to prevent the adverse event, drug misadventure, and pain killer medications related death at health care institutions. One of the tools to evaluate the performance and drug safety of the pain management program. It is the assessment of ten directions of medication safety including patient information, medication information, communication process of medicines, drug packaging and labeling, drug devices, work environment and staffing management, competency and education, patient or family education, and quality and risk management. The new tools as self-assessment of pain management medication safety and modified of former the United States of America and Canada Institution Safe Medication Practice (ISMP) ten elements with additional to the health care institution demographic information and according to the pharmacy law and regulations in Saudi Arabia. This new method can assess the hospital's pain management implementation and detect the gap problems implementation, risk of the patient safety level of pain management. The tool had a scoring scale system of acceptable or risk level or need improvement with the annual application. The tool is first self-assessment tool of pain management medication in Saudi Arabia. The tool is highly recommended to apply at all government and private hospital in Kingdom of Saudi Arabia.</p> <p>Key words: Pain Management, Safety, Medications, Self-Assessment, Ministry of Health, Saudi Arabia.</p>
Journal	Journal of Pharmacy Practice and Community Medicine
Link	KSA-Self Assessment of Pain Management Medication Safety for Hospitals



Research Title	Assessment of Queries Received by the Drug Information Center at King Saud Medical City
Authors from KSMC	Dr. Dalal Abdulrahman Almazroua, Dr. Sheraz Ali, Dr. Jasser Ali Alzhrani,
Abstract	<p>Background: The complexity of drug therapies has increased the need to evaluate the drug information scientifically. In this regard, the aim of drug information centers (DICs) is to promote rational use of drugs in a health-care setting. DIC pharmacists play a vital role in providing the necessary and reliable information on drugs to promote the concept of rational drug use, eventually leading to a better patient outcome. The objective of the present study was to assess the drug-related queries received by the DIC at the King Saud Medical City (KSMC) from health-care professionals working in a large tertiary care setting. Methods: A retrospective analysis was conducted from February 2016 to January 2017. Data were collected using the DI request form, available in both printed and electronic formats for use by the health-care professionals. Descriptive statistics were used to calculate frequencies and percentages. Data analysis was performed using the Statistical Package of the Social Sciences software, version 16.0. Results: The current study received a total of 139 queries that were answered by the DIC pharmacists over a period of 1 year. The majority of queries were asked by pharmacists (61.2%), followed by physicians (23.7%) and nurses (10.10%). About half of the queries were related to the dosage and administration of the drugs. Lexicomp® acted as the common resource of information. Conclusion: DIC has been instrumental in the dissemination of drug-related information to health-care professionals since its inception in February 2016, resulting in the provision of quality health care to the patients. However, based on yearly queries, there still exists a need to increase the awareness of health-care professionals about the DIC at KSMC, which will urge them to take drug consultation from DIC pharmacists and promote patient safety.</p> <p>KEYWORDS: Drug information, health-care professionals, King Saud Medical City, pharmacist, queries</p>
Journal	Journal of Pharmacy and Bioallied Sciences
Link	Assessment of Queries Received by the Drug Information Center at King Saud Medical City



Research Title	Breast-feeding Practice and knowledge among Women attending PHC centers in Riyadh
Authors from KSMC	Dr. Norah Faleh Al-Mutairi, Dr. Yousef Abdullah Al-Omran, Dr. P.J.Parameaswari
Abstract	<p>Introduction: Breast milk is the best natural essential nutrition to newborns and infants. However, the practice of breastfeeding (BF) has declined in Saudi Arabia. Objective: The objective of this study was to assess the knowledge and practice of BF with their determinants among mothers in Riyadh. Materials and Methods: in this cross-sectional study, 252 mothers attending the well-baby clinics in Riyadh from March 2016 to May 2017 were selected randomly with their consent and studied by a standardized questionnaire. Results: of the 252 women, 69.4% were 25-35 years of age and 56.7% with a bachelor degree or higher education. Nearly 75% mothers had education on BF before our study. Mixed feeding was the most preferred method (51.6%) followed by artificial milk (29.4%). The most reported reason for discontinuing BF was breast milk insufficiency (37.3%) and of breastfeed continuation was their perceived benefit (36.6%). Excellent knowledge was observed among 12.7%, good knowledge in 57.1% and unsatisfactory level in 30.2% mothers. The regression model shows that high school education improved the knowledge by 10.9 points (P = 0.024) and undergraduate by 18.7 points (P value ~ 0.001) when compared to women who were literate. Women with partly >5 improved knowledge score by 17.3 points (P < 0.001). Conclusion: We observed that majority (57.1%) of Saudi mothers had a moderate level of knowledge on BF benefits and 19% had practiced exclusive BF. There is a need for better education programs to increase awareness and its benefits for health situation in the country on the long term.</p> <p>Keywords: Breastfeeding, Cross-sectional study, knowledge, practice</p>
Journal	Journal of Family Medicine and Primary Care (JFMPC)
Link	Breast-feeding Practice and knowledge among Women attending PHC centers in Riyadh



