NEXT STEPS IN PATIENT CENTRICITY AND TECHNOLOGY: BIG DATA, DATA PORTABILITY AND INTEROPERABILITY WHILE MAINTAINING INTEGRITY AND QUALITY

Keynote speaker:
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ABSTRACT
The COVID-19 pandemic is accelerating the evolution of the health-data ecosystems at different levels, local to international, and within different actors, institutional and industrial. The ability to quickly globally analyze health data in real time is dependent of three important concepts: interoperability, portability, and data-linking.

Aim: The aim of this presentation will be to explain these three concepts and to present practical use cases.

Background: Interoperability is the ability of different information systems and software applications to communicate and exchange data and use the information exchanged. This implies the existence of common data standards and terminology.

Data portability is the essential concepts that places the patient in command of their own personal data. It allows data subjects to obtain data that a data controller holds on them and to reuse it for their own purposes. Individuals are free to either store the data for personal use or to transmit it to another data controller. The data must be received “in a structured, commonly used and machine-readable format”.

Finally, it is essential to be able to aggregate in a safe and secure manner data from the same patients but providing from different sources much like we see on national health databases.

The combination of these 3 principles will allow for the patients to control their health data and for the health authorities to evaluate in real time he health status of their populations. This will also be useful for the industry to generate real-world evidence in support of their products.

During the presentation, we will see examples of data exchange standards. We will also look at industrial and national solutions to enable data portability and linkage. Through the example of the safety follow-up of the COVID-19 vaccines, we will see how these 3 concepts work together and we will conclude the presentation with recommendations.

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"AMIR’S DUBAI REPAIR- ADR" MANAGEMENT OF REFUX (GORD) POST WEIGHT LOSS SURGERY SAFETY AND FEASIBILITY: SHORT TERM RESULTS

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ABSTRACT
Following on from our last year’s presentation from Mediclinic Parkview hospital, Dubai, of an innovative surgical technique, Amir’s Dubai Repair (ADR), to treat gastroesophageal reflux post bariatric surgery. We present our short term follow up of the patients who had undergone ADR. We aim to demonstrate that the new surgical technique, ADR, is safe and feasible with acceptable outcomes and that meet the patient and clinician’s expectations.

In addition, we assessed and demonstrate that the benefits of ADR are better than the current standards of care, mainly chronic PPI therapy or aggressive surgery like Roux-en-Y gastric bypass for previous sleeve gastrectomy or total gastrectomy and Roux-en-Y Oesophageojunostomy after an initial proximal gastric bypass operation.

Our short-term results demonstrate that Amir’s Dubai repair is safe and feasible in experienced hands with low morbidity, few complications and no mortality in our series.

All the five patients reported complete resolution of reflux symptoms and positive restriction at the Gastroesophageal junction post ADR.

Background: a. Incidence of GORD / GERD after Bariatric weight loss surgery – Magnitude of problem
The prevalence of obesity worldwide has been steadily increasing from 1975 to 2014, with men and women having a BMI > 30 kg/m2 in 3.2–10.8% and 6.4 to 14.9% respectively. The prevalence of obesity has been extrapolated to estimate that more than 50% of the world’s population will be classified as obese or overweight by 2030. With an increase in obesity there has been a noticeable increase in attempts to curb the trend ranging from multiple diet plans and more importantly to an increase incidence of bariatric surgery. A little over 468 000 bariatric surgeries were performed globally in the year 2013. Of
all bariatric procedures, two are significantly more popular than their counterparts; Laparoscopic Sleeve Gastrectomy (LSG) and Roux-en-Y Gastric bypass (RYGB), accounting for 78.3% of all weight loss procedures in 2013. Both of these procedures, when performed following the prescribed and acceptable methods means that patient is no longer amenable for Nissen’s Fundoplication should they experience worsening of pre-existing GORD or new onset of GORD post operatively (De Novo GORD).

The prevalence of GORD as of 2015 is estimated at 14.8% of the adult population with significantly higher prevalence in Europe and Central America. There has also been shown to be a strong correlation between obesity and GORD with an increase of BMI by 3.5 unit points being correlated to a 3 fold increase in risk of developing new reflux symptoms. Ultimately this results in a large percentage of the adult population whom have undergone bariatric surgery and are now suffering from GORD and associated complications with little alternatives to treat their condition outside of life long PPI therapy or repeat bariatric surgery.

b. Current Anti-reflux management options for patients who have undergone resectional Bariatric operations (Sleeve Gastrectomy and Proximal Gastric Bypass operation) – Lack of satisfactory management option for GORD / GERD post weight loss surgery

Anti-Refux surgery and Bariatric surgery are sub specialties in their own right. Anti-reflux surgery offers functional results with surgical readjustment of Oesophago-Gastric-Hiatal complex. In Bariatric surgery; mostly resectional; primary goals are restrictive and malabsorptive to lose weight and avoid metabolic syndrome complications of obesity.

Anti-reflux surgery is being done for nearly 70 years and there are more than 10 surgical operations and many variations being offered to the patients. Over the last 30 years 3 operations are commonly offered with Laparoscopic Nissen’s Fundoplication being the most popular globally with excellent results.

Bariatric surgery is being practiced for nearly 55 years and more than 15 operations are have been used during these years and the choices change every few years, with new operations being offered to the patients after every five years or so. The jury is still out to find an operation with lower rate of complications like anastomotic leak, bleeding, failure to lose weight / regain of weight loss and post-operative reflux.

In recent years the awareness has improved regarding the issue of Gastro Oesophageal Reflux disease (GORD / GERD) after Bariatric surgery (Sleeve Gastrectomy and Proximal Gastric Bypass operation). Bariatric fraternity tends to have a consensus of converting a sleeve to a Proximal Gastric Bypass and a Proximal gastric bypass to a Total gastrectomy and Roux-en-Y Oesophago-Jejunostomy. Both are salvage operations of poor acceptence from patients, poor quality outcomes and unpredict- able results. In our opinion a simplistic answer to a complex situation.

We presented our new technique in 2019, which is being offered to the patients with reflux after Bariatric surgery (Sleeve Gastrectomy and Proximal Gastric Bypass operation). The technique is based on the sound principles and practices of established Antireflux surgery operations. We have treated patients over a period of three years with our technique named, Amir’s Dubai Repair (ADR). It’s compliant with all the four fundamental principles of Anti-reflux surgery.

We have performed ADR for 8 patients over the last 3 years. Six patients had previous sleeve gastrectomy and two had Proximal gastric bypass operation.

Following on from our previous presentation of ADR as a safe and feasible preferred technique to treat gastroesophageal reflux post bariatric surgery (Sleeve Gastrectomy and Proximal Gastric Bypass operation), we have followed up the outcomes of patients who have undergone ADR in Mediclinic Parkview hospital, Dubai.

Our secondary aim is to demonstrate that the new surgical technique was a success outright by ensuring that surgical outcomes and patient expectations were met.

In addition, the authors believe that the benefits of ADR are superior to the current Bariatric surgery salvage /corrective standards of care, mainly chronic PPI therapy or conversion to Roux-en-Y gastric bypass surgery (for Previous sleeve gastrec- tomy) or total gastrectomy and Roux-en-Y Oesophago-Jejunos- tomy (for a previous proximal gastric bypass operation).

**Method**: Patients followed after ADR procedure were reviewed in clinic 1 week and 6 weeks post operatively. The patients had a telephone interview using a standardized questionnaire at 1, 12 and 24 months after surgery. In addition, data collected from the hospital records regarding patient’s weight and height, preoperative endoscopic findings, operative time, post-operative complications, length of hospital stay and unplanned return to hospital.

**Questionnaire**: Detailed telephone consultation was done by a specialist Surgical doctor and answers sought for general demographics, operative management, specific issues with reflux before and after ADR, benefit for satiety and further weight loss and improvement in quality of life.

**Results**: Outcomes from the assessment in all the patients are shown in table below: Primary aims of ADR:

- Control of reflux symptoms
- Quality of life post procedure

Secondary aims of ADR:

- Continued weight loss post procedure with improved satiety
- Correction of other complications from the primary bariatric surgical procedure (Gastric tube spiral and Gastric tube stenosis)

All the patients reported complete resolution of reflux symptoms and positive restriction at the Gastroesophageal junction post ADR.

All reported improvement in their need to take medication, with no reliance on chronic PPI therapy or minimal use of PPIs on as an if required basis.

All the patients in study have expressed significant improve- ment in quality-of-life post ADR, including factors such as being able to eat better and appropriately, ability to lie flat at night, sleep through the night without symptoms, no need to sleep propped up or sitting after ADR, absence of heartburn, volume reflux, coughing, sore throat and associated symptoms. Improved satiety after ADR has helped them to continue their weight loss journey with fresh hope and vigor.

**Discussion**: Although the sample size is small, however the preliminary results for ADR are very promising in short term. We need to follow up the patients closely in medium and long term.

Amir’s Dubai Repair (ADR) primary goal is to control and cure reflux after Bariatric surgery (Sleeve Gastrectomy and Proximal
Gastric Bypass operations). While performing ADR, we also correct the other complications from the initial bariatric operation (Gastric tube spiral, Gastric tube stenosis, lax Gastrojejunostomy post gastric bypass).

We will present of medium-term results after ADR in due course.

With increased awareness, we hope to be able to help a large proportion of patients suffering from GORD post bariatric surgery with this technique.

Reproducibility of the technique will have to be ensured in order to achieve consistently good results.

Conclusion

- Amir’s Dubai Repair is based on and compliant with the standard and published principles of anti-reflux surgery.
- We believe that Amir’s Dubai Repair (ADR) is a safe and feasible option for the treatment of complex issues in patients with reflux (GORD / GERD) after Bariatric surgery / Metabolic Syndrome surgery for weight loss (Sleeve Gastrectomy and Proximal Gastric Bypass operation).

TRANSITIONING TO TELE-ICU MODEL: IS THIS THE RIGHT TIME?

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Background: The COVID-19 pandemic has surged critical care resources to crisis levels. With the outpouring of critically ill patients during the pandemic, there is a shortage of essential human resources (ICU nurses and providers) and materials (personal protected equipment and ventilators) reported. As a result, healthcare providers must be prepared to resolve challenges regarding communication, care coordination, resources scarcity and minimizing the risk of contracting the infection. This demands a reasonable crisis management approach that can provide quality of care to patients, ensure safety and well-being of the healthcare provider, as well as optimize resource utilization.

Aims: To identify the opportunities and possible barriers of implementing Tele-ICU during the COVID-19 pandemic.

Method: The literature review was conducted using two online electronic databases including CINAHL and Medline. Google Scholar was also utilized as an additional source to gather relevant research. Articles were found using a Boolean search in which “benefits”, “opportunities”, “barriers”, “Tele-ICU”, and “COVID-19” were used as keywords to gather quantitative and qualitative articles. Research studies were consequently reviewed to determine common themes and gaps in the literature.

Results: Tele-ICU can be a valuable mechanism to facilitate the crisis management during the pandemic. Tele-ICU is described as technology-enabled care delivered from off-site locations via virtual patient care by specialized healthcare professionals. In partnership with primary care nurses who stand-in with the bedside team, tele-intensivists and critical care nurses can virtually monitor, care for patients, and provide clinical advice aided by biomedical devices and electronic medical records. This model of care also provides opportunity to a critical care specialist to share knowledge and virtually enter the patients room for real-time support during an Advanced Cardiac Life Support situation (“code”) with limited people and without any delay of fulfilling PPE requirement of the pandemic. In contrast, certain barriers to commence Tele-ICU have also been reported, which may include lack of hands-on experience and involvement in ICU bedside procedures, costly infrastructure to set up an advance system, as well as healthcare provider readiness. However, as time is of the essence, alternative tools such as phones, portable computers or other mobile and wireless communication devices can be utilized to rapidly intervene.

Conclusions: Tele-ICU has redefined the typical ICU staffing models. It has the potential to augment ICU capacity, optimize efficiency, maximize safety, and improve quality of care provided amid large-scale disruptions. Even though there are some hypothetical apprehensions associated with Tele-ICU in literature, the overall benefits overshadow the potential shortcomings. This can help enhance knowledge of managing pandemic response and can also facilitate intensive care when on-site and on-call intensivists are unavailable or hard to recruit, such as in rural areas.

PSYCHOLOGICAL IMPACT OF COVID-19 PANDEMIC ON HEALTHCARE PROFESSIONALS: ONLINE SURVEY

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Background: The possible impact of the Covid-19 pandemic is a major concern not only in the population at large but also for employees in healthcare facilities. The WHO has highlighted the extremely high burden on healthcare workers, and recommended measures needed to prevent a serious impact on their physical and mental health.

Objectives: To assess the psychological impact of the coronavirus pandemic on healthcare professionals. To evaluate the healthcare professionals wellbeing and the prevalence of anxiety and depression

Methods: An email with a link to an online questionnaire was sent out to all Mediclinic, Al Noor Hospital employees. The questionnaire consisted of socio-demographic questions and three well-established scales: The Generalized Anxiety Disorder Scale (GAD-7), The Patient Health Questionnaire for Depression (PHQ-9) and The WHO Wellbeing Index (WHO-5).

Results: A total of 481 participants answered the questionnaire. The majority of employees were between 25 and 54 years of age (91.8%) with relatively equal gender distribution (Female: 59%; Male: 40.8%) for the total cohort. Being at high risk due to chronic disease or pregnancy, was reported in 14.5%. In addition, 8 (1.7%) reported a pre-existent mental health condition. Thirty nine employees (8.2%) were diagnosed with Covid-19 and 32 (6.7%) have been hospitalized due to Coronavirus. Job descriptions were divided into physicians (25.8%), nurses/
paramedics (33.6%), technicians (9.5%) and administrative staff
31.1%. Of these, 71% reported having close contact with Covid-
19 patients.

A total of 131 employees (27.6%) have received a psychologi-
cal support program, provided by the hospital for 120 of the
participants and 75.3% found it helpful.

Of the 481 participants who answered the GAD-7 anxiety
questionnaire, 283 (58.7%) reported no anxiety, 123 (25.5%)
mild, 62 (12.8%) moderate and 14 (2.9%) severe anxiety. The
results for the PHQ-9 were 407 (84.4%) no depression, 52
(10.8%) moderate, 15 (3.1%) moderate/severe and 8 (1.7%)
severe. The WHO-5 Wellbeing Index was divided into quartiles
with the lowest quartile indicating excellent well-being and the
highest quartile the lowest wellbeing respectively (59/12.2%; 78/
16.2%; 127/26.4%; 218/45.2%).

Conclusion: Despite the majority of participants reporting low
depression and mild to moderate anxiety symptoms, the WHO
Index was affected which may indicate that stress and anxiety had
a strong effect on the overall wellbeing of healthcare profes-
sionals. The results reflect the effectiveness of the measures taken
by the hospital and the benefits of the psychological support
provided. Based on our findings, we strongly recommend all
healthcare facilities to improve access to mental health services
for all their employees.

INVESTIGATING THE ROLE OF “COVID-19 ROUNDS”
AS AN INNOVATIVE EDUCATIONAL APPROACH FOR
ENHANCING UNDERGRADUATE MEDICAL STUDENTS
KNOWLEDGE OF EMERGING DATA DURING THE
COVID-19 PANDEMIC

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Background: The coronavirus disease 2019 (COVID-19)
pandemic has turned into an “info-demic”, bringing about
challenges in both clinical practice and the delivery of medical
education. This necessitated the development of innovative
Teaching methods following school closures and societal lock-
downs.

Aims: To identify the opportunities and possible barriers of
implementing Tele-ICU during the COVID-19 pandemic.

Methods: The setting and participants include 47 fourth-year
medical students at Mohamed Bin Rashid University (MBRU).
The data collected by survey method utilizing Microsoft forms,
measuring student satisfaction, program effectiveness, impact on
knowledge, and exploring the added value of infographics to the
learning experience.

Results: Evaluation of the results revealed an overall high
satisfaction rate (3.9/5 ± 0.94). Most students were satisfied with
course format (71%), organization (81.6%) and learning
experience (73.7%). The course was particularly useful for
offering evidence-based talks regarding different aspects of the
pandemic (89.5%), providing weekly updates of emerging
evidence (84.2%), enhancing understanding of the status and
challenges of the pandemic (89.5%). Satisfaction with distance
learning was moderate (62.2%), however a minority of students
would have preferred an in-person version of the course (27%).
The use of infographics provided an opportunity for students to
express themselves creatively (81.1%). Overall, students appre-
ciate the rising importance of infographics in the medical
literature (75.7%).

Discussion and Conclusions: “COVID-19 Rounds” provided a
textualized, curriculum-based program that included virtual
clinical experiences with physicians on actual rounds in hospitals
and COVID-19 wards. In addition, students were requested to
design and present infographics pertaining to the various aspects
of COVID-19. The program featured weekly updates on the
latest statistics, pertinent new COVID-19 research, along with
student-led research projects in collaborations with hospital
educators. We hope that knowledge gained from this study can
help in bridging the literature gap regarding innovative
educational strategies implemented amidst the COVID-19
pandemic.

Take-Home Messages: This innovative approach to educate
medical students about COVID-19 via virtual learning proved
effective at achieving pre-set objectives and reported high student
satisfaction rates. However, shortcomings of the course related to
lack of in-person teaching and clinical activities were also
highlighted.

THE USE OF INFORMATION AND COMMUNICATION
TECHNOLOGY BETWEEN EMERGENCY MEDICAL
TEAMS IN A DISASTER, IN RIYADH, KSA: A QUALITA-
TIVE STUDY

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ABSTRACT

The use of information and communication technologies
(ICTs) in a disaster is increasingly reliant on effective coordina-
tion and collaboration within and between emergency medical
teams (EMTs), which is essential for ensuring an effective
organizational response to such incidents. The use of ICT has a
mixed effect on the response of EMTs and the literature identi-
fies a number of concerns around the effective use of ICTs follow-
ing a disaster.

Aim: The aim of this study is to explore the use of information
and communication technology between EMTs (staff of the Saudi
Red Crescent Society and hospital emergency department
professionals) when responding to a disaster in Riyadh, in the
Kingdom of Saudi Arabia.

Methodology: A qualitative exploratory study was undertaken
to explore the experiences of 63 respondents: eighteen call-centre
staff, dispatcher teams, field supervisors and paramedics, and a
total of 45 from hospital EDs, comprising fifteen senior
paramedics, fourteen physician consultants and twenty ED nurse
managers. Semi-structured interviews were conducted with the
participants, who all had experience of responding to a disaster and had the authority to communicate with one another during an incident. The interviews were tape-recorded and transcribed verbatim and the transcripts were analysed using Braun and Clarke’s thematic analysis.

**Findings:** Three overarching themes emerged from the findings:
1. The perceived effectiveness of communications and information systems used;
2. EMTs’ perceptions regarding preparation and coordination in disaster response;
3. Psychosocial factors, interpersonal relationships, and teamwork between paramedics and relevant stakeholders.

