Free Communications of the Seventh Annual Al Ain Research Day, Al Ain, United Arab Emirates, June 9, 2023

Satish C. Nair[1] Asma M. Al-Neyadi[2] Raya A.M. Al-Mazrouei[3] Gohar A.M. Jamil[4] Khaled H.A. Al-Qawasmeh[5] Abdulla H. Al-Kuwaiti[6] Omaema O. Al-Baghdadi[7] Aydah M.S. Alawadhi[8] Abdulrahman Al-Alanqar[2] Fatima R. Alkendi[10] Ahmed Chabban[2] Khaled Mohammed Al Dahmani[3]

[1] Departments of Academic Affairs (Clinical Research)
[2] Departments of Academic Affairs (Internal Medicine)
[3] Departments of Endocrinology
[4] Departments of Cardiology
[5] Departments of Nursing
[6] Departments of Neurology
[7] Departments of Nephrology
[8] Departments of Obstetrics and gynecology
[9] Departments of Oncology
[10] Departments of General Medicine, Tawam Hospital, Al Ain Medical Region, Al Ain , UAE

Address for correspondence Dr. Khaled Mohammed Al Dahmani, MD FRCPC, Department of Endocrinology, Tawam Hospital, Al Ain, Abu Dhabi, UAE (e-mail: kmdahmani@seha.ae).

Ibnosina J Med Biomed Sci 2024;16:A1–A36.

Abstract

These are the free communications of the Seventh Annual Al Ain Research Day, Al Ain, United Arab Emirates, on June 9, 2023. Oral and poster communications are listed separately. The abstracts came from various medical specialties, including internal medicine, endocrinology, cardiology, nursing, neurology, nephrology, obstetrics and gynecology, oncology, and general medicine.

Introduction

These are the free communications of the Seventh Annual Al Ain Research Day, Al Ain, United Arab Emirates, on June 9, 2023. Oral and poster communications are listed separately. The abstracts came from various medical specialties, including internal medicine, endocrinology, cardiology, nursing, neurology, nephrology, obstetrics and gynecology, oncology, and general medicine.

The abstracts are presented as they were received with minimal editing to meet the Journals style. The aim is to give a rapid communication to share the current interests of the research workers.

DOI https://doi.org/10.1055/s-0043-1778128.
ISSN 1947-489X.

Thieme Medical and Scientific Publishers Pvt. Ltd., A-12, 2nd Floor, Sector 2, Noida-201301 UP, India

ORAL COMMUNICATIONS

OC23-001. The Spectrum of Neuro-genetic Disorders in the United Arab Emirates National Population

Sirine Saleh[1], Ela Beyyumi[1], Aysha Al Kaabi[1], Jozef Hertecant[2], Doaa Barakat[3], Noura S. Al Dhaheri[4], Lihadh Al-Gazali[5], Aisha Al Shamsi[2]

[1]*Pediatrics Department, Tawam Hospital*
[2]*Genetic Division, Pediatrics Department, Tawam Hospital*
[3]*Psychiatry Department, Behavioral Sciences Institute, Al Ain Hospital*
[4]*Department of Pediatrics & Department of Genetics & Genomics, College of Medicine and Health Sciences, UAEU, and*
[5]*Departments of Pediatrics, College of Medicine and Health Sciences, UAEU, Al Ain, United Arab Emirates*

Methods: Clinical and molecular characterization of neuro-genetic disorders among UAE national patients seen in the Genetic Clinic at Tawam Hospital over 3 years. A retrospective chart review of all Emirati patients assessed by clinical geneticists due to neuro-genetic disorders, including global developmental delay, ASD, ID, ADHD, and epilepsy, in combination with abnormalities of other organ systems. Each patient had a proper assessment, including a detailed history, three-generation family history, developmental history, and detailed physical examination looking for other system involvement. Hearing tests and ophthalmological examinations were performed when needed. Magnetic resonance imaging (MRI) of the brain, echocardiogram, and renal ultrasound were pursued as indicated. Detailed psychological evaluation and psychometric assessment were done when indicated. The review was done for a period between January 2018 and December 2020. Genetic investigations included chromosome karyotype, FISH study, metabolic/biochemical tests, chromosome microarray, gene sequencing, targeted mutation testing, trio whole exome, and trio genome sequencing. Six hundred forty-four patients with developmental delay, ID, learning difficulty, ASD, ADHD, or NNDs were seen in the genetic clinic from January 2018 to December 2020. A total of 506 patients were included in this review; all completed the genetic evaluations during the study period.