Research Title	Critically Ill Patients with the Middle East Respiratory Syndrome: A multicenter Retrospective Cohort Study
Authors from KSMC	Dr. Ahmed Mady,
Abstract	<p>Objectives: To describe patient characteristics, clinical manifestations, disease course including viral replication patterns, and outcomes of critically ill patients with severe acute respiratory infection from the Middle East respiratory syndrome and to compare these features with patients with severe acute respiratory infection due to other etiologies.</p> <p>Design: Retrospective cohort study.</p> <p>Setting: Patients admitted to ICUs in 14 Saudi Arabian hospitals.</p> <p>Patients: Critically ill patients with laboratory-confirmed Middle East respiratory syndrome severe acute respiratory infection (n = 330) admitted between September 2012 and October 2015 were compared to consecutive critically ill patients with community-acquired severe acute respiratory infection of non-Middle East respiratory syndrome etiology (non-Middle East respiratory syndrome severe acute respiratory infection) (n = 222).</p> <p>Interventions: None.</p> <p>Measurements and Main Results: Although Middle East respiratory syndrome severe acute respiratory infection patients were younger than those with non-Middle East respiratory syndrome severe acute respiratory infection (median [quartile 1, quartile 3] 58 yr [44, 69] vs 70 [52, 78]; p < 0.001), clinical presentations and comorbidities overlapped substantially. Patients with Middle East respiratory syndrome severe acute respiratory infection had more severe hypoxemic respiratory failure (PaO₂/FIO₂: 106 [66, 160] vs 176 [104, 252]; p < 0.001) and more frequent nonrespiratory organ failure (nonrespiratory Sequential Organ Failure Assessment score: 6 [4, 9] vs 5 [3, 7]; p = 0.002), thus required more frequently invasive mechanical ventilation (85.2% vs 73.0%; p < 0.001), oxygen rescue therapies (extracorporeal membrane oxygenation 5.8% vs 0.9%; p = 0.003), vasopressor support (79.4% vs 55.0%; p < 0.001), and renal replacement therapy (48.8% vs 22.1%; p < 0.001). After adjustment for potential confounding factors, Middle East respiratory syndrome was independently associated with death compared to non-Middle East respiratory syndrome severe acute respiratory infection (adjusted odds ratio, 5.87; 95% CI, 4.02–8.56; p < 0.001).</p> <p>Conclusions: Substantial overlap exists in the clinical presentation and comorbidities among patients with Middle East respiratory syndrome severe acute respiratory infection from other etiologies; therefore, a high index of suspicion combined with diagnostic testing is essential component of severe acute respiratory infection investigation for at-risk patients. The lack of distinguishing clinical features, the need to rely on real-time reverse transcription polymerase chain reaction from respiratory samples, variability in viral shedding duration, lack of effective therapy, and high mortality represent substantial clinical challenges and help guide ongoing clinical research efforts.</p>
Journal	Critical Care Medicine
Link	Critically Ill Patients with the Middle East Respiratory Syndrome: A multicenter Retrospective Cohort Study



Research Title Increased Continuity of Care Associated with Decreased Hospital Admission and Emergency Department Visits for Pediatric Patients with Asthma in Children's Hospital, KSMC Riyadh