**Discussion:** A number of unexpected findings emerged in relation to effective communication within and between EMTs. SRCA and ED paramedics shed light on some of the challenges that they face related to their relationships and teamwork with other stakeholders and how this affected communication and information exchange. This study posited a connection between these issues and the absence of protocols for best practice. In addition, there were factors associated with technical problems related to the communication systems they used. Participants also reported issues related to the training they received. As a result of these factors, there was some difficulty ineffective coordination and information exchange between the medical teams.

**Conclusion:** In order to improve communication between EMTs in a disaster, there is a need to develop a clear ICT strategy which includes the availability of effective ICT devices, agreed policies and protocols regarding coordinated communication and a comprehensive program of staff training.

**KEYWORDS**
Emergency medical Teams, disaster, Information and Communication Technology

**ENABLING AN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING INFRASTRUCTURE TO IMPROVE PATIENT CARE AND OUTCOMES BY IMPROVING HEALTHCARE DATA ANALYTICS**

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**Background:** As healthcare digitalizes, we now have masses of structured, coded information on patients available in electronic health records (EHRs), incl. demographic data, diagnoses (e.g. using ICD-10), medications, procedures and laboratory results. Meanwhile, there is also a growing amount of unstructured data in patient records, such as physician notes, admission and discharge reports, pathology reports, genomic information and imaging data. Ideally, medical decisions should be based on the full scope of information in a patient’s records, so there is a need to be able to query both structured and unstructured data alongside each other, using cutting-edge data processing tools. As an example, vast numbers of patients remain undiagnosed because the diseases themselves are not truly a single disease but a constellation of subtypes not visible through a single record.

**Aims:** Leverage the power of real-world data (RWD) and advanced analytics to connect structured and unstructured data within hospitals, contribute to the scientific understanding of patient phenotypes and enable the earlier detection of incipient difficult-to-diagnose diseases and fast-progressing patients, resulting in better patient care, stratification and study capability.

**Method:** Create an infrastructure for artificial intelligence (AI) and machine learning (ML) algorithms (incl. Natural Language Processing (NLP) techniques) on the RWD platform of an existing hospital network. This machine learning infrastructure will be aligned with local installations at the partner hospitals to keep the patient records on-site while doing the calculations there. The AI/ML infrastructure uses local training data to develop and test pattern-learning methodologies and subsequently optimize the global training for the AI/ML model, preserving privacy at the federated level. (This project is in partnership with key academic AI researchers within Switzerland and Innosuisse, the Swiss Innovation Agency.)

**Results:** The model allows AI/ML across connected data lakes within each hospital, enabling more sophisticated search and pattern-mapping of patient care data and care metrics within the platform. Longitudinal modelling from EHRs permits individual patient journeys to be modelled. The results provide an algorithm which identifies patient phenotypes and predicts disease progression alongside expert nephrology domain knowledge that allows replication in other geographies, on other platforms.

**Conclusions:** Enabling access to the full scope of the patient record gives clinical researchers access to a patient’s full medical profile and journey, and lets hospitals prioritize their own care better. AI/ML promises physicians better recognition of rare conditions and symptoms and faster diagnosis of life-threatening diseases, improving patient outcomes and care.

**CLINICAL CHARACTERISTICS OF CHILDREN WITH COVID-19: A MULTICENTER STUDY IN THE UNITED ARAB EMIRATES**

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**Background:** As healthcare digitalizes, we now have masses of structured, coded information on patients available in electronic health records (EHRs), incl. demographic data, diagnoses (e.g. using ICD-10), medications, procedures and laboratory results. Meanwhile, there is also a growing amount of unstructured data in patient records, such as physician notes, admission and discharge reports, pathology reports, genomic information and imaging data. Ideally, medical decisions should be based on the full scope of information in a patient’s records, so there is a need to be able to query both structured and unstructured data alongside each other, using cutting-edge data processing tools. As an example, vast numbers of patients remain undiagnosed because the diseases themselves are not truly a single disease but a constellation of subtypes not visible through a single record.

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**Conclusions:** Enabling access to the full scope of the patient record gives clinical researchers access to a patient’s full medical profile and journey, and lets hospitals prioritize their own care better. AI/ML promises physicians better recognition of rare conditions and symptoms and faster diagnosis of life-threatening diseases, improving patient outcomes and care.

**Background:** To date, coronavirus disease-2019 (COVID-19) has infected over 106 million people globally. The first confirmed case in the United Arab Emirates (UAE) was reported on 29th January 2020. Current data suggests that children with COVID-19 have a mild disease course. There is a lack of extensive
published data about COVID-19 infection among children in the Arabian Gulf region.

**Methods:** This cross-sectional multicenter study included children with confirmed COVID-19 infection admitted between March 1st and June 15th, 2020 to three large hospitals in Dubai, UAE. Serial nasal swabs for COVID-19 polymerase chain reaction (PCR) testing were collected during hospitalization. We investigated patients’ demographics, clinical characteristics, radiological and laboratory investigations during their inpatient hospital course.

**Results:** 111 children were included in our study and represented 22 nationalities. Fifty-nine (53.2%) were boys. The mean age was 7 years (±5.3), and 15.3% of children were younger than 1 year. Only 4 (3.6%) children had pre-existing asthma, all of whom had an uneventful clinical course. At presentation 43 (38.7%) were asymptomatic, 68 (61.2%) had mild or moderate symptoms and none had severe illness requiring intensive care. Fever (20.7%), cough (19.8%) and rhinorrhea (15.3%) were the most common presenting symptoms, most of which resolved by day 5 of hospitalization. Most of our patients had a normal chest x-ray. The most common laboratory abnormalities on admission included variations in neutrophil count (24.7%), aspartate transaminase (22.5%), alkaline phosphatase (36.7%) and lactate dehydrogenase (42.5%). Children were infrequently prescribed targeted medications, with only 4 (3.6%) receiving antibiotics. None of the 52 patients tested for viral co-infections were positive. COVID-19 PCR turned negative at a median of 10 days [6–14 days] after the first positive test. Overall, there was no significant difference in time to negative PCR between symptomatic and asymptomatic children.

**Conclusion:** This pediatric study of COVID-19 presents a first look into the burden of COVID-19 infection among children in the UAE. Patients had various laboratory abnormalities despite clinical stability. We conclude that a large percentage of children with COVID-19 infection experience no symptoms, and severe disease is uncommon in the UAE. Ongoing surveillance, contact tracing and public health measures will be essential in containing future outbreaks.

**BIOFEEDBACK, NEUROFEEDBACK AND MINDFULNESS INTERVENTION IN CHRONIC DISEASE**

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**Background:** Chronic stress responses can be manifested as mental health disorders including anxiety, depression and in more severe cases as post-traumatic stress disorder (PTSD). Chronic physical diseases such as diabetes, CVD, kidney disease amongst others is also often associated with stress as a cofactor. Although medication can lessen the symptoms, medication does not necessarily change the mental and physical attributes of the stress reaction. This research explored the use of biofeedback as an alternative or adjunct option to clinical practice.

**Methods:** Participants attended research programs at Charles Sturt University, Australia. Data came from six participants (4 females, 2 males; aged 51–79, M = 62.83; SD = 19.92). Ethics approval was granted by CSU Human Ethics Committee and written informed consent was obtained from all participants. Heart rate was measured before and after each session using HeartMath and interbeat intervals analyzed (HRV). Participants were instructed to either breathe normally, use paced breathing (6 breaths/minute) or aim to interact with balloon on screen. The balloon game consisted of a balloon rising or descending as part of a landscape in response to the subject’s heart rate changes correlating with their breathing pattern and heart rate coherence. Each condition (control, paced breathing/balloon game, relaxation) lasted 10 minutes. Participants came in for three sessions in random order with at least 2 days between conditions.

**Results:** Biofeedback using paced breathing showed a good decline in autosomal arousal and activation of vagal nerve response measured as low frequency (LF; vagal response dominates at 0.1Hz breathing frequency) from pre-paced breathing to during paced breathing (26.5%). Very low frequency power (VLF%) dropped by 42.1%. This latter response indicates a reduction in vigilance response often
associated with PTSD or a chronic physiological arousal throughout the system. Similar results were obtained with the balloon game (LF change=37.5% & VLF=46.5%).

**Conclusion:** The current work is the first to investigate the efficacy of Heartmath application on PTSD and compare the effectiveness of a mobile application with paced breathing versus a balloon game biofeedback. Clinical use of biofeedback Apps should first compare patient responses to different devices and conditions to determine optimum outcome in reducing stress.

**ELECTRONIC NEONATAL ALERT SYSTEM AND NEONATAL OUTCOMES – PILOT STUDY**

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**ABSTRACT**

We present a 2-year data of the quality improvement initiative undertaken at Mediclinic Al Noor Hospital.

A neonatal alert system was established to improve documentation and written communication between teams and to alert the neonatology team well in advance.

Alert form is generated when a fetal condition requiring specialised neonatal care is identified. This is retrospective study to evaluate the effective use of the neonatal alert system.

**Aim:** We aim to look at the impact of the alert system:

1. on the neonatal outcomes
2. Failure to identify high risk pregnancies
3. Failure to instigate an alert in high-risk pregnancies
4. Failure to implement the agreed action plan

**Background:** The maternity unit at Mediclinic Al Noor delivers around 600 babies/year. Around 20% of these babies require neonatal care.

The unit is supported by a level 3 Neonatal unit caring for babies more than 26 weeks' gestation.

The department has an inhouse fetal medicine service which provides 1st trimester aneuploidy screening and second trimester fetal anomaly screening in accordance to the guidelines from the Department of Health.

We see a range of fetal anomalies varying from mild, moderate to severe, fetal chromosome anomalies and lethal malformations. Other conditions requiring specialised neonatal care include intrauterine fetal growth restriction, medical disorders in the mother affecting the fetus, prematurity and sepsis.

The Obstetric team works in close collaboration with the neonatology team in managing high risk pregnancies. Improved communication, advanced care planning and robust follow up system is crucial in achieving optimum outcomes for such babies.

The electronic form is sent to the neonatology team where the neonatal consultant identifies issues and formulates a detailed care plan for the baby at birth.

This care plan is then shared with the key maternity staff on delivery unit and the neonatology team. A hard copy is also saved filed in a Neonatal Alert folder which is accessible to all staff at all times.

This is a live document and is updated as the fetal condition evolves during the course of pregnancy. A total of 67 alerts were generated during the period between February 2019 to February 2021.

All high-risk cases were managed in a multidisciplinary setting with involvement of tertiary maternity centre where needed. Parents were involved early in the care planning of the baby after birth.

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**NECK PAIN RELATED TO SMART PHONE AND LAPTOP USE**

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**ABSTRACT**

I will be presenting a short yet effective research study that was done in the year 2020 at the Mediclinic City Hospital.

**Background:** Studies have been conducted to determine the differences in muscle fatigue, muscle activity and pain of your neck muscles at different cervical flexion angles (0 degrees, 15 degrees, 30 degrees, 45 degrees and 50 degrees). When the cervical flexion angle increases, the amount of weight placed on the neck increases from approximately 5 kg to approximately 25 kg. This is excessive of the maximum pressure the neck can withstand and after a prolonged period of time it may consequently result in degenerative conditions in the cervical spine.

The 'niche’ or gap identified in these previous studies is that these studies have just determined the prevalence of neck pain but
have not investigated the severity of the neck pain experienced by these patients and if there is a correlation between the severity of the neck pain and number of hours spent on smartphones and laptops.

**Aim:** There has been a drastic increase in the use of technological devices over the years and therefore the aim is to determine if the number of hours spent on smartphones and laptops is related to the increasing cases of patients presenting with neck pain and to determine how severe the neck pain is.

**Objectives**
- Establish if there is a relationship between screen time and neck pain.
- Compare the severity of neck pain between patients to determine if the severity is based on the number of hours of screen time.
- To bring about awareness and to emphasize on the seriousness of the fact that excessive hours spent on smartphones/laptops can result in life changing neck injuries.

**Methods**

**Study design**
- Cross sectional study (which can be described as a snapshot of the population)
- The data collection tool is a questionnaire which my supervising doctor will hand to his patients who present with neck pain at the neurology department in Mediclinic city hospital
- Basically, what the questionnaire was trying to determine is
  1. How many hours each of these patients are spending on technological devices each day (independent variable)
  2. To determine the severity of their neck pain using a visual analogue scale (dependent variable)
- After compiling this data into a table on excel, a correlation will be made between these 2 variables with the use of a line graph
- Estimated sample size o 100 patients or more
- However due to covid delays the study at the moment has been based on 15 patients and will be continued for the next couple of months till 100 patients have been recruited.

**Results:** Due to the lack of statistical power as a result of covid related delays, the individual scatter plot points (representing one patient each) on the graph did not really show a relationship between the 2 variables and looked rather disorganized. This is also because there is a level of bias as patients may interpret the pain scale in different ways, in other words patients with neck pain who have a screen time of 5 hours may rate their pain at same level as a patient with neck pain who has a screen time of 13 hours even though the patient with a screen time of 13 hours would be experiencing much more severe pain and this will completely defeat the purpose of the study.

However regardless of all these obstacles it can still be observed on the graph that the trend line is demonstrating the fact that with an increase in screen time, you are getting an increase in pain severity and the opposite is true.

In conclusion, the result of this study will bring about awareness amongst the public especially the young adults and adolescents who have had a drastic increase in screen time, and encourage them to decrease their screen time. It will also accentuate the fact that excessive hours spent on technological devices can induce life changing neck injuries which can negatively impact your ability to achieve your life goals. And last but not least the results of this study can be used to advise people to take regular breaks every 20–30 mins during long sessions of device use. This is essential in optimistically resulting in a decrease in national screen time and hence decrease the prevalence of neck pain and ensure the well-being of the nation.

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**DETECTION OF FETAL ABNORMALITIES BY ROUTINE PRENATAL ULTRASOUND SCREENING BY FETAL MEDICINE SPECIALIST IN A NON-SELECTED POPULATION**

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**Background:** The accuracy of prenatal scan in detecting anomalies is variable as published in the current literature. The most frequently missed anomalies are related to the cardiovascular and facial regions. Operator expertise is a significant factor enabling the detection of these anomalies. This is the first review of our clinical practice in our region.
Aims: This study assessed the sensitivity of routine ultrasound examination performed by a fetal medicine specialist for the detection of abnormal chromosomes and structural malformations in fetuses in a non-selected population in a private hospital.

Material and Methods: Prenatal diagnoses of fetal abnormalities in 2,981 fetuses and newborns were reviewed and compared with all postnatal diagnoses of congenital abnormalities between September 2014 and September 2019. We included pregnancies resulting in live birth or stillbirth. It is our practice to offer three ultrasounds during pregnancy (11–14 weeks, 18–23 weeks and 32–36 weeks). Abnormalities were classified according to the affected major organ system, and the type and incidence of new abnormalities were determined at each trimester scan.

Results: Overall, 169 fetuses and newborns had confirmed congenital abnormalities, with a prevalence of 1.7%. Of these fetuses and newborns, 15.9% (27/169) had chromosomal/genetic abnormalities (overall prevalence, 0.3%), and 182 structural abnormalities were identified in these 169 fetuses (overall prevalence, 1.9%). One hundred and seventy-one abnormalities were detected postnatally, yielding a total sensitivity for prenatal detection of fetal abnormalities of 94.1% (171/182; 95% CI 89.3–97.1), with specificity of 99.9%, a positive predictive value of 99.37% and a negative predictive value of 99.9%. The most common organ system involved was the cardiovascular anomalies, 27.4% (50/182) followed by central nervous system(31/182) and renal anomalies(32/182). Among the cardiovascular anomalies 37/50 babies required major neonatal intervention while 13/50 fetuses (mainly Ventricular septal defects and minor valvular anomalies) needed follow up only. Third trimester review at 32–36 weeks identified new abnormalities in thirteen previously screened fetuses (7.1%, 13/182) and eleven of them needed neonatal intervention. The incidence of abnormalities first seen postnatally was 0.1% and the most common were isolated cleft palate, polydactyly or syndactyly and aortic arch anomalies.

Conclusions: The accuracy of prenatal ultrasound conducted by appropriately qualified personnel in the detection of structural abnormalities is quite high in a routine clinical setting with a non-selected population. As majority of the abnormalities involve the cardiovascular system requiring significant intervention, it is important to accurately diagnose these lesions prenatally if we want screening ultrasounds to make any meaningful contribution towards the improvement of perinatal morbidity/mortality. This calls for stringent regulation of criteria for screening standards similar to the first trimester screening programme. The inclusion of third trimester review even in previously seen normal fetuses cannot be overemphasized as this practice can additionally contribute to the detection of developing anomalies.

COMPARING T3 SUPPRESSION AND WITHDRAWAL TO THYROID CANCER PATIENTS, DUBAI, 2019-2020: A RETROSPECTIVE COHORT STUDY

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Background: Thyrogen is indicated for use as an adjunctive diagnostic tool for serum Tg testing with or without radio-iodine imaging and ultrasound in the follow-up of patients with well-differentiated thyroid cancer who have previously undergone thyroidectomy. Even when Thyrogen-stimulated Tg testing is performed in combination with radio-iodine imaging, there remains a possibility of negative iodine diagnostic scan test as well as underestimated Thyroglobulin value. T3 suppression and withdrawal is not currently used as a diagnostic tool in the course of treating thyroid cancer patients.

Objective: To compare patient results after the use of T3 suppression and withdrawal to the currently used diagnostic test, Thyrogen recombinant TSH (Thyrogen) injections, and to determine whether T3 is more specific, natural, and beneficial in terms of quality of assessment than engineered TSH.

Methods: 18 medical records of thyroid cancer patients who’ve all had a thyroidectomy and iodine ablation presenting to Mediclinic City Hospital (MCH) from 1 January 2019 to 1 November 2020 were viewed and analyzed retrospectively. Sociodemographic variables were age, gender, nationality, and comorbidity. Investigations that were studied were neck ultrasound, type of thyroid cancer, lymph node involvement, distant metastasis, and histopathology. Lab results were collected including Thyroid Stimulating Hormone (TSH) and Thyroglobulin (Tg). The outcome variables were the results of the labs that these patients underwent. Our conclusion is based on these results.

Results: When looking at lab results, the mean (±SD) of TSH after T3 withdrawal was 69.9±24.5, while mean (±SD) the TSH after Thyrogen recombinant TSH injections was 111.6±25.3. On the other hand, the mean (±SD) Tg after T3 withdrawal was 24.9±36.7; while, the mean (±SD) of Tg after Thyrogen recombinant TSH injections was 2.03±2.3. Patients after T3 withdrawal had a much higher Tg compared to when they underwent Thyrogen recombinant TSH injection, a high Tg indicates that the patient needs further treatment; this may be missed by the use of Thyrogen recombinant TSH injections which makes it more likely to have underestimated or false negative results.