Results: There were 398 (61.8%) males and 246 (38.2%) females, with a ratio of 1.6:1. Positive family history of NDD was documented in 132 families, while 115 families had negative history, and family history was unknown/unclear in the remaining. Fifty-seven (11.26% [57/506]) patients had positive microarray results. Hundred ninety-seven (38.9% [197/506]) patients had positive molecular testing. Genetic disorders were found in 133 (67.5% [133/197]), and inborn errors of metabolism were found in 42 (21.3% [42/197]). Consanguinity was documented in 139 patients with positive molecular diagnoses (139/197, 70.5%). Sixty-nine (35% [69/197]) patients had autosomal dominant disorders; the majority were De Novo (84%). Ninety-five (48% [95/197]) patients had autosomal recessive diseases, 40 mutations involved inborn errors of metabolism, and 50 mutations involved genetic disorders. Pathogenic variants causing both autosomal dominant and recessive disorders were found in 98 patients (49.7% [98/197]), and likely pathogenic variants causing both autosomal dominant and recessive disorders were found in 66 patients (33.5% [66/197]). X-linked-related disorders were found in 10 patients (5% [10/197]). A mitochondrial mutation was found in one patient. Novel mutations were found in 76 patients (76/197, i.e., 38.56%). Twenty-two patients had variants of unknown significance. The remaining 252 studied patients (252/506, i.e., 49.8%) remained undiagnosed. This study shows that neuro-genetic disorders in the UAE are very heterogeneous at clinical and molecular levels. Using microarray, WES, and WGS, a diagnosis was reached in 50% of the patients, while no diagnosis was reached in the other half of the studied patients.

Conclusion: This is the first research that studies the genetic mapping of neurodevelopmental disorders in UAE. It is worth mentioning that 38.56% (76/197) of the mutations reported here are novel and not reported before.

OC23-003. IgA Glomerulonephritis Associated with Disseminated Tuberculosis Infection

Ahmad Chaaban[1], Nihal Bashir[1], Mohamad Al Hakim[1], Asma Al Neyadi[2], Noura Al Nuaimi[3], Aishah Al Yamahi[3], Abraham George[1], Mohamed Saad[1], Mohammed Budruddin[1], Imran Khan[1], Suhail Al-Salam[4], Yousef Boobes[1]

[1]*Seha Kidney Care*
[2]*Internal Medicine Department*
[3]*Infection Disease Department, Tawam Hospital*
[4]*Department of Pathology, CMHS, UAEU, Al Ain, United Arab Emirates*

Background: Tuberculosis (TB) is a common worldwide infection that ranges from latent disease to disseminated infection, with a high mortality rate if untreated. TB can invade the urogenital system, resulting in various complications; however, IgA glomerulonephritis related to TB infection is rarely reported. We described our experience of two cases.

Case 1: A 64-year-old Moroccan female presented with a 2-month history of fever, night sweats, poor appetite, and weight loss of 10 kg. Investigations revealed liver, pancreatic masses, and pleural effusion with lymphadenopathy. Lymph node biopsy showed necrotic granulomatous lymphadenitis. Biopsies from pancreatic tissue and pleural fluid analysis were negative for malignancy, and the *Ziehl–Neelsen stain* was nonreactive. Her quantifier-TB IGRA test was positive, while other infectious serology and autoimmune workups were negative. She developed acute kidney injury (Cr 197 micromol/L), hematuria, and nephrotic range proteinuria (4.17 g/g Creat). A kidney biopsy revealed IgA nephropathy with acute tubular necrosis. Oxford classification cannot be applied because of the limitation of the sample. She was started on anti-TB medications along with a low dose of prednisolone 10 mg with improvement of renal function to Cr 79 micromol/L at the follow-up visit.