Authors from KSMC Dr. Aziza Abdullah Donques, Dr. Emadia Mohammad Alaki,

Abstract Background: Poor asthma control remains a common cause of emergency department (ED) visits, presentation and hospital admission. The cost of uncontrolled asthma care is substantial in Saudi Arabia. Methods: A cross sectional observational and descriptive study that is conducted in Pediatric Hospital Allergy and Immunology Clinic (Pediatric Outpatient Department), King Saud Medical City in Riyadh, Saudi Arabia From: 2nd of September 2014 To: 2nd of September 2015. The study includes pediatric patients regardless of age (0-12 years old), gender and nationality who visited Allergy & Immunology Clinic (Outpatient Department). The data will be collected using a questionnaire and statistical analyses were performed using SPSS Version 16.0 with the confidence interval = 95% and P values= <0.05. Results: The study population showed that most of them have a regular visit to outpatient clinic 91 % (95), among those 92% (88) visited Pediatric Allergy & Immunology in KSMC, on the other hand, 77% (80) are visiting emergency department within the year, the majority of them visited Pediatric ER in KSMC 63% (37), and less than half of them are visiting 1-3 times per year 43% (45). Asthmatic Children, who are admitted to the hospital, have average length of stay more than 1 week 52% (54) managed with medications. Conclusions: Availability of asthma medications, correct delivery of it and to have permanent asthma clinic with Asthma educators will be the most important factors that will decrease revisit to emergency department, long stay in hospital during admission and to control the asthma. Keywords: pediatrics, asthma, continuity of care, emergency, ALOS, OPD, Riyadh

Journal International Annals of Medicine

Link Increased Continuity of Care Associated with Decreased Hospital Admission and Emergency Department Visits for Pediatric Patients with Asthma in Children's Hospital, KSMC Riyadh



Research Title Biomarker that Predict The Response to Chemo-radiotherapy in Rectal Cancer

Authors from KSMC Dr. Mahdi Hussain Al Bandar

Abstract The treatment of locally advance rectal cancer is a challenging with a relatively high incidence of local recurrence. CRT, however, has proven to be a great success in controlling rectal tumor locally. Nevertheless, recognizing relevant biomarkers are of paramount importance in order to tailor patient management and to avoid unnecessary chemotherapy related morbidity. In addition, biomarkers could outline oncological outcomes early on. Tumor response considered a strong indicator about tumor status and response to the given treatment. Unfortunately, there is no single effective method to predict tumor response to CRT treatment solely. However development of clinical and immunohistochemistry markers are essential to know what it takes to design a proper management plan for the right patient. We focus in our review to summarize relevant articles emphasizing predictive value of tumor biomarker in estimating rectal cancer response to preoperative CRT.

Journal Journal of Current Medical Research and Opinion

Link Biomarker that Predict The Response to Chemo-radiotherapy in Rectal Cancer



Research Title	Propensity Score Matched Analysis of the Endoscopic Bilateral axillo-breast approach (BABA) versus Conventional Open Thyroidectomy in Patients with Benign or Intermediate Fine-needle Aspiration Cytology Results, A Retrospective Study
Authors from KSMC	Dr. Mansour A.M. Alramadhan
Abstract	<p>Background: The purpose of this study was to compare the surgical outcomes of endoscopic bilateral axillobreast approach (BABA) to conventional open thyroidectomy (COT) in patients who had thyroid nodule(s) with a benign or intermediate fine-needle aspiration cytology (FNAC) results.</p> <p>Materials and methods: All patients with benign or intermediate thyroid nodule(s) who underwent BABA (n = 95) or COT (n = 262) between 2008 and 2015 were reviewed. Then, 1:1 propensity score matching was performed, and 66 matched pairs were obtained. Surgical outcomes were then compared.</p> <p>Results: Before matching, patients in the BABA group were significantly younger (36.5 vs. 50.7 years, p < 0.000), predominantly female (97.9% vs. 69.8%, p < 0.000), had smaller tumours (2.1 vs. 2.8 cm, p = 0.002) and more commonly underwent hernithyroidectomy (88.4% vs. 70.6%, p < 0.000) than those in the COT group. After matching, all clinicopathological characteristics were equivalent. BABA was found to be significantly associated with longer operative time (125.3 vs. 79.8 min, p < 0.000), greater drainage volume (132.9 vs. 59.1 ml, p < 0.000), longer postoperative hospital stay (3.1 vs. 2.2 days, p < 0.000), and higher average total medical expense (4000 vs. 3200 US\$). However, the incidence of complications did not differ between the groups.</p> <p>Conclusion: BABA is comparable to COT in terms of complications and is safe and feasible when performed by experienced surgeons and for carefully selected patients who are concerned about neck scarring. However, the operative time and postoperative hospital stay are significantly longer, which may increase medical expenses</p>
Journal	International Journal of Surgery
Link	Propensity Score Matched Analysis of the Endoscopic Bilateral axillo-breast approach (BABA) versus Conventional Open Thyroidectomy in Patients with Benign or Intermediate Fine-needle Aspiration Cytology Results, A Retrospective Study