Conclusion: This is the first study among adult thyroid cancer patients who previously had a total thyroidectomy and iodine ablation in the UAE to compare the use of T3 suppression and withdrawal to the use of Thyrogen recombinant TSH injections in terms of quality of assessment. The mean Tg after T3 withdrawal is much higher than Tg post-Thyrogen recombinant TSH injections. The use of T3 suppression and withdrawal is more specific, sensitive, and beneficial when guiding the treatment course of thyroid cancer patients. This study is the first of its kind in the UAE and will help inform medical practitioners and improve the quality of assessment and early detection of recurrence in patients. The findings of this study may indicate the need for adjustment and revision of clinical guidelines; however, a larger scale of studies is required.

RESILIENCE, CULTURE AND TRAUMA: HOW DO CHILDREN COPE WITH CHILDHOOD ABUSE COMPLEX POST TRAUMATIC STRESS DISORDER IN THE UAE? A SMALL SCALE QUALITATIVE EXPLORATION

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Objective: Complex Post-Traumatic Stress Disorder (C-PTSD) is a common and debilitating mental health problem that occurs often in the event of experiencing childhood abuse. The notion of cultural resiliencies in adjustment or recovery from complex PTSD is poorly understood in this population. This project contributes to the oft-neglected area of cultural resilience in recovery and sheds some light on some cultural resilience factors amongst children recovering from complex PTSD in the United Arab Emirates (UAE). Methods: A small scale exploratory qualitative study of n=6 purposefully sampled children from Child Protective Agencies who had also recovered from Complex PTSD via Eye Movement Desensitization and Reprocessing (EMDR), Prolonged Exposure (PE), Narrative Exposure (NE) or Shame- based Trauma Focused Cognitive and Behavioral Therapy and who met stringent recovery criteria (Children’s Impact of Events Scale (CRIES), cut off 17) were interviewed using semi-structured interviewing. Data analysis using NVIVO took place afterwards. Through inductive reasoning, core categories or themes were identified. Results: Preliminary results (the project is ongoing) suggest that the themes of religion, culture and family may be factors of resilience amongst these subjects. More research is called for.

CLINICAL CHARACTERISTICS AND OUTCOMES IN DIABETES PATIENTS ADMITTED WITH COVID-19 IN DUBAI: A CROSS-SECTIONAL SINGLE CENTRE STUDY

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Aim: To describe the clinical characteristics and outcomes of hospitalised Coronavirus Disease 2019 (COVID-19) patients with diabetes.

Methods: A cross-sectional observational study was conducted in patients with diabetes admitted to COVID-19 to Mediclinic Parkview Hospital in Dubai, United Arab Emirates (UAE) from 30th March to 7th June 2020. They had laboratory and/or radiologically confirmed severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2), known as COVID-19. Variation in characteristics, length of stay in hospital, diabetes status, comorbidities and outcomes were examined.

Results: A total of 103 patients with confirmed COVID-19 presentations had diabetes. During the same timeframe, 410 patients overall were admitted with COVID-19 infection. This gives a total proportion of persons admitted with COVID-19 infection and coexistent diabetes/prediabetes of 25%. 67% (n = 69) of the COVID-19 diabetes cohort were male. Patients admitted with COVID-19 and diabetes represented 17 different ethnicities. Of these, 59.2% (n=61) were Asians and 35% (n=36) were from Arab countries. Mean age (SD) was 54 (±12.5) years. 85.4% (n=88) were known to have diabetes prior to admission, while 14.6% (n=15) were newly diagnosed with either diabetes or prediabetes during admission. Most patients in the study cohort had type 2 diabetes or prediabetes, with only 3% overall having type 1 diabetes (n=3). 46.9% of patients had evidence of good glycaemic control of their diabetes during the preceding 4–12 weeks prior to admission as defined arbitrarily by admission HbA1c <7.5%. 73.8% (n=76) had other comorbidities including hypertension, ischaemic heart disease, and dyslipidemia. Laboratory data (Mean ±SD) on admission for those who needed ward-based care versus those needing intensive care unit (ICU) care: Fibrinogen 462.75 (±125.16) mg/dl vs 660 (±187.58) mg/dl; D-dimer 0.66 (±0.53) µg/ml vs 2.3 (±3.48) µg/ml; Ferritin 358.08 (±442.05) mg/dl vs 1762.38 (±2586.38) mg/dl; and CRP 33.9 (±38.62) mg/L vs 137 (±111.72) mg/L were all statistically significantly higher for the ICU cohort (p<0.05). Average length of stay in hospital was 14.55 days. 28.2% of patients needed ICU admission. 4.9% (n=5) overall died during hospitalisation (all in ICU).

Conclusion: In this single-Centre study in Dubai, 25% of patients admitted with COVID-19 also had diabetes/prediabetes. Most diabetes patients admitted to hospital with COVID-19 disease were males of Asian origin. 14.6% had new diagnosis of diabetes/prediabetes on admission. The majority of patients with diabetes/prediabetes and COVID-19 infection had other important comorbidities (n=76; 73.8%). Only 4 patients had negative COVID-19 RT-PCR but had pathognomonic changes of COVID-19 radiologically. Our comprehensive laboratory analysis revealed distinct abnormal patterns of biomarkers that are associated with poor prognosis: Fibrinogen, D-dimer, Ferritin and CRP levels were all statistically significantly higher (p < 0.05) at presentation in patients who subsequently needed ICU care compared with those patients who remained ward-based. 28.2% overall needed ICU admission, out of which 5 patients died. More studies with larger sample sizes are needed to compare data of COVID-19 patients admitted with and without diabetes within the UAE region.

PREPAREDNESS OF EMERGENCY CARE PROVIDERS TO DEAL WITH DEATH, DYING AND BEREAVEMENT

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Introduction: Emergency care providers are exposed to events involving suffering and tragedy as part of their routine work in the field. They are accordingly expected to deal with death, dying and bereavement in a safe, sensitive, efficient manner, showing empathy and compassion while managing their own emotions. This can be stressful and lead to trauma symptoms, anxiety and depression.

Purpose: To investigate how prepared emergency care providers are to deal with death, dying and bereavement in the prehospital setting in order to recommend strategies that will diminish the emotional strain they experience, as well as decrease the trauma of sudden death and the number of abnormal grief reactions for the bereft.

Methods: The study used a quantitative descriptive prospective design. Data was collected using an online self-report questionnaire that was sent to all operational emergency care providers in
the Dubai Corporation of Ambulance Services (DCAS). The data from consenting participants (n=496) was analysed using the IBM Statistical Package for Social Sciences (SPSS) version 25.0. Inferential statistical techniques such as correlations and chi-square test values were used and interpreted using the p-values. Factor analysis was also conducted for the purpose of data reduction.

Results: The majority of respondents (n=316; 64.4%) reported that they had not received any formal education or training on death, dying and bereavement. Those that had received formal education or training reported that this training was conducted mainly by nursing (n=124; 25.9%) and paramedic (n=65; 13.6%) instructors. A quarter of the respondents (n=126; 25.4%) reported experiencing intrusive symptoms such as loss of sleep, missing work and nightmares as a result of a work-related death or dying incident, but only a few (n=20; 4.1%) had received professional counselling.

Conclusion: This study found that emergency care providers are underprepared to deal with death, dying and bereavement and reported discomfort and anxiety associated with this aspect of their job. A comprehensive death education programme that encompasses the diversity of death and the unique challenges that the emergency and prehospital setting presents should be implemented to reduce emotional anxiety, help emergency care providers cope better with death and decrease the number of abnormal grief reactions on the part of the bereft.

“MEDICLINIC FACILITY SUPPORT HOTLINE . . . HOW CAN WE ASSIST YOU?”

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Background: South Africa’s healthcare system is unique; two fold and comes with various challenges. Throw a Covid-19 pandemic into this mix, and this unique system brings about the most rapid and agile innovative ideas ever seen in South Africa.

Once South Africa went into the countrywide lockdown and healthcare resources became overburdened, it was apparent that ER24 and Mediclinic needed to grab the opportunity to create a Facility Support Hotline to reduce pressure on facilities and clinicians as well as enhance patient safety efforts.

Aims: This hotline was established to assist the hospitals and patrons with COVID related questions and concerns and was quickly expanded to include operational support such as the sourcing of beds as well as logging and coordinating of interfacility transfers. This was done as a measure to ensure patient-centred care Real Help Real Fast®. Furthermore, to ensure real-time referral, as well as accurate updating and use of an existing comprehensive diverts and bed availability database.

Method: An electronic Bed Bureau was created with an overview of real-time bed availability and Mediclinic hospitals capability. This electronic platform was utilised by the Mediclinic Facility Support Hotline to supplement the two-pronged approach executed, from 16 December 2020 to 10 February 2021.

The 24 hour, 7 days a week, Mediclinic Facility Support Hotline was staffed by trained, first line, Emergency Resource Officers (EROs®) who provided assistance with the coordination of patient transfers from one resource limited facility to an available hospital – meeting their COVID-19, funding and clinical needs on short notice. To further enhance the service and assist with what seemed like an impossible task, the EROs’ contacted facilities nationally to confirm hospital bed availability and/or the status of their wards i.e. availability of speciality, equipment and beds for patients (also known as Hospital Diverts). The line was programmed for calls to be routed via three options: Option 1: Logging an Inter-Facility Transfer (IFT); Option 2: Bed Bureau for bed sourcing and option 3: Logging of Hospital Diverts.

Results: The Mediclinic Facility Support Hotline answered 1536 calls and made approximately 5430 outbound calls over the study period. This translates to approximately an average of 95 outbound calls per day.

The answered calls (1536) consisted of the following: Option 1: 476 calls (31%); Option 2: 936 calls (61%) and Option 3: 124 calls (8%).

In total, 650 cases were opened as per end user’s requests, however, 394 of these were cancelled. This means that 256 active cases where for bed resourcing. The success rate for sourcing a bed was 94% (241 beds were sourced).

Beyond just the statistical results, there was overall positive feedback from the Mediclinic group and end-users.

Conclusion: Based on the these results, the Mediclinic Facility Support Hotline had immense success and added value in providing Real Help, Real Fast®, as it allowed the hospitals to concentrate on their core function of patient care. This study has shown that going forward; there is a need to embark on developing a permanent bed bureau platform in South Africa. RealHelpRealFast refers to ER24 Pty Ltd.’s slogan – it has been referenced differently in the abstract for ease of reading.

RECURRENCE OF CERVICAL DYSPLASIA BEFORE & AFTER HPV VACCINATIONS

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Background: Cervical dysplasia, which is also referred to as cervical intraepithelial neoplasia (CIN), is an abnormal change in the cells of the lining of the cervix of the uterus. It is thought to have the potential to advance in progressive stages to cervical cancer.[1] one of the most common cancers among women in the world and in the Middle East.[2] CIN is detected by a PAP smear and is pathologically diagnosed by a tissue biopsy from either the cervix, vagina, or vulva. The degree of abnormality of the diagnosis would be indicated by CIN1 (mild), CIN2 (moderate), or CIN3 (severe).[3] Such screening for cervical cancer assumes great importance as it provides the ability to identify the illness at an early stage to disrupt its progression.[2] Additionally, cervical dysplasia and cervical cancer are both strongly associated with certain human papillomaviruses (HPV).[5]
Purpose

- Assess recurrence of cervical dysplasia after vaccination
- Understand importance of HPV vaccination

Study Objectives

- Identify and analyse HPV status, genotype, and PAP smear of patients at Mediclinic, Dubai Mall before and after HPV vaccination.
- Assess prevalence of recurrence of cervical dysplasia in patients after vaccination.
- Investigate most common HPV genotype and status in each age group.
- Compare data on HPV genotyping and recurrence of cervical dysplasia in the same patients before and after vaccination

Method and Study Design: A retrospective cohort study was conducted of patients who presented to Mediclinic in Dubai Mall between the years 2016 and 2019 who were either HPV positive or negative, and had a PAP test and HPV vaccination done. Data from when each patient first presented to the clinic was collected from their past medical records and followed up until their most recent visit.

Results

- Recurrence occurred in 23% of patients, did not occur in 38.5%
- Significant association between post-vaccination PAP smear and recurrence of dysplasia [p value = 0.00]

Conclusion

- Post vaccination HPV genotype not significantly associated with recurrence
- Recurrence most commonly occurred in 30-40 years old
- Vaccination important due to its effect on PAP smear grade and hence recurrence

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POSTER PRESENTATION ABSTRACTS

SICKLE CELL ANAEMIA KNOWLEDGE AND ATTITUDE TOWARDS SCREENING AMONG STAFF AND UNDERGRADUATE STUDENTS AT HIGHER COLLEGES OF TECHNOLOGY IN THE UNITED ARAB EMIRATES

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Background: Sickle cell anaemia is among the most common genetic diseases in the United Arab Emirates (UAE). Through researches and previous studies, it has been proven that it is necessary to raise the level of knowledge on sickle cell anaemia and the practices towards screening in order to reduce the number of sickle cell anaemia cases. This would significantly minimise the emotional, physical, social and financial burdens on the UAE government, society and families.

Aim: To assess the knowledge and attitude towards screening of sickle cell anaemia among staff and students of both genders at Higher Colleges of Technology (HCT) in the UAE.

Method: A descriptive cross-sectional study design was conducted among 300 participants across all HCT campuses in the UAE. Data was collected from October 2020 to November 2020.

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Aim: The aim of this study was to assess the level of thalassemia knowledge and attitude towards screening among staff and undergraduate students at Higher Colleges of Technology (HCT) in the UAE.

Method: A descriptive cross-sectional study was carried-out across all HCT campuses in the UAE. Data was collected from October 2020 to November 2020 using an online survey. The study survey included 23 questions that were developed by referring to previously published relevant studies. Descriptive analysis and Chi-square tests were performed on all data using Statistical Package for the Social Sciences (SPSS) software and results were considered significant below 0.05 (p < 0.05).

Results: Among the 300 participants within the study, the majority (83.7%) were students, mainly under the age of 21 years-old (45.7%) and were mainly from Abu Dhabi campuses (68%). This study showed that both variables; gender (p = 0.001) and field of education (p = 0.033) of the participants had a statistically significant association with the knowledge of sickle cell anaemia. Interestingly, screening knowledge and attitude toward sickle cell anaemia were also noted to have a statistically significant association with the following variables: gender (p = 0.001), age (p = 0.031), nationality (p = 0.011), field of education (p = 0.001), and HCT status (p = 0.036) of the participants. Furthermore, only 1% of the participants had excellent knowledge toward sickle cell anaemia whereas 37% of participants had poor knowledge on the screening of sickle cell anaemia.

Conclusion: Although sickle cell anaemia is a serious chronic condition that is among the most prevalent genetic diseases in UAE, the overall knowledge of the participants on sickle cell anaemia was below average (43%). Moreover, it is worthy to note that sickle cell anaemia knowledge of the participants on screening practices was poor (37%). Therefore, based on the findings of this study, it is recommended that healthcare authorities provide the community with several educational awareness programs, seminars, 33

THALASSEMA KNOWLEDGE AND ATTITUDE TOWARDS SCREENING AMONG STAFF AND UNDERGRADUATE STUDENT AT HIGHER COLLEGES OF TECHNOLOGY IN THE UNITED ARAB EMIRATES

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Background: In 2018, the Ministry of Health and Prevention stated that at least 8.5% of the United Arab Emirates’ (UAE) population are thalassemia carriers, indicating that it is one of the most common hemoglobin disorders in the country. Thalassemia cannot be eradicated but it can be prevented if the awareness of thalassemia among the UAE population is increased.

Aim: The aim of this study was to assess the level of thalassemia knowledge and attitude towards screening among staff and undergraduate students at Higher Colleges of Technology (HCT) in the UAE.

Method: A descriptive cross-sectional study was carried-out across all HCT campuses in the UAE. Data was collected from October 2020 to November 2020 using an online survey. The study survey included 23 questions that were developed by referring to previously published relevant studies. Descriptive analysis and Chi-square tests were performed on all data using Statistical Package for the Social Sciences (SPSS) software and results were considered significant below 0.05 (p < 0.05).

Results: The total number of participants within the study was 244. Most of the participants (47.5%) had heard about thalassemia and wanted to know more about this condition. Participants mostly heard about thalassemia from family/friends (28.1%) and educational institutes (28%). Moreover, nearly half of the participants (49.5%) knew that patients with thalassemia trait lived a normal life. Furthermore, 48% of participants agreed that family history was the most common risk factor for thalassemia. Additionally, this study found that the most frequent thalassemia treatment in which participants (28.1%) had heard of was regular blood transfusion. A huge number of the participants supported the concept of making premarital screening for thalassemia mandatory by the Department Of Health (DOH) in Abu Dhabi. This study showed that the knowledge of thalassemia had a statistically significant relationship with the number of children (p = 0.013), and field of education of the participants (p = 0.005). Knowledge of thalassemia screening had a statistically significant relationship with the participants gender (p = 0.044) and nationality (p = 0.007).

Conclusion: It is worthy to note that despite the fact that thalassemia is the most common genetic disease in the UAE, the overall knowledge of the participants in this study was below average. Moreover, the knowledge of participants on thalassemia screening was average. Therefore, based on the findings of this study it is recommended for the UAE government to increase the UAE community’s awareness about this serious chronic condition.

CAN PLASTIC SURGERY IMPROVE THE LONG-TERM WEIGHT CONTROL AFTER BARIATRIC SURGERY?

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Introduction: According to the statistics from the International Federation of Surgery of Obesity IFSO, the numbers of bariatric surgery performed in the Middle East and especially in the United Arab Emirates is on the rise. Bariatric surgical procedures performed within UAE has increased from about 2000 cases per year in 2011, 4000 in 2013, 12000 in 2018. Patients undergoing weight loss surgery benefit from metabolic and psychological well-being, but the excess skin looseness throughout the body and the resulting folds can cause poor hygiene and functional impairment. Body contouring and plastic surgery in general can relieve these symptoms and such procedures improve self-esteem, body image and quality of life. However, there are no evidence based guidelines regarding indications for surgery and the choice of surgical procedures for post-bariatric patients.

Objectives: To assess the impact of post-bariatric surgery reconstructive and aesthetic procedures on the long-term results of Bariatric surgery in terms of:

1. Weight control
2. Body image
3. Functional impairment
4. Self-esteem
5. Quality of life
• Weight regain
• Satisfaction with body image and self-esteem.

Inclusion:
Body contouring surgery included Abdominoplasty, Mammo-
plasty, Brachioplasty and Thigh lift. % EWL in 24 months 80%

Demographics and Results
• Bariatric procedure: Omega loop Gastric Bypass
• Study period: 2007 – 2017
• Follow up period: 3–5 years
• 2 Groups of patients: matched for demographics
• Group 1: Plastic surgery group n=200
• Group 2: Non Plastic surgery n=650

Incidental Findings: 60% of bariatric surgery patients suffered
from some sort of psychiatric disorder during their lifetime and
many had issues with body image and self-esteem.

In post-bariatric surgery patients, up to 80% requested body
contouring but only 20% actually had it and reported significant
improvements in quality of life.

Conclusion: In conclusion, our study showed that patients who
had body contouring after bariatric surgery had less weight
regain and better quality of life.

Recommendations
• Larger prospective studies needed
• Sound study design
• Larger sample number
• Randomization
• Long term follow up
• Establish a guideline
• Insurance provider to provide body contouring as a treatment
post Bariatric Surgery

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5. Panniculectomy before and after. Note that the umbilicus is
left in place and prevents re-draping of the abdominal skin.
6. Abdominoplasty before and after. The entire anterior torso
is contoured and excess skin is removed as well as tightening of
the rectus muscles 35

PRIMARY HYPERPARATHYROIDISM IN PREGNANCY-
CASE REPORT AND REVIEW OF LITERATURE

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Case Report: This is a case of Primary hyperparathyroidism
caused by adenoma of the parathyroid gland which was
successfully treated by surgery prior to pregnancy. During the
course of pregnancy, the patient developed hypercalcemia raising
the possibility of incomplete tumor resection or a second
adenoma developing in the other glands. She was monitored
closely for maternal and fetal complications. The baby showed
evidence of fetal growth restriction and induction of labour
planned.

Objective: This case highlights the difficulties in the diagnosis
of hyperparathyroidism in pregnancy due to the vague symptoms
like fatigue, nausea, vomiting, constipation and their similarity
with the normal symptoms of pregnancy.

Hyperparathyroidism in pregnancy is rare. Maternal complica-
tions occur in around 67% of cases include renal stones,
pancreatitis, hyperemesis gravidarum, pre-eclampsia and hyper-
calcaemic crises. The fetal complications can be as high as 80%1
and include up to 5-fold increase in the risk of miscarriage,
intrauterine growth restriction and preterm birth. The maternal
and fetal complications of uncontrolled disease can have serious
implications on perinatal outcomes.

Discussion: This case is important as the incidence of
hyperparathyroidism in pregnancy is around 1%. Women are
3 times more likely to develop the condition. Knowing how few
cases we come across in our practice makes it very likely that the
condition is underdiagnosed.3 Symptoms of hyperparathyroid-
ism such as fatigue, nausea and vomiting can mimic the
symptoms of pregnancy and hence raising awareness amongst
the obstetricians can prevent serious maternal and fetal
complications. Early diagnosis and treatment of the condition
in women has long term benefits on bone health knowing that
menopause can worsen it further.

Conclusion: The case highlights the importance of showing
vigilance in managing pregnancies in women who have
undergone parathyroid resection. Diagnosing hypercalcemia
can be complex because of low albumin during pregnancy
leading to falsely low calcium levels. Furthermore, localisation
scans during pregnancy are contraindicated.

NICE recommends managing such pregnancies in a multidis-
ciplinary setting to minimise Maternal and fetal complications
and optimising outcomes3.

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EUGLYCEMIC DIABETIC KETOACIDOSIS IN A PATIENT WITH TYPE 2 DIABETES MELLITUS ON SODIUM-GLOUCOSE CO TRANSPORTER-2 INHIBITORS INDUCED BY COVID-19

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Background: Recently many reported cases of eu glycem ic Diabetic Ketoacidosis (e-DKA) have been reported in patients with type 2 diabetes mellitus (T2DM) on Sodium-Glucose Cotransporter-2 Inhibitors (SGLT-2) and COVID-19 infection. DKA is a serious metabolic condition of patients with type 1 diabetes (T1DM) however; it may be the presenting feature in patients with T2DM on SGLT-2. Physicians should be aware of other trigger factors of e-DKA in those patients like surgery, trauma, infections and acute illness.

Aims: Early diagnosis of this metabolic condition will help to reduce further complications and reduce mortality.

Methods and Results: A written consent obtained from a 47 years old woman with history of T2DM for 6 years and was on Metformin 1000 mg twice daily. She attended other health care facility and Dapagliflozin 10 mg once daily was added due to poor control DM with HbA1c of 10%. Then was admitted to the ICU of this hospital with symptoms of lower respiratory infection of three days duration. COVID-19 was confirmed on chest x-ray, HRCT scan of the chest and PCR of the nasal swab whereas e-DKA was diagnosed on the laboratory tests results. Other causes of DKA were excluded. The patient has no history of alcohol intake or taking any other drug. Random blood glucose 10.0 mmol/L, HCO3 − 9, pH 7.1, Lactate 1.3 mmol/L, urinary ketones 3 +, ketones in the blood were positive, Hb 15.2 g/dl, white blood cell count 5.00 (103/μL), Neutrophil 9.70 (103/μL), lymphocytes 0.47 (103/μL), platelets 211 (103/μL), PT 15.7 seconds, INR 11.5, D-Dimes 2.74ug/mL, Ferritin 367ng/mL, CRP 186mg/L, serum creatinine 58.4μmol/L, Sodium 140mmol/L, K 3.9mmol/L, serum Cl 109mmol/L anion gap 26mEq/L, BUN 2.4nmol/L.

ECG: normal sinus rhythm without ischemic changes or heart blocks. Liver and cardiac enzymes were within normal ranges. The patient was managed according to the hospital DKA protocol approved by endocrinology and ICU departments of this hospital. The patient improved on the following days and was advised on discharge to avoid the drugs of SGLT-2 inhibitors group.

Conclusion: Patients with T2DM on SGLT-2 inhibitors, should discontinue this group during acute illness as above to prevent the risk of DKA however it is a rare side effect in those patients.

TELEHEALTH TO THE RESCUE DURING COVID-19: A CONVERGENT MIXED METHODS - STUDY INVESTI GATING PATIENTS’ PERCEPTION

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Background: Prior COVID-19, the outpatient consultations in the United Arab Emirates were based exclusively on traditional, face-to- face visits. The onset of the pandemic necessitated abrupt transition to telehealth consultations. Although there are a few tools that gauge the patients’ perception about their experiences, none of them are contextualized to an emergency situation in the Middle East and North Africa region. Accordingly, this study aims at developing and validating a tool to address this gap, and deploying it to assess the patients’ perception of telehealth services during the COVID-19.

Methods: A convergent mixed methods design was adapted. Qualitative and quantitative datasets were collected using a tailor-made survey. The quantitative data captured the patients’ extent of satisfaction and was assessed using SPSS. As for the qualitative data, collected through open-ended questions, it was analyzed using thematic analysis. The qualitative and quantitative findings were then merged via joint display analysis.

Results: Out of the 100 patients that were randomly selected, 94 patients approved to participate in this study. The reliability score of Cronbach’s Alpha for the instrument was 98.9%. The percentage of the total average of satisfaction was 80.67% on a scale of 1 to 100. The Principle Component Analysis showed that 88.1% of the variance can be explained by the instrument (p < 0.001). The qualitative data analysis expanded upon the quantitative findings enabling a better understanding of the patients’ perception. Three themes, revolving around the quality of the patient telehealth experiences, surfaced: ‘Factors that worked to the benefit of the patients’ with great appreciation of the efficiency and efficacy of telehealth services, ‘Factors that the patients were not in favor of’ which mainly included lack of human touch and compromise of physical exam, and ‘Opportunities for improvements as perceived by the patients’ including improvement of appointment scheduling and the utilization information technology.

Discussion: This study introduced a novel patient satisfaction with telehealth consultation survey contextualized to the COVID-19 times. The participants were quite satisfied with the quality of their experience, however suggested areas of
improvement included employing innovative methods to improve the scheduling of appointments. The findings of this study can be used by decision-makers to leverage the identified advantages and opportunities for improvement of telehealth medicine. This will enable making informed decisions regarding the continuity of telehealth medicine irrespective of how matters unfold in relation to the pandemic. It will also better prepare the healthcare sector for potential resurgence(s) of COVID-19 and/or the occurrence of any other similar emergency situation.

KEYWORDS
COVID-19 Pandemic; Telehealth; Consultation; Mixed Methods; Integration; Joint Display Analysis

FEATURES AND OUTCOMES OF SECONDARY SEPSIS AND URINARY TRACT INFECTIONS IN COVID-19 PATIENTS TREATED WITH STEM CELL NEBULIZATION

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Introduction: COVID-19 is the defining global crisis of our time. Secondary complications such as urinary tract infections and sepsis, worsen the already established problem, creating a new challenge. Objective: To characterize the features and outcomes in COVID-19 patients with sepsis and urinary tract infection.

Methods: An observational and analytical study was conducted within the framework of the SENTRY COVID trial at the Abu Dhabi Stem Cell Center, where the patients received a nebulization therapy with the use of autologous stem cells (group A). Those patients were compared with a non-stem cells treated control arm (group B), and both received the United Arab Emirates COVID 19 standard management. An analysis of the culture samples, antimicrobial agents, and the efficacy of the therapy on patient outcomes was done.

Results: A significant difference between the groups was found in the urinary infection incidence (p = 0.0206). Patients in group A showed a lower tendency to sepsis in comparison with group B (7% vs 21%), HR = 0.35, (95% Confidence Interval: 0.13 – 0.91), p = 0.0175. It was calculated an NNT = 7.3. Candida albicans was the most frequent agent causing sepsis and urinary infections. The massive use of broad-spectrum antimicrobials was striking.

Conclusion: We found a protective factor of stem cells against secondary infection in COVID 19 cases, in terms of sepsis and urinary infections. The suggested immunomodulatory effect of stem cells offers a therapeutic strategy to manage the disease and avoid several complications. Antimicrobial agents can lead to increased opportunistic infections, so a rational approach to these treatments must be considered.

RETROSPECTIVE REVIEW OF IN-HOSPITAL CARDIAC ARREST AT A TERTIARY PRIVATE HOSPITAL IN DUBAI

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Acknowledgements:
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Introduction and background: At Mediclinic City Hospital, an in-hospital cardiac arrest is called a code blue. A dedicated team made up of physicians and nurses from the Emergency Department (ED) and Intensive Care Unit (ICU) respond to the event in the facility. The team are all Advanced Life Support (ALS) trained and assist with running the codes and facilitating transfer to ICU or ED depending where the code occurred and providing the relevant expertise. The code blue team has a dedicated time keeper who records all the variables for a standard ALS resuscitation.

The hospital has 180 inpatient beds and 24 ICU beds. The Emergency Department sees on average 3500 – 4000 patients, with a 16–18% admission rate.

Objectives
• Data analysis of the code blue events at Mediclinic City Hospital to review
• The number of events
• Average age between the group that had ROSC versus and unsuccessful attempt. Location where the code blue occurred in the facility
• Outcomes were only defined as a Return of Spontaneous Circulation (ROSC) vs Deceased (the analysis did not consider the neurological outcome) Average duration of resuscitation attempt
• Initial cardiac rhythm when the code blue team was activated
• To correlate the initial rhythm with the likelihood of ROSC
• Assess the time taken to convert a non-shockable initial rhythm to a shockable rhythm during the code blue

Methods
• Retrospective chart review of the code blue events at Mediclinic City Hospital between 2016 and 2020.
• Inclusion criteria: All code blue events for patients 18yrs and older
• Exclusion criteria: Patient under 18yrs of age
• Data was collected from the standard code blue event form reviewed by the resuscitation committee
• A false code was defined as a non-cardiac arrest or critical event
• ROSC was defined as an organized rhythm with a pulse, associated with a cardiac output
• Other rhythms were defined as anything that did not fall into the ACLS categories of shockable and non-shockable rhythms

Results: A total of 376 Code Blue events occurred during period under review. In 46% of the events ROSC was achieved.

Average age in ROSC group 67.5yrs and the group that demised 67.1yrs. The majority of code events occurred in ICU 79% followed by the emergency department at 8%. ROSC was achieved on average within 10.2 minutes. The code was stopped on average within 24.4 minutes of initiation of the resus in unsuccessful events. On average change from non- shockable to shockable rhythm was achieved within 4.7mins from initiation of code blue.

In 62 of the code blue events out of 343 (total events minus the shockable rhythms at onset) changed to a shockable rhythm during the resuscitation attempt. The initial rhythm showed asystole 39%, pulseless electrical activity in 43%, other rhythm
9%, pulseless ventricular tachycardia 2% and ventricular fibrillation 6%.

The following cardiac rhythms was associated with ROSC in asystole in 15%, pulseless electrical activity in 66%, other rhythm 63%, pulseless ventricular tachycardia 66% and ventricular fibrillation 80%.

**Conclusion:** An in-hospital cardiac arrest at Mediclinic City Hospital activates the code blue team. A return of spontaneous circulation was achieved in 46% of the resuscitation events. Time to return of spontaneous circulation was achieved on average within 10.2 minutes. Resuscitation attempts where stopped on average after 24 minutes. The majority of in-hospital cardiac arrests occurred in the intensive care unit followed by the emergency department. In keeping with international trends, shockable rhythms carried a higher percentage of ROSC 40%

**HOW DECISIVE IS THE CONFIGURATION OF ARTERIAL GRAFTS IN CORONARY BYPASS SURGERY?**

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**Background:** The benefit of arterial revascularization in coronary bypass surgery (CABG) remains controversial. The incremental value of additional grafts to the left internal thoracic artery (ITA) has been mainly assessed according to the number of arterial grafts used, possibly limiting the detection of its actual impact, and not according to the number of arterial anastomoses performed which defines the concept of arterial revascularization more accurately.

**Aims:** We analyzed our 25-year experience in arterial grafting to test the hypothesis that the number of distal arterial anastomoses (DAA) performed in patients undergoing CABG has an impact in their long-term outcome and to detect any additional effect of the supplemental graft configuration used: Bilateral ITA (BITA), sequential ITA (SeqITA), or gastroepiploic artery (GEA) as a third arterial graft.

**Methods:** Retrospective review of 3685 primary isolated coronary artery bypass grafting (CABG) performed from 1989 to 2014 was conducted with a 13-year mean follow-up. One arterial graft (SITA) was used in 969 patients, two arterial grafts, ITA or gastroepiploic artery (GEA), in 1883 patients (BITA: 1644; SITA +GEA: 239), and three arterial grafts in 833 patients (BITA +GEA). Totally, 795 patients (22%) received one DAA, 1142 patients (31%) two, 1337 patients (36%) three, and 411 patients (11%) four or more. A first (GEA) matched group analysis was done in the 1432 patients who received BITA on the left side and either vein graft or GEA to bypass the right side (2 groups of 420 patients). A second (SeqITA) matched group analysis was done in the 1644 patients who received BITA on the left side without additional arterial graft and either sequential or non-sequential ITA graft (2 groups of 334 patients).

**Results:** In this series the early mortality was 1.6% and it was not influenced by the surgical technique. Late mortality was significantly influenced by age, gender, heart failure, LV ejection fraction, diabetes status, complete revascularization, number of arterial grafts, number of DAA, both ITA, sequential ITA graft, GEA graft. In multivariable analysis with Cox regression model, the number of DAA was the only technical significant independent prognosis factor of late survival (p < 0.0001), predominant over both ITA, complete revascularization and number of arterial grafts. The impact of the number of DAA on survival was found discriminant from 1 to 3; after 3 there was no more additional effect. According to the GEA matched group analysis, the graft configuration on the right side (vein or GEA) had no impact on long-term survival when BITA were used to bypass the left side. According to the SeqITA matched group analysis, sequential ITA was a significant independent prognosis factor of late survival, contributing significantly to the influence of the number of DAA on survival.

**Conclusion:** The number of distal arterial anastomoses is an independent predictor of long-term survival, predominant over the number of arterial grafts and the completeness of the revascularization; higher the number, better the late survival. The contribution of sequential ITA graft was found determinant, underlying the benefit of additional bypass targets revascularized with an ITA.

**FETAL ANOMALY SCREENING SERVICE- 12 MONTHS STUDY**

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**Objective:** We would like to conduct a study on the Fetal Anomaly Screening Service at Mediclinic Hospital.

The aim is to assess the prevalence, pattern, risk factors and outcome of congenital anomalies among women who have undergone fetal anomaly screening. This would be the single largest study in UAE looking at prevalence, pattern, risk factors and outcome of congenital anomalies among women who have undergone fetal anomaly screening.

We aim to conduct a cross-sectional retrospective review of the medical records of all pregnant women who present at Mediclinic Hospital over a 12 month period. Maternal characteristics such as age, ethnicity consanguinity, assisted conception and congenital anomaly status as confirmed by the tertiary fetal medicine unit and the outcome of the babies at birth would be studied.

**Background:** Congenital disorders is a leading cause of perinatal mortality and morbidity. As per the WHO data from 2004 around 260,000 deaths worldwide (about 7% of all neonatal deaths) were caused by congenital anomalies. The mortality rates are most prominent in regions of lower mortality rates such as European region accounting for around 25% of the neonatal deaths1.

According to the Department of Health, all health care professionals are required to offer Fetal Anomaly screening to pregnant women. This includes aneuploidy screening in the 1st trimester and a detailed anomaly scan in the 2nd trimester between 18–20 weeks of gestation. The aim is to identify babies with chromosome anomalies namely T21, T18 and T13 and
structural anomalies at the detailed anomaly scan so that advanced preparations are made for the baby at birth.

There is significant under-estimation of congenital anomalies in the UAE due to poor uptake of the fetal anomaly screening at the health facilities, under-reporting, deficient diagnostic capacity, lack of skills and poor awareness amongst professionals and patients.

Prevalence studies are needed to establish baseline rates, demonstrate changes that occur over time and give clues to aetiology.

Data from various small retrospective studies across the UAE quote congenital anomaly rates between 7–8%, 4, 5, 6. This rate is significantly higher than that reported in the western countries. Some of these studies have been conducted at the tertiary referral fetal unit and could explain the higher background incidence. There is a distinct lack of recent published data on the anomaly trends in the UAE.

We aim to look at the incidence of fetal anomalies, detection rates in different trimesters of pregnancy, maternal characteristics associated with fetal anomalies and neonatal outcomes.

The study will provide important data on the incidence of anomalies in the background population and help with counselling couples who wish to embark on a pregnancy and those with risk factors. The detection rates will guide couples when seeking screening services.

Neonatal outcome data will assist mothers in making choices when faced with abnormal pregnancies.

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PARENT SATISFACTION WITH CARE AT THE NEONATAL UNIT OF MEDICLINIC AL NOOR HOSPITAL, ABU DHABI

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Background: The admission of a newly born baby to the neonatal unit has a major impact on the baby’s family. The parents are likely to experience uncertainty, increased anxiety and depression. The parent’s distress has been associated with multiple factors including adapting to having sick newborn, the stress of the NICU environment, the physical and emotional isolation from the baby, in addition to the normal stresses of parenthood. Positive experience and satisfaction of parents of babies admitted to the neonatal intensive care is a critical yardstick in measuring the service quality from the parents’. Family-centered care in the NICU is regarded as a core strategy to improve the outcomes of critically ill infants because it acknowledges and addresses the key role of parents in the infant’s health, both during inpatient care and following discharge. A core element of family-centered care is effective communication by nurses with parents. 1Neonatal intensive care parent satisfaction: a multicenter study translating and validating the Italian EMPATHIC-N questionnaire: https://riponline.bioomedcentral.com/articles/10.1186/s13052-017-0439-8

Objective: To describe the satisfaction of parents of infants admitted to Mediclinic Al Noor Hospital neonatal intensive care and to determine which areas require improvement from the medical and nursing team. A secondary objective is to identify potential areas not covered in the structured survey of parental satisfaction to enhance the quality of service.

Methods: This is a prospective longitudinal open cohort study of all babies admitted to NICU for longer than 24 hours. Eleven dimension of parent’s satisfaction were evaluated. This evaluation was by means of a structured survey which was completed by the parents on the day of discharge.

All babies who stayed in NICU for longer than 24 hours were included in the study. The study was conducted in the period from September 2020 to December 2020. The total number of Discharged babies in NICU during the study period is 130 babies. The total number of distributed survey forms is 95, and returned filled survey form is 53. Most of the respondent in the survey were 75% from mothers and 25% from the fathers.

The measured elements of parental satisfaction included:
Assurance, Caring, Communication, Consistent information, Education, Environment, Follow-up care, Pain management, Participation in care, Proximity, and Support. 2Neonatal Intensive Care: Satisfaction Measured From a Parent’s Perspective: Jeanette M. Conner and Eugene C. Nelson: Pediatrics January 1999, 103 (Supplement E1) 336–349;

Results: 100% of NICU parents’ response were overall satisfied with the NICU services.

Discussion: The results reflects a very satisfactory outcome as the overall satisfaction rate was 100%. This exceeded our local bench mark which is 80%. This bench mark was derived from
averaging the mean of 87% obtained by 3Parental satisfaction with neonatal intensive care units: A quantitative cross-sectional study:Hagen et al. BMC Health Services Research (2019) 19:37 Page 7 of 12 and 76% (Hagen et al. BMC Health Services Research (2019) 19:37 Page 8 of 12).

The areas of particular strength were: Assurance and trust in caring of their neonate and support in newborn care. The areas which requires more attention from the medical and nursing staff are consistent and detailed update on baby’s progress and communication with the NICU parents.

The open comments part of the survey was useful in highlighting areas not covered in the survey. Many parents commented on the importance of having a lactation Consultant in the unit while some other parents suggested to improve the noise reduction methods in the unit. Some other parents suggested to improve communication between parents and the neonatal team.

Conclusion: The survey was conducted over a span of 4 months. The majority of parents 100% were overall satisfied with the care offered their baby during stay in the neonatal unit. The areas where more efforts are required were identified as communication with parents. Some parent ideas and feedback are very constructive and will be relayed to the Neonatal team.

Keywords: parent satisfaction, missed nursing care, neonatal intensive care unit, infant, patient satisfaction, nurses, hospitals

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ECHOCARDIOGRAPHIC PATTERNS AMONG CRITICALLY ILL PATIENTS WITH COVID-19: IMPACT OF CARDIAC INJURY AND COAGULATION BIOMARKERS

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Background: The current data correlating echocardiographic findings among patients with COVID-19 with consecutive laboratory parameters is scarce. We performed a complete echocardiographic evaluation and measured troponin, D-dimer and BNP at the time of admission and throughout hospitalization in critically ill patients with COVID-19. The purpose of this study is to report on the dynamic interplay between echocardiographic and laboratory findings and provide insights into the mechanism of myocardial injury.

Methods: 28 critically ill patients, with laboratory-confirmed COVID-19, were retrospectively assessed. Four echocardiographic patterns (normal, left ventricular diastolic dysfunction, left ventricular systolic dysfunction and right ventricular dysfunction) were identified and correlated to serial measurements of biomarkers of myocardial injury (troponin), coagulation (D-dimer) and cardiac dysfunction (BNP).

Results: Median age was 52 years (31–71), 5 patients (17.9%) were female. Eight patients (28.5%) had normal echocardiogram. The most common abnormality was left ventricular diastolic dysfunction with left ventricular hypertrophy present in 10 patients (35.7%), followed by left ventricular systolic dysfunction observed in 6 patients (21.4%) and right ventricular dysfunction in 4 patients (14.3%). Troponin I and BNP were significantly high at all time points throughout hospitalization in patients with LV systolic dysfunction. Troponin and BNP were only significant much later in the disease course in patients with RV dysfunction. D-dimer was significantly higher than upper reference limit of normal in all patients.

Conclusion: Early and persistent elevation of troponin and BNP correlate and predict left ventricular systolic dysfunction. Right ventricular dysfunction is a late manifestation of COVID-19 and correlates with a significant and late increase in D-dimer, troponin and BNP.

ADVANCEMENTS OF COSMETIC OUTCOMES IN NEEDLESCOPIC MINI-SCAR-LESS (MSL) TOTALLY EXTRA PERITONEAL (TEP) INGUINAL HERNIA REPAIR: A SINGLE CENTRE AND SINGLE SURGEON REVIEW

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ABSTRACT
Inguinal hernias are a very common surgical presentation affecting both genders with a prevalence of 1.7% for all ages and 4% for those aged over 45 years. Males have a higher lifetime risk of inguinal hernia estimated at 27–43% compared to women with 3–6% risk.

With an estimate 223 million inguinal hernias occurring each year globally this is a field in which any surgical advancement can have a tremendous impact on a large proportion of the
population. In a 2017 systematic review and meta-analysis of the current literature, it showed that of the 350 randomised control trials looking at surgical outcomes only 2 included patient satisfaction, including cosmesis, as an outcome of concern. Patient satisfaction was identified as the 3rd most patient-important outcome at (17%) behind Morbidity and Mortality (41%) and Functionality (37%). The intention of this study is to review the cosmetic outcome and patient satisfaction of all TEP inguinal hernia repair surgery performed at a single center, Mediclinic Parkview Hospital in Dubai, UAE, and ensure that changes to the standard TEP procedure to improve cosmetic outcomes has not compromised the fundamental patient-important outcomes of morbidity, mortality and functional outcome.

Background: Mediclinic Parkview Hospital is a newly established, tertiary hospital located in the Al Barsha South suburb of Dubai, United Arab Emirates. It opened in September 2018, and provides 182 beds to a culturally diverse population. There are currently 5 full-time operating theatres, with a General Surgery department comprising of four international consultants performing on average 76 inguinal hernia surgeries per year. The department is led by Professor Amir Nisar, whose advancements in Totally Extra Peritoneal (TEP) hernia repair have formed the foundation for this review.

Totally Extra Peritoneal repair of groin for Inguinal, femoral and Obturator hernias has become the gold standard over the last three decades. It offers far superior results than conventional open approach regarding less post-operative pain, early mobilisation, early return to activity, decrease length of hospital stay, early return to driving, early resumption of exercise, early return to work, lesser chance of hernia recurrence and chronic pain due to surgery in unilateral, bilateral and recurrent inguinal hernia surgery.

The standard operation requires three cuts in the lower abdomen with accumulative incision’s length of 3–4cm. The technique involves Balloon dissection kit for camera port and two other working ports. We had improved this technique to Needlescopic Hernia repair with accumulative incision’s length of 1.6cm, offering much better cosmesis and less post-operative pain at the port sites in the abdominal wall since 2018. Most recently we have introduced a further improved version of the technique and now we perform the same operation through a total incision size of nearly just 1cm. Cosmetically this is a much superior operation than its previous versions. There are scars in the lower abdomen, hence mini-scar, however the size in so small that these cannot be identified by an on looker even to some trained surgeon in the post-operative stage, thus the addition to the name of the technique; Mini-Scar less TEP repair.

Though the cuts in the abdominal wall are minimal; however, the end surgical result is the same. There small variations in surgical steps and techniques such as the use of blunt dissection in replacement of balloon dilatation and light weight mesh that allows for the removal of a standard 10 or 12mm umbilical incision.

Aims: To determine the patient-important outcomes (Morbidity, Mortality, Functionality and Patient satisfaction) of all TEP hernia repairs performed by Prof Amir Nisar at Mediclinic Parkview Hospital from January 1st 2019 to October 31st 2020 to determine if the new MSL TEP repair technique can be used to improve patient-important outcomes without the compromise of primary surgical outcomes.

Furthermore this aims to standardise the treatment of inguinal hernia repairs in the region to ultimately improve patient care and outcomes.

Method: The surgical records of all inguinal hernias performed at Mediclinic Parkview Hospital were retrospectively reviewed for the timeframe January 1st 2019 to October 31st 2020. Of the 110 identified cases, 34 were performed by Prof Amir Nisar, of which, 31 met the inclusion criteria for review. These 31 patients each received a tailored questionnaire regarding their post-operative recovery and overall satisfaction. This information was combined with medical records documenting VAS Scores, discharge dates and analgesic requirements to create a data set specific for Mediclinic Parkview Hospital that could then be compared to global standards.

The international standards were identified using literature review and meta-analysis of North American and European surgical registries for hernia repair over the past 10 years.

The two data sets were then compared using statistical analysis to determine a level of significance given the large discrepancy in sample sizes.

Results: Preliminary data has shown a significant increase in patient satisfaction in all 3 patient-important outcomes while also showing improvement in a large number of primary surgical outcomes when compared to the standard TEP hernia repair technique on a global stage.

Fantastic cosmetic results, as reported by patients stating, no visible surgical scars as soon as 1 month post-operatively with no post-operative complications and VAS scores of 0/10.

Conclusion: MSL TEP hernia repairs when performed at Mediclinic Parkview Hospital by Prof. Amir Nisar are showing improved patient-important outcomes, focusing on cosmesis, when compared to global standards without any compromise to surgical based outcomes such as hernia recurrence, post-operative complications and long term post-operative pain.

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MARRIED WOMEN BETWEEN THE AGES OF 18–30 AFFECTED BY DOMESTIC VIOLENCE EMOTIONALLY IN THE UAE

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Objective: This research proposal outlines a project on domestic violence toward women in the UAE. Unfortunately, violence against women is a serious social issue in the UAE that affects many women between the ages of 18–30. Therefore, a study will be conducted on emotional domestic violence against married women in the UAE between the ages 18–30. The goal of this study is to raise awareness in the community about the impact of emotional domestic violence against women.

Method: This study will conduct a convenience sample of 4 women between the ages 18–30 who have escaped domestic violence in the UAE and administer semi-structured interviews around the issue of coping and resilience. The method used for selecting the sample is a non-probability sampling that is based on the social status of women between the ages of 18 to 30 who visits the Social Support Centre. Field notes from observation will also be utilized to gather descriptive data and to understand this group’s behaviors and their interactions within the center or in their natural environments.

Procedure: Selecting a sample from all married women who visit the Social Support Centre is appropriate because the study include domestic violence cases related of married women between the ages of 18 to 30 years and analyze the emotional impact of domestic violence on this selected group. To identify the population, the center visits’ cases that is related to domestic violence and those who have a history of being victims of this social issue will be utilized.
to find out any gaps in the prescriptions and administration of antibiotics. The study may then be in a position to recommend additional interventions to improve the practice based on the findings.

**Methods:** This is a prospective study which was carried out over a period of 16 weeks from 15/09/2020 – 31/12/2020 at the Neonatal Unit of Mediclinic Alnoor Hospital in Abu Dhabi, UAE. Inclusion Criteria: All newborns who received intravenous antibiotics in the neonatal unit or transitional care unit during this period were included in the study. There were no exclusions.

**Data Collection:** The following data was collected for each episode of antibiotic prescription: demographic data including the gestational age and the birth weight, the working diagnosis at the time of antibiotic prescription, collection of blood culture and other septic workup prior to commencement of the antibiotics, repeat of the inflammatory markers within 12–24 hours of giving the first dose of the antibiotics, the antibiotics used, their dose, route and duration. Other data included the volume of the blood taken for blood culture, the time lag between decision to treat and commencement of the antibiotics, the trough levels, renal function and hearing test upon the use of Vancomycin and Gentamycin. The outcome of the babies was collected as a secondary measure.

**Benchmark:** The Neonatal unit at Mediclinic Alnoor hospital has set standards for management of neonatal infection which are in line with international recommendations. These were used as the bench mark and included:

1. The antibiotic prescription should be justified as per the current unit guidelines.
2. The baby receiving antibiotics should have a blood culture plus inflammatory markers as a minimum before starting antibiotics.
3. The blood culture sample taken should be at least 1 ml.
4. The blood culture should be taken aseptically from peripheral venous blood.
5. The antibiotics are administered within 60 minutes of the decision to treat.
6. The choice of the antibiotic should conform to the unit guidelines.
7. The prescribed dose of the antibiotics should be appropriate as per the unit guidelines.
8. The drug levels of Gentamicin and Vancomycin (when indicated) are done and at the correct time.
9. The blood culture (or other tissue culture) result is available in the Electronic Health Record within 48 hours of starting the antibiotics.
10. The total duration of the antibiotic course should appropriate as per the unit guidelines.
11. All babies with positive blood culture should have a CSF examination unless there is a specific justification not to.

**Results:** There were 20 episodes of antibiotics prescriptions to a total of 19 babies. Male to female ratio was 2:1. 40% of the prescribed episodes were for Low Birth Weight babies. The preterm babies (< 37 completed weeks of gestation) had more episodes of antibiotic prescriptions than term babies (65% vs 35%). All the babies (100%) received the unit first line antibiotics for early onset sepsis (Benzyll Penicillin plus Gentamicin) and the same applies for late onset sepsis including a suspected meningitis. The justification for commencement of the antibiotics conformed to the unit guidelines in all episodes (100%). The main diagnoses associated with antibiotic prescription were: Respiratory distress (80%), 2 or more infection risk factors (15%), and clinical suspicion of sepsis (5%). The antibiotics courses duration observed the unit guidelines in 85% of the episodes and was longer by 24 hours in 15%. (Table 1) below shows the unit performance against the standard set by the neonatal unit guidelines.

**Discussion:** Dustin D. Flannery et al (in Paediatrics, September 2018)7 identified the main indications for commencing antimicrobials in NICU setting as: prophylaxis in babies at high risk of infection, empirical treatment of suspected infection and as targeted treatment of confirmed infection 7. Our results showed similar pattern (15%, 80% and 5% respectively). More preterm babies compared to term babies (65% Vs 35%) in our population received a course of antibiotics. This is in line with international statistics as the antibiotic use in preterm babies is more prevalent due to their higher Incidence of morbidity and mortality from early-onset sepsis (EOS) 8, 9. The common areas of implementation of stewardship actions focus on reducing initiation of antibiotic therapy as well as shortening the duration of antibiotic therapy 10. Initiation of the antibiotics followed the unit guidelines in all the 20 episodes (100%), while the duration was longer by <24 hours than the planned duration in 15% of the cases due to delay in availability of the blood culture results in the patient’s electronic health records. The total duration of all the antibiotic courses was <72 hours. This reflects the fact that there was no positive blood culture in the cohort and the babies were relatively well. The standards of the unit were met in all the cases (100%) re: Blood culture taken before starting antibiotics, Inflammatory markers taken before starting antibiotics, choice and time of antibiotics administration, blood culture volume and technique, and necessary precautions when using ototoxic or nephrotoxic antibiotics.

Our results shows a very high level of adherence to the unit guidelines re: infection and antibiotic use. We acknowledge the small numbers of our antibiotic prescription episodes (20 in total) but the 100% compliance in almost all the items assessed was very encouraging. We conclude neonatal guidelines are very helpful to secure the implementation of antibiotics stewardship programs. This in turn should reduce unnecessary antibiotic exposure.

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cases have been performed since its launch in June 2020. While part of its comprehensive robotic surgery program and currently for everyone. position to ratify and mature this discipline making it accessible Middle East welcoming talent from the world over places it in a thriving industry as in Europe. Its position as a leader in the conjunction with its health tourism vision and hopes to replicate ultra-modern society has adopted this trailblazing science in the globe when dealing with the novel coronavirus epidemic. It upsetting and challenging time for medical professionals all over design and performance. The year 2020 brought with it an evolved from a theoretical assertion to a credible option that significantly better patient outcomes could be achieved with less surgical trauma2. It would take the landmark “Linbergh Operation” in 2001 for people to recognize the possibility of having a robot in the operating theater when Prof Marescaux performed a transatlantic robot assisted cholecystectomy on a patient in Strasbourg while sitting in New York3. Ever since, the notion of robot assisted surgery has evolved from a theoretical assertion to a credible option that fulfills the entire potential of minimal invasive surgery allowing shorter recovery times and less complications even in complex procedures. The fourth generation DaVinci Xi (Intuitive Surgical, Inc., Sunnyvale, CA, USA) is one of the most advanced surgical robots in the market which has built up its technology based on lessons from the last two decades ensuring substantial improvements over design and performance. The year 2020 brought with it an upsetting and challenging time for medical professionals all over the globe when dealing with the novel coronavirus epidemic. It also marked the entry of robotic surgery in Dubai which has taken the industry by storm. Dubai with its reputation of being an ultra-modern society has adopted this trailblazing science in conjunction with its health tourism vision and hopes to replicate the thriving industry as in Europe. Its position as a leader in the Middle East welcoming talent from the world over places it in a position to ratify and mature this discipline making it accessible for everyone.

Mediclinic City Hospital Dubai has introduced this system as a part of its comprehensive robotic surgery program and currently over 100 successful surgeries including urology and gynecology cases have been performed since its launch in June 2020. While many robot assisted surgeries have been accomplished, Mediclinic City Hospital is the first medical facility in the entire Middle East to carry out novel procedures like:
- Transversus Abdominis Release (TAR) for large complex ventral hernias with minimally invasive robotic approach.
- Colectomies with intracorporeal anastomoses.
- Robotic assisted pyeloplasty in a pediatric patient.
- Other cases which are a first for Dubai include:
  - Rectal cancer surgery with ultra-low anastomoses.
  - Fundoplication surgery for para-esophageal hernias.
  - Liver Resection.
  - Pancreatic resection.

While these procedures are being carried out in routine in well-established centers in Europe, their diffusion into the Middle East heralds a new future for robotics in this region and with Mediclinic City Hospital Dubai being an early adapter it maintains its position as a market leader in the field of advanced surgery.

**Back to The Future:** The advantages observed with robotic surgery are becoming more and more apparent as further case numbers are being included in ongoing studies bringing some semblance to patient outcomes envisioned by early practitioners. What the robotic platform loses in the domain of haptic feedback, it compensates beautifully with superior immersive visibility using a high definition three-dimensional view. Stable camera control, eradication of tremors and capability to work with 7 degrees of freedom of movement ambidextrously equip surgeons with the precision and control that is expected of progressive medicine. These are unprecedented gains in supporting surgeons with enhancements in perception, processing and action4. With more and more robotic systems being launched around the world, the surgical community is seeing a remarkable ongoing diffusion of robotic surgery in clinical practice. The people of UAE have shown an exceptional appetite for technology and incorporation of the robot in the healthcare system is yet another feat that encourages growth and betterment for society as a whole.

**With Power Comes Responsibility:** Establishment of a robotic surgery programme utilizes complex implementation chains which are motivated by various stakeholders within an organization5. Administrators alongwith surgeons can work in sync to devise a programme that is both patient centric and adaptable6. The goal is to achieve acceptable clinical outcomes and can be attained and ensured through two elements: expertise in using the equipment available and a structured training programme7. While training centers and courses are well developed in the European countries and the US for residents and surgeons to undertake training and proctoring for robotic surgery, the Middle East has generally lagged behind in this endeavor. As more and more hospitals are embracing this platform, it is imperative for general surgeons to be appropriately trained in this technology8. A structured training curriculum needs to be devised by experts in the field ensuring systematic development of not only surgeons and trainees but operating theater staff and coordinators as well. Collaboration among surgeons is the key to materialization of this vision of making a training pathway here in the UAE so as to ensure budding surgeons are kept abreast of the skills they require for the future. We also recommend establishing a Robotic Registry to ensure systematic pooling of data while using it to improve clinical outcomes, robotic team performance and safeguard public health.

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Efficacy of methylprednisolone in COVID-19 patients

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Background: Glucocorticoids are occasionally used in systemic infections due to their potential role in controlling the inflammatory response. The use of steroids in the context of viral diseases is still controversial as it has shown to have a deleterious effect in various viral infections. However they do have an important role in the management of cytokine storm in COVID 19 infection. This study looks at the role of Methylprednisolone in management of COVID 19 patients who have moderate or severe respiratory distress.

Aims: The primary objective of the study was to determine the effectiveness of intravenous methylprednisolone in the treatment of patients with moderate to severe COVID 19 infection. The secondary objective was to assess the adverse effects of this treatment and its effect on time to negative PCR swab.

Methods: A retrospective single arm observational study was conducted on adult patients admitted to our hospital during the period of March to May 2020. The data extracted included pre and post treatment patient symptoms, respiratory rate, oxygen saturations, CRP levels, ferritin, LDH, chest x-ray / CT scan, the occurrence of hyperglycemia or GI bleeding and the time to viral clearance.

Results: 71 patients received IV methylprednisolone and 49 met the inclusion criteria. The age range was 26 to 67 years (mean 49.6 years) and 41 (84%) were males. Comorbidities were present in 32 patients and included diabetes mellitus in 8 (16%), hypertension in 12 (24%), diabetes and hypertension both in 20 (40%), asthma in 1 (2%), other medical disorder in 4 (8%) and no medical history in 18 patients (36%). The dose used in all patients was 40mg by intravenous infusion twice daily over for a total of 4 days. All 49 cases had one or more of the following symptoms: fever, cough, shortness of breath, fatigue, body, aches, vomiting and diarrhea. These improved in 45 patients (91%) post treatment. The respiratory rate was abnormal in 21 patients and improved or normalized in 20 (95%). Abnormal SpO2 measurements were found in 23 patients and improved in 20 (86%). CRP was elevated in 46 cases and improved in 41 (89%). Ferritin levels were raised in 44 patients and improved in 28 (63%). LDH levels were elevated in 44 patients and improved in 23 (52%) however in 11 patients it had not been checked again after treatment. Radiological features of COVID-19 infection were present in all patients and improvement was documented post treatment in 10 cases (20%), no change in 19 (38%), and worsening in 9 (18%). In 11 (22%) cases radiological assessment was not repeated. All patients were alive until their last follow up visit.

All patients developed hyperglycemia while none of the patients developed GI bleeding. Viral clearance was evidenced by 2 consecutively negative PCR results 24hours apart. Clearance was achieved in all patients, ranging from within 1 week to 5 weeks and with a mean duration of 1.8 weeks. Within the first 2 weeks 41 patients (83.7%) were clear, between 2 and 4 weeks 6 (12%) and between 4 and 5 weeks 2 patients (4.1%) were clear of the virus.

Conclusion: This relatively small study demonstrates that methylprednisolone plays an important role in the treatment of moderate to severe COVID 19 infection, carries a high rate of efficacy, low incidence of serious adverse effects and does not adversely affect clearance of the virus. Further studies with matched controls may provide greater evidence to recommend this routinely.

COVID-19 infection in patients with rheumatic conditions: Our experience

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Introduction: According to the literature, patients with rheumatic disease receiving immunosuppressant medications are at higher risk of getting infections in general [1], however this may not be entirely translated with Corona virus disease 2019
(Covid19) infections according to the global rheumatology alliance provider registry (2). And to our knowledge, there is currently no evidence identifying risk factors for poor outcome with COVID-19 that are specific to rheumatic disease. In fact, some medications used to treat rheumatic diseases, such as hydroxychloroquine and interleukin-6 inhibitors, are being studied for the prevention and/or treatment of COVID-19 and its complications including a cytokine-storm (3). Because of the lack of published literature from the middle east, we wanted to share our experience from two Mediclinic hospitals in Dubai, acknowledging that the emirates society of rheumatology has been also involved in registering patients from the United Arab Emirates in the global rheumatology alliance registry.

**Objectives:** To further understand the behaviour of this virus in our patient population, we performed a retrospective observational study looking at the profile of patients with different rheumatic diseases who contracted COVID-19 infection in two Mediclinic Hospitals in Dubai.

**Methods:** Data of patients who attended the rheumatology clinic were collected via patients’ electronic medical records. This included patients demographics including age, sex, nationality, body mass index, existing co-morbidities, rheumatological diagnosis and their full drug history. The presenting symptoms, any complications that occurred and the time taken for full recovery were also recorded.

**Results:** A total of 17 patients were identified, 11 (65%) females and 6 (35%) males with a median age of 44 (26–70), with 2 patients over the age of 64 (11%). Two patients (12%) were obese, 5 (29%) were hypertensive, 2 (12%) were asthmatic, 5 (29%) were smokers and one patient (6%) was diabetic.

Majority of patients (88%) had mild to moderate disease with fever, cough and myalgia being the predominant symptoms. Two patients needed hospitalisation, one with a diagnosis of systemic lupus erythematosus (SLE) with lung involvement and the other patient with antiphospholipid antibody syndrome (APS) who required ventilatory support in the intensive care unit. Eight patients (47%) had a diagnosis of rheumatoid arthritis, 3 (17%) had spondyloarthropathy, 16 (9%) had Psoriatic arthritis, 4 (23%) with SLE and one (6%) with APS. Of the drugs used, 6 (35%) patients were taking Hydroxychloroquine alone or in combination, 4 (23%) on Sulphasalazine, 4 (23%) on Methotrexate, 5 (23%) on prednisolone, all on ≤5 mg of Prednisolone, 2 (12%) on Mycophenolate, 4 (23%) on Adalimumab, 2 (12%) on Golimumab, and 4 (23%) on Tofacitinib. No patient received prior B cell depletion therapy. The median time to full recovery was 14 days (7–90 days).

**Discussion:** Our data was collected based on preliminary retrospective cohort studies (4) that identified the various risk factors for poor outcome with COVID-19 include older age (e.g., >65 years), chronic lung disease, hypertension, cardiovascular disease, chronic kidney disease, obesity, diabetes mellitus and prior corticosteroid use and hence these were all included in our analysis.

Despite the co-existing comorbidities, all patients made full recovery eventually.

There was a total of five (29%) hypertensive patients, all were either on Angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blocker (ARB), 4 of which recovered in 7–10 days except one who was 64 years of age and took 30 days to recover. Whether or not there was any protective role of their antihypertensive, as demonstrated in the literature (5) is debatable.

All patients discontinued their disease modifying antirheumatic drugs in accordance to the American College of rheumatology (ACR) guidelines(6) apart from hydroxychloroquine, and low-dose prednisolone.

Despite the discontinuation of medication, no patients experienced flares of their underlying rheumatological condition, and only 2 patients needed to have an increase dose of corticosteroids during the cytokine storm.

Despite their use in severe Covid infections, due to their anti-inflammatory properties, corticosteroid usage have not shown any meaningful benefit in other viral infections and some publications suggesting harm (7). This is also been reflected in our cohort, as the two patients who had complications with lung involvement where on prior corticosteroid therapy. However one of those patients, who required intubation, also had antiphospholipid antibody syndrome. This is not surprising as it was well recognized that COVID-19 can also lead to a hypercoagulability state (8) resulting in vascular and thrombotic events.

All patients restarted their treatment 14 days after symptoms resolution. They all performed a repeat PCR testing before re-initiation of their medications however that was not endorsed by the ACR task force, as it posed the risk of disease flare.

**Conclusion:** From our small cohort of patient with underlying rheumatic disease who contacted COVID-19 infection in the second wave of the virus, we observed full recovery in all our patients with the majority having mild/moderate symptoms of the disease. None of our patients on biologic therapy had severe illness or needed hospitalisation. Those who developed severe disease requiring hospitalisation were a case of SLE, and APS, both on Mycophenolate mofetil and small dose prednisolone.

Time to full recovery was noted to be shorter in the younger groups, those who were not on corticosteroid therapy and with less co-morbidities.

Although our data was not of a large population, it reflected similar experiences of other centres where patients with rheumatic diseases were not at any additional risk of severe COVID-19 disease compared to the general population.

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IMPLEMENTATION OF PHARMACY AUTOMATED DISPENSING SYSTEMS

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Background: The use of automation has been increasingly reported in several sectors, including the healthcare system. According to the scooping literature search conducted prior to this systematic review, most of the published literature regarding pharmacy automated dispensing systems in the outpatient setting shared similar outcomes such as increased productivity, decrease workload, and saving time.

Aims: This systematic review aims to explore the efficacy of pharmacy automated dispensing systems in the outpatient setting compared to the manual dispensing systems. Other research objectives include; exploring pharmacy staff readiness as well as facilitators and barriers to implementation.

Methods: A systematic review protocol was developed in accordance with the Preferred Reporting Item for Systematic Reviews and Meta-Analyses Protocol (PRISMA-P). A literature search was conducted on the Cumulative Index of Nursing and Allied Health Literature (CINAHL), MEDLINE, and International Pharmaceutical Abstracts (IPA). Quality assessment was conducted in accordance to PRISMA-P standards. Results were synthesized using a narrative approach, since retrieved data cannot undergo statistical meta-analysis.

Results: Nine studies were included; eight quantitative studies and one qualitative study. Most studies were conducted in the United Kingdom (n = 4), the United States of America (n = 3), Spain (n = 1), Australia (n = 1). The most commonly reported outcomes were increasing storage capacity, staff satisfaction, fewer dispensing errors, increased efficiency, Staff acceptance, improve medication use process, positive impact on staff experience, and improve work conditions and workload. Decreased need for pharmacy technicians was identified as a barrier.

Conclusion: The finding of this review suggests that ADS in pharmacy improves medication safety. There is a need to explore the implementation of automation in the UAE.

THE MENTAL HEALTH OF THE FRONTLINE HEALTHCARE PROFESSIONALS DURING COVID-19: REVIEW ON COUNTRIES’ RECOMMENDATIONS

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Background: The Coronavirus (COVID-19) pandemic placed frontline healthcare professionals across abnormal challenges in current times worldwide. They are at tremendous risk of short- and long-term effects such as stress, depression, anxiety, and sleep problems 1,2,3,4.

Aims: First, to explore the occupational risk factors affecting the frontline healthcare providers during Covid-19. Second, review psychological support services provided. Third, suggest a plan to support mental health during and after the pandemic based on countries’ recommendations.

Methods: A systematic literature search was conducted using two databases: PubMed and Google Scholar. The literature review was conducted on peer-reviewed journal articles (Indexed in Scopus) published in the last twelve months (January 2020-January 2021). Article selection criteria included studies related to mental health of frontline healthcare providers, and physiological support services recommended by fourteen countries (China, United States, United Kingdom, Italy, Germany, Switzerland, Ireland, Singapore, Saudi Arabia, Iran, Pakistan, India, Bangladesh, Nepal). A total of Fifteen articles were selected by initial screening, and thirteen articles were met the selection criteria and included in the final review.

Results: Burnout reported to be a major occupational risk as a result of the high workload and multiple physiological stressors. Studies showed that frontline female nurses (between 30–39 age group) were the most category affected from mental health consequences. Promoting physiological well-being through teamwork and humanitarian are effective strategies in making the work mission a more meaningful experience. Reviewing collection of published studies highlighted the following recommendations to cope and enhance resilience during the pandemic: Telemedicine (Iran), health belief model (Pakistan), self-reported stress levels (United States), stress management, awareness on self-care practices (including mind, body, and soul) (Italy), availability of mental health services (China), mindfulness moments for clinicians (Ireland), sound epidemiological principles (Singapore), representing work as a national duty (Saudi Arabia) and fake news ignorance (India, Bangladesh, Nepal). The literature showed that there is a worldwide interest in the investigating of health workers explored the diverse perspectives of the plan of actions provided by different countries worldwide. Policy implication related to occupational burnout are needed at national, regional and international level (United States and Germany).

Conclusions: In anticipation of any future pandemic, it is crucial to continue the investigation on the current mental health implications, and follow-up with the recommendations’ implementations, aiming to construct a foundation for the countries’ best practices on facing pandemic times.

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ACUTE HYPERGLYCAEMIA AFTER COVID-19 VACCINATION IN PATIENTS WITH STABLE DIABETES

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ABSTRACT
The COVID-19 pandemic is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). To date 267,258 cases have been reported in the United Arab Emirates (UAE) with 766 deaths.1 Patients with diabetes who develop COVID-19 infection are at increased risk of severe infection and mortality.2 Poor glycaemic control is also associated with worse clinical outcomes in terms of hospitalisations and death.3 In United States of America, the Centers for Disease Control and Prevention (CDC) has categorized diabetes in terms of increased risk of severe illness, if infected with COVID-19.4

With availability of COVID-19 vaccinations worldwide, patients with diabetes are usually in the highest priority group to be vaccinated.5 Currently 2 vaccines are available in the UAE. These are the Pfizer-BioNTech and Sinopharm vaccines. The Pfizer-BioNTech ribonucleic acid (RNA) vaccine is composed of nucleoside-modified messenger RNA (modRNA) encoding a mutated form of the spike protein of SARS-CoV-2, which is encapsulated in lipid nanoparticles. It is administered by two injections at least 21 days apart. In contrast, Sinopharm is a chemically inactivated whole virus vaccine. It is also given by two injections administered at least 21-28 days apart.

We describe 2 cases of diabetic patients with stable glycaemic control, who post-COVID-19 vaccination developed acute glycaemic decompensation.

The purpose of this case series is to alert healthcare professionals regarding potential transient hyperglycaemia post-COVID-19 vaccination. The vaccination should be recommended for people with diabetes as benefits far outweighs the risk. However, patients should be educated in advance to keep a close eye on their blood glucose levels post vaccination and regarding sick-day rules. As ADA 2021 recommendations were developed before COVID-19 vaccines were widely available, no detailed information regarding COVID-19 vaccination is captured.7

SINGLE CENTER STUDY OVER A PERIOD OF 1 YEAR TO EVALUATE THE FETOMATERNAL OUTCOME IN COVID 19 POSITIVE PREGNANT WOMEN

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Background: COVID 19 pandemic is the most recent health issue baffling the world. Its effect on pregnancy and the unborn fetus is still under a lot of evaluation. This single center study is done to evaluate the effect on the mother and the fetus of pregnant women who were positive for COVID 19 anytime during their gestation.

Aim/Objective: The purpose of the study is to highlight the possible impact on the mother and the fetus due to COVID 19 with the purpose of improvement in fetomaternal outcome by interventions and precautions which can be implemented.

Method: The records of all pregnant women who came to Mediclinic Al Noor Hospital from 1st Feb 2020 to Jan 31, 2021 who were positive for COVID 19 any time during their gestation were retrospectively reviewed. Data was collected from the Bayanaty system and laboratory records.

Results and Discussion: 1.7% of total pregnant women (1145) attending or admitted to our hospital over a duration of 1 year were confirmed positive for COVID 19.

The total positive cases with pregnancy were 20 out of which 25% (5 patients) were detected in 1st trimester, 20% (4 patients) in 2nd trimester, 55% (11 patients) in 3rd trimester. None of...
them were admitted to Intensive care units. Out of 9 patients who needed hospital admissions, 7 were due to obstetric conditions, 2 had comorbidities: age > 35 years and high BMI, 1 was symptomatic with high grade fever. 2 preterm deliveries occurred (10% of total Covid positive pregnant population) which could be due to obstetric reasons, (twins, PPROM with incompetent cervix).

Total of 17 babies with a history of COVID positive in mothers have delivered till now in our hospital over the study period. Babies with birth weight < 2.8kg were 7 (41%) out of which 3 were preterm babies and appropriate for gestational age. 2 of them were with early onset small for date babies and 2 were with fetal growth restriction. The mothers of growth restricted babies were detected with COVID 19 in their third trimester and were of Arab and South Asian ethnicity. Most of the babies did well in their postnatal period and the NICU admissions were for prematurity and neonatal jaundice.

Conclusion: In our study group, the rate of comorbid factors in pregnant women with Covid 19 were low and the fetomaternal outcome were favourable in most of them. Given the physiologic and immune function changes in pregnancy, they might be considered at a higher risk of developing more complications but it needs a longer duration of study with a larger sample. Statistical analysis could not be possible in our study due to the smaller sample size and we plan to continue the study further in the future to obtain a larger pool of data to validate the findings more accurately.

KNEE MENISCAL RE-TEARS: A SYSTEMATIC REVIEW COMPARING DIAGNOSTIC MODALITIES

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Purpose: Proper identification of a residual tear or a recurrent tear after a knee meniscal repair is key for treating the knee which might prove challenging by the conventional MRI, due to the distorted anatomy of the meniscus postoperatively. The purpose of this study was to conduct a systematic review on the available literature which compare different diagnostic modalities of diagnosing knee meniscal retears in patients who have undergone surgical meniscal repair.

Methods: Two authors independently searched two databases (PubMed and Scopus) for literature related to knee meniscus retear according to the PRISMA guidelines.

Results: Eight studies were found which resulted in 475 patients with 505 menisci. All studies were published between 1993 and 2014. Data regarding sensitivities, specificities, positive and negative predictive values and overall accuracy was collected from each study. Patient age ranged between 13 – 73 years of age. Seven studies presented data on MRI findings, eight studies presented data on direct MR arthrography, two studies presented data on indirect MR arthrography and one study each on conventional arthrogram, iodinated MR arthrography, and combinations of MRI + direct MRA and MRI+ indirect MRA.

Conclusion: We found that the highest sensitivity and overall accuracy of 100% to be with a combination of MRI and direct MRA. We found the highest specificity and PPV of 100% to be with direct and indirect MRA. We found the highest NPV of 94% with direct MRA. More studies using study designs such as randomized controlled trials involving MRI, direct MRA, indirect MRA and combinations of such techniques should be performed in order to accurately assess the different techniques and aid in designing guidelines to guide the diagnosis of meniscal retears following meniscal repair.

IMPACT OF FOCUSED DISCHARGE TIME APPROACH ON DISCHARGE DELAYS OF PATIENTS IN MEDICAL WARD

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Background: Delays in the discharge of hospital patients cause a backlog for new admissions from the Emergency Departments (ED), outpatient clinics, and transfers from the Intensive Care Units (ICU). A variety of initiatives have been reported on previously which aim to tackle this problem with variable success, A. Mustafa, S. Mahgoub, 2016.

Aims: To identify root causes of discharge delays in medical ward and implement 120 mins discharge time model by using PDCA methodology.

Method: A retrospective interventional study design used.
Phase I: Baseline data collected from the patient’s files from three months Feb 2020 till April 2020. Phase II: Data collected during the intervention period from May 2020 till Jan 2021.

Inclusion Criteria: Adult patient’s files who discharge home from medical ward during these months. Exclusion Criteria: Adult patients who got transferred or opted discharge against medical advice.

Discharge date and time collected from electronic medical record system (Bayanaty) through reviewing two fields; 1. Physician discharge date and time, 2. Patient final discharge date and time.

Nurse’s notes were reviewed to identify the causes of delay if any.

Results: Out of 167 files were reviewed to reach to causes of discharge delay in medical ward. 132 file out of 167 patient’s files showed that patient discharges took time more than 2hrs or 160 mins. Diagram1 explains multiple root causes identified during the course of study.

Second Phase of the study involved PDCA (Plan, Do, Check and Act) methodology and make a process map in order to reach a target of 90% of medical ward patients to discharge home within 160mins of discharge orders. Action plans were made and executed such as 1. Discharge planning a night before actual discharge, 2. Inform pharmacy about discharge medicine separately then other routine meds, 3. Increase in manpower and 4. Patient and family preparation about the discharge process.

Conclusion: Data collected throughout the year explained the need of Consistency in monitoring and implementation of the planned interventions. And ensure staff recognition on their continuous efforts. These are keys to improve patient satisfaction on our discharge process.
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RISK FACTORS RELATED TO AN OUTBREAK OF COVID-19 AMONG HEALTHCARE WORKERS ON A GENERAL MEDICINE WARD

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Background: Healthcare workers (HCW) are the front line facing the COVID-19 pandemic, but little is known about related risk factors and quality improvement measures needed for preventing occupational exposure to the virus.

Objective: To determine risk factors related to an outbreak of SARS-CoV-2 in 6 healthcare workers in a private hospital general medical ward.

Method: Retrospective review of existing medical record data, hospital work assignment calendars, and data from a novel quality improvement questionnaire related to exposures and potential risk factors and use of personal protective equipment (PPE) was performed following an outbreak of Sars-CoV-2 infection among COVID-19 positive patients and healthcare workers at Mediclinic City Hospital in May 2020.

Results: There were a total of 34 healthcare workers screened in the unit while identifying the cluster event; 16 of whom were nurses, 9 nursing assistants, and 9 physicians. All these healthcare workers had contact with at least 1 of the 3 patients in the unit who were initially repeatedly PCR negative for SARS-CoV-2 infection, but later tested positive and were clinically diagnosed with COVID-19. Following the diagnosis in the first patients, 6 healthcare workers, all nursing staff, with these exposures later tested positive for SARS-CoV-2 by PCR. In all cases, symptom onset preceded PCR positivity by 1 to 10 days. There were no differences between COVID 19 negative HCWs and COVID 19 positive HCWs in terms of mean duration of hours worked that month in the unit during the cluster event (180.2 [SD 29.90] hrs. vs 177.5 [SD 28.42] hrs.) (p > 0.05), mean total time spent in contact with the 3 patients (12.8 [SD 8.92] hrs. vs 10.5 [SD 9.74] hrs.) (p > 0.05), mean total time spent on aerosol generating procedures for the 3 patients (1.9 [SD 1.44] hrs. vs. 0.9 [SD 0.94] hrs.) (p > 0.05) and mean total time spent on non-aerosol generating procedures for the 3 patients (10.9 [SD 9.29] hrs. vs 9.6 [SD 10.06] hrs.) (p > 0.05). In terms of possible community exposures, 17% of positive HCW had personal contact with COVID-19 positive subjects compared with no known positive contacts among COVID-19 negative HCW. The average number of co-habitating adults in the COVID-19 positive nurses was similar to the average number of co-habitating adults among COVID-19 negative nurses. There were no differences between community exposures in terms of restaurant visits, travel, shopping, hotel stays, and social gatherings. These data do not rule out a yet to be identified mechanism of transmission independent of duration and type of exposures measured in this study.

Conclusion: Infection of HCW can occur from patients with repeatedly negative COVID-19 PCR tests prior to diagnosis of COVID-19. PPE use, hand hygiene, and other robust infection control measures should be practiced diligently during routine patient care in general hospital wards regardless of COVID-19 status to prevent occupational exposure. Additionally, HCW need to remain diligent with awareness of personal contact with COVID-19 positive subjects outside of the work environment. The use of workplace and community risk factor questionnaires may aid in further investigations of hospital infection outbreaks.

INFORMATION AGILITY IN A TIME OF COVID-19
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Background: On the 5th of March 2020, South Africa announced its first COVID-19 case. Almost a year later, with COVID-19 as a household name, life and business has changed and agility is embraced in order to survive and thrive in this more volatile, uncertain, complex, and ambiguous world.

ER24 and Mediclinic broadened their business services, with a Pandemic Support Lines to assist not only their employees, but also companies stretched across various business sectors, with up-to-date evidence based medical information. These business sectors included financial, automotive and medical insurance.

Aims: To provide evidence based medical information regarding the evolving COVID-19 virus, providing comfort in a distressed and uncertain time by means of answering COVID-19 related questions and providing onsite COVID-19 support.

Method: ER24 Contact Centre created dedicated Pandemic Support lines for 8 companies, from the financial, automotive, medical insurance and hospital sectors. For the purpose of this study, the data was collected from 1 September 2020 to 28 February 2021.

The 24 hour, 7 days a week, Pandemic Support Lines were staffed by trained, first line, Emergency Resource Officers (EROs') who provided assistance with escalation of COVID-19 related questions to a Health Care Professional. To further enhance the clinical quality of the information shared, a dedicated task team of high level Emergency Medical Services (EMS) and Mediclinic Professional Nurses were formed. This task team were the end point of the escalation, to provide scientifically sound information, based on the best evidence available.

Results: The Pandemic Support Lines answered 1071 calls over the study period. The calls were received as follows: September 2020: 84 calls; October 2020: 82 calls; November 2020: 98 calls; December 2020: 463 calls; January 2021: 272 calls and February 2021: 74 calls.

Questions ranged from enquiring on when to go for COVID-19 testing, how testing works to the more recent, enquiry on the efficacy of the COVID-19 virus vaccine.
**Conclusion:** Based on the these results, the Pandemic line calls reached a peak in December 2020, in line with the time the new COVID-19 strand reached South Africa. There is a continued need for business and the public to have real time access to COVID-19 information. This study has shown that there is value in providing a real time Pandemic line going forward; there is a need for similar information lines to ensure everyone receives up-to-date information on not only COVID-19, but also their health in general, in South Africa.

**IS BEHAVIORAL ACTIVATION (BA) AN EFFECTIVE TREATMENT FOR WOMEN WITH DEPRESSION IN THE UAE? A CASE SERIES REVIEW**

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**Objective:** Major Depressive Disorder (MDD) is both a global and local disease burden of significance. Behavioral activation (BA) is an evidence-based intervention for MDD. However, most studies suggesting efficacy have been undertaken in the West. There is very little evidence for the effectiveness of BA for Muslim populations and no evidence for BA that is culturally titrated to the needs of Emirati people.

**Method:** 6 Emirati Females were purposefully sampled from Women attending outpatient hospital clinics in Abu Dhabi. Each met the cut off score for Depression with the Arabic version of the PHQ-9 measured women for depression severity at income, cultural and religious sensitivities. The Arabic version of the ages of 20-35 received 6 sessions of BA titrated for Arabic activity of the approach.

**Results:** Simple aggregated statistics demonstrated the effectiveness of the approach.

**Conclusion:** BA titrated to an Islamic context may be an effective treatment of depression in the UAE for depressed women. Further larger scale research is required.

**SELECTED ABSTRACTS**

**SHOULD A ROUTINE GENOTYPING OF CYP2D6 AND CYP2C19 GENETIC POLYMORPHISMS BE RECOMMENDED TO PREDICT VENLAFAXINE EFFICACY IN DEPRESSED PATIENTS TREATED IN PSYCHIATRIC SETTINGS?**

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**Introduction:** Venlafaxine, an antidepressant drug, is a combined serotonin and noradrenaline reuptake inhibitor and is metabolized by the cytochrome-P450 enzymes CYP 2D6, 2C19.

**Aim:** To evaluate the impact of CYP2D6, 2C19 genetic polymorphisms on patient treatment efficacy.

**Material and Methods:** A total of 184 Caucasian patients treated with flexible doses of venlafaxine treatment were selected from the METADAP cohort, a 6-month prospective, multicenter, real-world setting, treatment study, including in or out-patients suffering from unipolar Major Depressive Episode (DSM-IVTR) and requiring a new antidepressant treatment. Depression symptoms were assessed using the HDRS score at baseline and 1 (M1), 3 (M3) and 6 (M6) months. Patients were genotyped for the major CYP2D6 alleles: the non-functional/null function alleles (CYP2D6 *3, *4, *5 del, *6), major decreased function alleles (CYP2D6 *10, *41,) and increased function (CYP2D6 *2xN) and CYP2C19 alleles: the non-functional alleles (CYP2C19 *2, *3, *4, *5) and increased function (CYP2C19 *17). Patients were classified into 3 CYP2D6 and 3 CYP2C19 phenotype subgroups according to inherited genotype, i.e., poor metabolizers (PMs), extensive metabolizers (EMs), and ultra-rapid metabolizers (UMs). The effect of each of the phenotype subgroups on HDRS score was evaluated by separate multivariate mixed model analyses. R Software version 2.14.1 was used for statistical analyses.

**Results:** In term of phenotypes for CYP2D6: 8 subjects were PMs, 145 subjects were EMs and 9 subjects were UM. For CYP2C19: 2 patients were PMs, 107 EMs and 51 UM. Whereas HDRS improvement is not associated with the CYP2D6 phenotype at M1, M3 and M6, in bivariate analyses, the average improvement on HDRS score at baseline is 26.74 ± 11.23 and at M3 is 19.16 ± 11.55. For PMs and EMs DHDRS (M0-M1) is 12.98, DHDRS (M1-M3) =4.03 and for UMs DHDRS (M0-M1) =4.72, at M3 =4.95; for EMs at baseline is 25.03 ± 4.72, at M1 is 13.38 ± 4.72 and at M3 is 11.946,64 and for UM at baseline is 24.11 ± 4.5, at M1 is 19.16 ± 11.23 and at M3 is 19 ± 11.55. For PMs and EMs DHDRS (M0-M1) =12.98, DHDRS (M1-M3)=4.03 and for UMs DHDRS (M0-M1)=4.95; DHDRS (M1-M3)=0.16.

**Discussion/Conclusion:** Despite small sample size, our results suggest that the CYP2D6 phenotype may be predicting patient treatment outcomes for venlafaxine.
VALUE OF DIFFERENT REFERRAL STRATEGIES FOR AXIAL SPONDYLOARTHRITIS RESTART STUDY IN THE ARAB COUNTRIES (WORK IN PROGRESS)

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Background: Axial spondyloarthritis (axSpA) is a relatively frequent disease, potentially disabling, with serious professional impact and high socioeconomic burden. Diagnosis is often delayed since the key feature, low back pain (LBP), is a widespread, nonspecific, musculoskeletal symptom.

Recent evidence shows that early axSpA diagnosis and treatment is associated with a better disease outcome. For the purpose of early diagnosis and management, several referral strategies were developed. They rely mainly on inflammatory back pain (IBP), HLA-B27 and other clinical or radiologic parameters. However HLA-B27 marker does not seem to be prevalent in the Middle East compared to Northern Europe.

Aim and Objectives: The primary objective of the study is to identify the optimal referral strategy for axSpA in the Arab populations. The secondary objectives are to estimate the value of IBP in the referral of axSpA, estimate the prevalence of HLA-B27 in Middle East population as well as the new marker Anti-CD74 prevalence and its diagnostic value.

Method: The study is multinational, multi-centre and prospective. Practices of several rheumatologists working as referral centres for rheumatology in Arabic countries conduct data collection. Inclusion Criteria: Age 18–45 y, Chronic LBP (duration >=3 months) Patient signed the informed consent form (ICF, Annex 1). Exclusion Criteria: Age < 18 years and > 45 years, Contraindications against MRI. Data to be collected are ASAS criteria for disease, any other associated feature, radiological assessment, laboratory investigations and biological markers.

Endpoints: primary endpoints are diagnostic properties (sensitivity, specificity, positive likelihood ratio) of each referral strategy, using the final axSpA diagnosis by the rheumatologist as a gold standard. Secondary endpoints are: Diagnostic properties of IBP alone, using the final axSpA diagnosis by the rheumatologist as a gold standard, Proportion of IBP in the CBP population Proportion of patients fulfilling the ASAS axSpA criteria in the CBP and in the IBP population.

Work in Progress: Abu Dhabi Centre (Mediclinic Airport Road hospital) has already recruited 5 cases to a target of 50 cases. Other centres are Beirut, Arbil, Manama, Doha, Dubai, Madina Monawara have to similar equal target. Beirut centre is the central office where data to be all collated, analysed and collaborated before publication.

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KNOWLEDGE, ATTITUDE TOWARD SCREENING AND PREVENTION OF CERVICAL CANCER AMONG WOMEN AT THE HIGHER COLLEGES OF TECHNOLOGY IN THE UNITED ARAB EMIRATES

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Background: Cervical cancer is one of the leading causes of death in the United Arab Emirates (UAE) among females. Knowledge and awareness toward cervical cancer have been proven to be essential towards decreasing the number of cervical cancer cases. In fact, adequate knowledge towards cervical cancer screening will help in early diagnosis and good prognosis outcome towards cervical cancer.

Aim: The aim of this study was to evaluate the knowledge and attitude towards screening and prevention of cervical cancer among women at Higher Colleges of Technology (HCT) in the UAE. Moreover, to assess the attitude towards Human Papilloma Virus (HPV) vaccines as a crucial preventive measure of cervical cancer.

Method: A descriptive cross-sectional study was conducted from March 2020 to April 2020 using an online survey. The survey contained 22 multiple-choice questions. Internal and external reviewers validated all questions within the survey.

The targeted population was approximately 250 - 300 participants. Descriptive analysis and Chi-square tests were performed on all data using Statistical Packagefor the Social Sciences (SPSS) software and results were considered significant below 0.05 (p < 0.05).

Results: Responses of 196 eligible participants were included in the data analysis. The vast majority of the participants (55.1%) were aged between 21- 25 years-old and were mainly from Abu Dhabi campuses (91.8%). A significant association was observed between the field of education of the subjects and their knowledge on cervical cancer (p = 0.002). Additionally, the knowledge of cervical cancer screening and the attitude of the participants towards cervical cancer screening were both noted to be significantly associated with the age of the participants (p = 0.022) and their field of education (p = 0.002). Additionally, the following factors; age (p = 0.007), nationality (p = 0.004), and field of education (p = 0.001) had a significant impact on the participants knowledge towards cervical cancer prevention. Furthermore, slightly over half of the participants (54.08%) had an overall average level of knowledge and attitude towards cervical cancer screening and prevention. Additionally, the study also indicated that participant’s showed a positive attitude towards permitting their daughters to receive the HPV vaccines (62.8%).

Conclusion: Despite the strong statistically significant association between the field of education and the overall knowledge of the participants towards cervical cancer, this health condition remains a major dilemma within the UAE society. Therefore, based on the findings of this study, it is recommended that UAE healthcare authorities organize several health educational programs that enhance the awareness of cervical cancer knowledge and promote the attitude towards cervical cancer screening practices among the community in the UAE. Moreover, it is crucial that UAE healthcare providers develop awareness campaigns highlighting the importance of the HPV vaccine and probably make HPV vaccination mandatory for all women in the UAE.
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CHALLENGES OF INTRALUMINAL BLEEDING WITH JEJUNO-JEJUNAL OBSTRUCTING HEMATOMA POST ROUX-EN-Y GASTRIC BYPASS IN HIGH-RISK PATIENT

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Aim: Raise awareness of possible early, severe complications post laparoscopic Roux-en-Y gastric bypass (LRYGB), especially in high-risk patients. Low threshold for performing of urgent CT scan in case of deterioration of the patient and early differential-diagnosis is crucial.

Method: 55-year old male patient (BMI: 37.7/weight:116kg; baseline BMI:42.2/weight:132.2kg) with high-risk comorbidities (atrial fibrillation, hypertension, obstructive sleep apnea (OSAS), ischaemic heart disease, post myocardial infarction twice . . . etc.) underwent successful LRYGB for morbid obesity. Initially he was stable, but 36 hours postoperatively he has deteriorated rapidly with acute abdomen, hematemesis, hiccups, fever of 38.5°C.

Results: Urgent CT confirmed intraluminal hematoma at the jejuno-jejunal (J-J) anastomosis site, small bowel obstruction (SBO)/closed loop obstruction and distended remnant stomach. During emergency laparoscopy a large blood clot was evacuated causing obstruction in the J-J anastomosis and small stapler line bleeding was controlled. Gastro-jejunal (G-J) anastomosis looked patent with gastroscopy. The patient was discharged on 12th postoperative day with support of the Multidisciplinary Team.

Conclusion: Postoperative bleeding from staple line potentially exacerbated by routine perioperative thromboprophylaxis use can cause life-threatening, early proximal SBO at the J-J anastomosis after LRYGB. Continuous monitoring of vitals, detection of clinical symptoms (hiccups, hematemesis, increasing abdominal pain) and early recognition of SBO post LRYGB is imperative to avoid serious sequelae. SBO following LRYGB can occur in up to 5% of patients and may be caused by adhesions, internal- or abdominal wall hernias, stricture at J-J anastomosis, intussusception and intraluminal bleed. Jejuno-jejunal obstruction due to intraluminal haematoma carries the risk for perforation unless urgent intervention is instituted.

QUANTITATIVE NON-INVASIVE ULTRASONIC ASSESSMENT OF BREAST MASS HETEROGENEITY FOR PREDICTION OF BREAST MALIGNANCY

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Introduction: The nature of breast masses on ultrasound (US) is often difficult to determine based on imaging characteristics alone. This potentially causes delays in cancer diagnosis, unnecessary biopsies, and elevated healthcare costs. The aim of this study was to examine the utility of a novel non-invasive quantitative sonographic marker, the heterogeneity index (HI), in predicting malignancy of breast masses. Also, we aimed to determine correlation of this index to tumor grade.

Materials and Methods: Quantitative analysis was performed in a cohort of 81 biopsy-proven fibroadenomas and 136 invasive ductal carcinomas (IDCs), utilizing a novel software program in which the pixels are transformed into a binary map. For each US image, two regions of interest (ROI) within the mass were selected to obtain an average percent echogenicity and HI. This was repeated with one ROI selected within the mass and the other in the adjacent fat for internal calibration. Regression analysis was then performed to determine correlation and functional association between the HI and probability of malignancy. Finally, Nottingham scores of malignant masses were correlated with results.

Results and Discussion: There was an observed difference in percent echogenicity when comparing biopsy proven fibroadenomas, and malignant IDCs (p<0.00001). Not surprisingly, fibroadenomas demonstrated increased echogenicity compared to IDCs (average of 20.83% vs. 11.70%, p<0.00001). There was a difference in the ratio of percent echogenicity of the surrounding fat to the mass between fibroadenomas and IDCs (ratio of 3.07 vs 8.07; percent change 42.1% vs. 74.3%; p<0.00001). Interestingly, there was no difference when assessing the HI within masses (1.85 for both), however, a significant difference was observed for the fat surrounding fibroadenomas compared to IDCs (1.58 vs. 1.37, p=0.00005). Finally, a positive correlation was observed between the Nottingham score of IDCs and average percent echogenicity, with an R2 value of 0.7435 (p<0.00005).

Conclusion: Quantitative analysis of benign and malignant breast masses on ultrasound utilizing a novel non-invasive sonographic marker of echogenicity and heterogeneity was capable of predicting benign versus malignant lesions and
demonstrated a positive correlation with tumor grade. This protocol has potential to be integrated into Artificial Intelligence algorithms, potentially improving diagnostic, prognostic, and predictive accuracy.

Clinical Relevance: The nature of breast masses is often difficult to determine based on imaging characteristics alone, potentially leading to delay in cancer diagnosis, unnecessary biopsies, and elevated healthcare costs. Our novel noninvasive quantitative sonographic marker, the heterogeneity index, has potential to aid in the prediction of benign versus malignant breast masses.

ENDOSCOPIC GASTRIC BOTULINUM AS A TREATMENT FOR OBESITY - AUDIT & PRACTICAL ASPECTS

Enas Al-Alawi MD, Department of Bariatric Surgery, Mediclinic Al Ain Hospital

Introduction: Several small studies were published evaluating the effect of Endoscopic Gastric Botulinum for the treatment of obesity giving conflicting results. Botulinum Toxin type A (BT-A) has a powerful inhibiting effect of long duration on the muscular contractions of smooth and striated muscles. This property has been used in the treatment of digestive illnesses characterized by muscular spasm, particularly achalasia and anal fissure.

Aims and Objectives: The aims of this study are to evaluate the benefit, safety and efficacy of EGB for weight loss, as well as providing recommendations of injection sites in carefully selected patients.

Results: Results are comparable to other endoscopic procedures. Safe with no reported major complication. Strict dietary follow up is necessary for desirable outcomes. 17% of patients had 0-3kg weight loss- Considered failure of procedure All failed cases were between 18-21 yrs. of age

Demographic Data and Results

Recommended Injection Sites

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CALIBRATED GASTRO-JEJUNOSTOMY REDUCES THE INCIDENCE OF STENOSIS IN OMEGA LOOP BYPASS

Enas Al-Alawi MD, Department of Bariatric Surgery, Mediclinic Al Ain Hospital

Introduction: The numbers of Omega Loop Gastric Bypass have increased dramatically in the middle east area in the last 15 years. It has been demonstrated that it is a rapid, safe and effective bariatric operation.

Advantages include; lower risk of anastomotic leakage, internal herniation and the ease of reversibility. Potential complications include; marginal ulcers, chronic alkaline reflux and gastro-jejunostomy stenosis.

Aims and Objectives: Assess the effectiveness of anastomosing the GJ on a calibration tube in reducing GJ stenosis after omega loop surgery.

Methodology
Retrospective analysis
Study period: January 2008 and January 2019
Group 1: 429 patients of Omega Loop Bypass with GJ anastomosis over a 40F boogie
Group 2: 83 patients with the GJ anastomosis performed without a boogie
Follow up period of up to 48 months.
Assessment tools: vomiting liquids and solids, GJ stenosis confirmed on fluoroscopy and endoscopy.

Demographic Data and Results

Conclusion: GJ anastomosis over a boogie reduces the risk of GJ stenosis.

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ACUTE PANCREATITIS IS A PRESENTING FEATURE OF COVID-19

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Background: Extra-pulmonary presenting symptoms of patients with COVID-19 are uncommon however; multisystem features are associated with this viral infection. Acute pancreatitis is a well-recognized complication and increasing mortality in patients with COVID-19. Therefore, early recognition may reduce the risk of further deterioration.

Aims: A careful assessment of patients presenting with severe abdominal pain in the current pandemic of COVID-19.

Methods and Results: A written consent obtained from a 63 years old woman of Indian background admitted to this hospital with a moderate to severe abdominal pain without radiation of 7 days duration. Initially was in the left flank then became central. The patient had episodes of fever, chills, nausea with loss of taste and smell after two days of tested positive PCR COVID-19 nasal swab of her husband. She had neither other GIT nor, respiratory symptoms. The patient was healthy and had a good lifestyle, although had history of right nephrectomy during childhood due to a severe infection. There was no history of taking any drug or any other significant illness.

On the day of admission, Temp 36.9°C, HR 98/min and regular, BP 145/80 mmHg, RR 18 and O2 sat 97% despite bilateral basal crepitation. Abdominal pain was central 7 out of 10 in severity with localized tenderness. Acute pancreatitis confirmed according to Atlanta criteria of abdominal pain and significant high levels of serum amylase 209 U/L (25-125) and lipase 528 U/L (8.0-78) despite normal CT scan of the abdomen. Chest x-ray and HRCT chest confirmed mild to moderate COVID-19 pneumonia and nasal PCR swab was positive of the same. US of the liver and biliary tree demonstrated normal liver texture and gall bladder stones free without biliary tract dilatation. Inflammatory markers CRP and ferritin in addition to LDH and D-dimers were elevated. LFTs were slightly deranged of hepatitis picture rather than obstructive. Other viral hepatitis (B, C and CMV) were non-reactive and collagen vascular screen was negative. Normal renal function and electrolytes mainly calcium throughout her admission as well as triglyceride. Acute coronary syndrome was excluded by normal troponin and a sinus rhythm ECG without any changes. Urine exam aborted UTI.

The patient discharged asymptomatic after 19 days of conservative management despite persistent high levels of lipase and amylase and settling inflammatory markers with normal repeated CT scan of the pancreas.

Conclusion: acute pancreatitis may be the presenting feature of COVID-19 and early diagnosis may prevent further morbidities and reduces mortality.

THE RIGHT ANTIBIOTIC CHOICE FOR PREOPERATIVE PROPHYLAXIS IN CHILDREN WITH ACUTE APPENDICITIS IN DUBAI, UAE, 2018 –2020: A CROSS-SECTIONAL STUDY

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Background: Previous studies stated that administration of prophylactic antibiotics during appendectomy decreases the morbidity and mortality rates and also reduces the risks of complication associated with infections and perforation.

Objectives
• To find the prevalence of the most prominent bacteria identified on culture swab from the surface of the removed appendices.
• To determine appropriate choice of antibiotics for preoperative prophylaxis.

Method
• This study was done in Mediclinic Parkview Hospital in Dubai, UAE, and looked at a group of patients up to 14 years of age, operated with laparoscopic appendectomy at the Hospital from 2018 to 2020.
• A swab was taken from the surface of the appendix and sent for culture.
• Then we identified the most prevalent bacteria present on the appendix by reviewing the lab results.

Results - Bacterial Culture
• Out of a total of 56 patients, 29 patients had no bacterial growth identified on the swab of the appendix.
• 23 patients had E. coli growth on their inflamed appendix, out of which 7 patients had co-infection.
• 7 patients were identified having Pseudomonas bacterial infection, out of which 5 had co-infection.
• Other minor bacterial groups identified on the culture swab were Klebsiella, Staphylococcus aureus, streptococcus gordonii & anginosus.

Antibiotic Susceptibility: Antibiotic sensitivity results demonstrated that 23 patients (85%) were susceptible to Gentamicin and Tobramycin, 16 patients were susceptible to Trimethoprim & Sulfamethoxazole (59%), 15 patients were sensitive to Cefazolin, Amoxicillin and Clavulanic acid (Augmentin) (55%).

Conclusion
• The most prevalent bacteria diagnosed on the swab taken from the appendix was E. coli.
• The most prevalent antibiotics that the bacteria were sensitive to were Gentamicin, Tobramycin and Amoxicillin and Clavulanic acid.
Augmentin (Amoxycillin and Clavulanic acid) was the routine antibiotic used for prophylaxis and it was the right choice and is going to continue as a first line.

**COVID-19 AND HEALTHCARE WORKERS: A SYSTEMATIC REVIEW AND METAANALYSIS**

Mandana Gholami, Iman Fawad, Sidra Shadan, Rashed Rowaiee, HedaietAllah Ghanem, Amar Omer Hassan, Samuel B. Ho

**Background:** The COVID-19 pandemic has focused attention on the challenges and risks faced by frontline healthcare workers (HCW). Our aim is to describe the clinical outcomes and risk factors for SARS-CoV-2 infection in HCW.

**Methods:** Three databases were surveyed identifying 328 articles. Of these, 225 articles did not meet inclusion criteria; 97 full-text article were reviewed. Finally, after further revision, 30 articles were included in the systematic review and 28 used for meta-analysis.

**Results:** A total of 28 studies were identified involving 119,883 patients. The mean age of the patients was 38.37 years (95% CI, 36.72–40.03) and males comprised 21.4% (95% CI, 12.4–34.2) of the population of health workers. The prevalence of HCW who tested positive for COVID-19 is 51.7% (95% CI, 34.7–68.2). The total prevalence of co-morbidities in 7 studies was 18.4% (95% CI, 15.5–21.7). The most prevalent symptoms were fever 27.5% (95% CI, 17.6–40.3), cough 26.1% (95% CI, 18.1–36). The prevalence of hospitalization of HCW was 15.1% (95% CI, 5.6–35) in 13 studies and the prevalence of death was 1.5% (95% CI, 0.5–3.9) in 12 studies. Comparisons of HCW with and without infection showed an increased relative risk for COVID-19 related to PPE, work-place setting, profession, exposure, contacts, and testing.

**Conclusion:** A significant number of HCW have been reported to be infected with COVID-19 during the first 6 months of the pandemic, with a prevalence of hospitalization of 15.1% and mortality of 1.5%. Further data is needed to track the continued risks in HCW as the pandemic evolves and health systems adapt.

**SARS-COV-2 REAL-TIME PCR ANALYSIS: A COMPARATIVE STUDY OF DETECTION LIMIT BETWEEN REAL-TIME-PCR KITS FOR ACCURATE DIAGNOSIS**

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**ABSTRACT**

Real-time PCR testing is the gold standard for the detection and diagnosis of SARS-CoV-2 viral infection. Accurate diagnosis is crucial for controlling the spread of the virus and containing the pandemic. There are numerous Real-time PCR kits available in the market to detect SARS-COV-2 viral RNA in human specimens. Limit of detection (LoD), the lowest concentration of virus detectable by a kit, is an integral factor in kit selection to provide accurate results. Studies have indicated that an increase in LoD can lead to an increase in false-negative detection rates. During the pandemic, diagnostic laboratories are facing numerous challenges such as shortage of kits or consumables, fluctuation in prices, and transportation barriers due to lockdowns. To overcome these challenges laboratories are constantly required to switch between kits according to price and availability without compromising quality. This study was conducted at Mediclinic Alnoor Hospital - Molecular Laboratory Department and the following commercially available kits for detection of SARS-CoV-2 were compared using a standard of known copy number to ascertain their detection limit.

The kits under evaluation were; TaqPath COVID 19 CE IVD RT PCR Kit (ThermoFisher Scientific, USA), U-TOP COVID-19 Detection Kit (SEASUN Biomaterials, Korea), Lifesifer Novel Coronavirus (SARS-CoV-2) Real-Time Multiplex RT-PCR Kit (Shanghai ZJ Bio-Tech, China), and DiaPlexQ Novel Coronavirus Detection Kit (Solgent, Korea). A Standard control material with synthetic RNA transcripts of known copy number containing 5 gene targets (E, N, S, ORF1a, and RdRP genes) of SARS-CoV-2 was used to evaluate the sensitivity of each kit against all gene targets. The precision analysis was also performed to validate the reproducibility of results at the lowest detection limit. All four kits were able to detect the virus as low as 1 copy per microlitre, indicating that the same results were obtained between kits from different manufacturers targeting different viral genes. Moreover, the results remained constant between kits detecting two and three SARS-CoV-2 genes. Based on the results of this study, these kits were selected to provide high quality-based testing for SARS-CoV-2 virus in a timely manner.

**MALI: MIDWAKH ASSOCIATED ACUTE LUNG INJURY (MALI):**

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**Introduction:** There is an alarming increase in the consumption of Alternative Tobacco Products (ATPs). Midwakh is one of the most used ATP in UAE, particularly amongst adolescents.

We report a 14-year-old adolescent male, who presented with Acute Lung Injury within 24 hours following a first attempt of Midwakh smoking, a presentation remarkably similar to E-Cigarettes or Vaping Associated Lung Injury. Mechanical ventilation was required for two weeks. A good response was achieved to a high dose of steroids, prone ventilation with ultra-short lung protective strategy.

**Discussion:** We reviewed the literature regarding the management of acute lung injury following Midwakh/ Dokah inhalation. The effects of the inhalation are not documented. To our knowledge this is the first case of Midwakh associated lung injury(MALI) reported. We wish to emphasize that physicians should be well informed about the use of alternative tobacco products, both existing and emerging ones and its potential severe complications.

**A RETROSPECTIVE STUDY ON LEEP, WITH FOCUS ON RECURRENCE / PERSISTENCE OF DISEASE**

Shabana Ashiq, Tabassum Perveen, Lakshmi Priya Soundararajan, Zoqeen Akhtar, Feroza Dawood

**Introduction:** The introduction of screening programs has reduced the incidence of invasive cervical carcinoma, with an increase in cervical intraepithelial neoplasia (CIN). CIN is a precancerous condition that can be treated effectively to prevent invasive cervical carcinoma.
Since 1990’s, the loop electrosurgical excision procedure (LEEP) has been the definitive diagnostic and therapeutic modality for CIN. Even today it is the most commonly used treatment tool.

Primary advantage:

- Submit excised specimen for pathology
- Confirm the diagnosis
- Excluding occult malignancy
- Obtaining Information about the completeness of excision

Persistent/recurrent disease after LEEP varies between 5% and 30%, requiring follow up and re-treatment once lesions have been identified.

Predictive factors:
- Involvement of Margin
- Histo-pathological CIN grade
- Glandular involvement
- Persistent human papilloma virus (HPV) Infection
- Age
- Immuno-suppression

Objectives

- Evaluate the importance of resection margins in the risk of persistent/recurrent lesions
- Investigate the presence of other risk factors that could potentially predict persistent/recurrent disease before patients engage in follow-up

Material and Method

Retrospective analysis

86 women with histologically confirmed CIN treated by LEEP at Corniche Hospital, Abu Dhabi between June 2013 and June 2018. Conization performed using loop diathermy with a blend setting and a power output of 50W. A larger loop (20 mm × 0.8 mm) was used for a central pass that removed the entire transformation zone. If needed, a 2nd selective pass using a smaller loop (10 mm × 10 mm) was performed.

Hemostasis achieved using a 3-mm cautery ball with a power setting of 50W.

All specimens were marked for orientation with a suture at the 12 o’clock position for pathology examination.

Follow - Up

- 6 and 12 months: Clinical examination, Pap smear, Colposcopy, +/- Biopsy.
- If surgical margins were affected, the first check-up was performed at 3 months
- Follow up time ranged from 3 – 36 months.

Follow Up Smears

- Defaulted: 15
- Positive : 13
- Micro-invasive Ca : 1
- Negative : 57
- Categorized
- Group A : Persistent disease
- Group B : No disease

Results

- The mean age at diagnosis of abnormal smears was 37.6 years (range 25 to 62 years)
- 17.44% of patients (15 / 86) were lost to follow-up and therefore not included in the data of persistent/recurrence from the study.
- The remaining 71 patients had a mean follow up of 20 months (range 4 – 36 months). We divided this group into two, depending on the follow up smears. Group 1 had persistent or recurrent disease and group 2 had cleared of the disease as evidenced by negative follow up smears.
- The mean age of patients was 41 years in the persistent/recurrent disease group
- Thus age is not predictive of persistent or recurrent lesions. However, patients with high-grade persistent/recurrent disease had a mean age 4 years older than patients with low-grade persistent/recurrent disease (41 vs 37.6 years).
- 67.6% patients (48/71) had clear margins in the operation specimens and the corresponding number of patients with positive surgical margins was 32.39% (23/71).
- The total number of patients with recurrence or persistence was 19.71% (14/71):
  - 57.14% of them (8/ 14) developed a CIN1 or ASCUS only,
  - 42.85% (6/ 14) developed a high-grade premalignant lesion during the follow-up.
- Significant differences in risk of persistent/recurrent disease depending on the involvement of the margins were observed on the involved margins were observed: 60.86% (14/ 23) in cases with positive margins vs 6.38% (3/47) in cases with clear margins (p < 0.0001)
- Only 3 out of the 71 (4.22%) patients went on to have persistent disease in spite of the initial LEEP specimen showing evidence of low grade disease. The remaining patients with low grade or negative dysplasia on LEEP, had complete resolution on repeat smears.
- On the other hand, 11/ 14 patients with persistent or recurrent disease had high grade lesion confirmed on the LEEP biopsy specimen.
- This highlights the importance of the histology of the LEEP in predicting the risk of incompletely treated disease or recurrence of disease

Conclusion:

- This study highlights the importance of LEEP in the definite diagnosis and as a treatment modality. It is remarkable that only 6 of 86 patients underwent hysterectomy and the rate of micro invasive cervical cancer in the hysterectomy group was also very low. (1/6).
- 1 patient had a micro invasive lesion cured by LEEP, hence the hysterectomy specimen did not show any residual lesion.
- The remaining patients with persistent disease had conservative management by LEEP and follow up until smears were negative for 2 -3 years.
- It is quite clear from this study that, positive margins on the LEEP specimen is an important risk factor for predicting recurrence thus warranting a strict follow up protocol for these patients.
- We don’t have much data to predict the role of HPV in predicting the risk of recurrent disease.
- We hope to conduct more studies including HPV as a test as cure and the rate of recurrence based on the HPV genotyping, once HPV testing becomes incorporated in the screening program.
- Other limitations of the study are lack of strict follow up criteria, short follow up periods and the number of patients lost to follow up due to several factors.