Case 2: A 30-year-old female from the Philippines presented with a 6-month history of progressive symptoms of fatigue, mid-back pain, right flank swelling, weight loss of 4 kg, and a 3-week history of right leg weakness. Her laboratory investigations were remarkable for hypercalcemia, acute kidney injury Cr 184 micromol/L (no baseline before), hematuria, proteinuria, and anemia. Imaging revealed multiple L2, L4, and L5 bony destructive lesions (spinal compression at L4), cervical necrotic lymph nodes, and abscess formation from the posterior right chest to the groin. Lymph node biopsy revealed caseating granulomatous lymphadenitis. Quantiferon-TB IGRA test was positive. She was started on anti-TB therapy. Then, she developed progressive deterioration in renal function. A kidney biopsy was done and showed IgA nephropathy with endocapillary proliferative glomerulonephritis "Oxford Classification M 1, E 1, S 1, T 2, C 2," acute tubular necrosis, and chronic tubulointerstitial nephritis. She developed hemorrhagic shock due to liver/plural bleeding post-T2–T5 laminectomy for spinal cord decompression. She required interventional embolization for the right hepatic artery and right thoracoscopic decortication. She was started with dexamethasone and continued with anti-TB therapy for disseminated spinal TB. After 2 months, she presented with a fever and was found to have AKI stage III and volume overload with acute anemia that required hemodialysis and blood transfusion. She was not compliant with anti-TB medications

and steroids. She is currently on dialysis twice per week and had urine output.

Conclusion: Kidney biopsy is fundamental to evaluate the cause of acute kidney injury in the setting of disseminated TB. Adding steroids to standard anti-TB medications might be a good approach for TB-related crescentic IgA glomerulonephritis.

OC23-005. Intravesical Gentamicin Instillation in the Prevention of Recurrent Urinary Tract Infections in Children with Neurogenic Bladder

Manal Mouhssine[1], Dania Al Ani[1], Amar Al Shibli[2,3], Ghassan Ghatasheh[2], Abdulla Al Amri[2,3], Hilal Matta[4], Roy Chedid[5], Hassib Narchi[3]

[1]Department of Academic Affairs
[2]Department of Pediatrics, Tawam Hospital
[3]Department of Pediatrics, College of Medicine and Health Sciences, United Arab Emirates University
[4]Department of Surgery, Tawam Hospital, Al Ain, United Arab Emirates, and
[5]William Carey University College of Osteopathic Medicine, Hattiesburg, Mississippi, United States

Background: Recurrent urinary tract infections (UTI) in children with neurogenic bladder (NGB) put them at high risk of morbidity and mortality from urosepsis and end-stage renal disease (ESRD). Since the efficacy of low-dose prophylactic antibiotics to prevent these recurrences has declined since the emergence of extended-spectrum β-lactamase (ESBL) organisms, intravesical gentamicin instillation has also been used. However, only scarce data on children are available in the literature.

Methods: We evaluate the efficacy of intravesical gentamicin instillation to reduce UTIs in children with NGB, compare it with oral antibiotic prophylaxis, and determine its effect on pathogen resistance to antibiotics. Therefore, we conducted a retrospective observational study including all children with NGB managed in Tawam Hospital, a tertiary center in the United Arab Emirates. In all patients, an initial oral antibiotic prophylaxis was followed by bladder gentamicin irrigation. In a conditional zero-inflated negative binomial regression model, we performed a matched comparison for each child, before and after each of these therapies, between the number and rate of UTIs, the identified pathogens, and their susceptibility to antibiotics.

Results: When compared with antibiotic prophylaxis, intravesical gentamicin instillation showed no significant difference in the yearly rate of UTI, symptomatic UTI, or admissions for intravenous antibiotic therapy. However, it was associated with a 38% reduction in the incidence rate ratio of UTI ($p = 0.04$) and 75% of asymptomatic UTI ($p = 0.006$). After intravesical gentamicin instillation, five children (31%) had a gentamicin-resistant UTI, similar to before that treatment ($p = 0.76$).

Conclusion: Gentamicin bladder irrigation decreases the overall rate of UTI and asymptomatic infections in children with NGB without the emergence of ESBL pathogens or increased bacterial resistance to gentamicin.

OC23-110. Anti-MDA5 Antibody-Positive Dermatomyositis Presented with Different Phenotypes and Manifestations: Case Series

D.Y. Ahmed[1,2], A.H. Al Dhaheri[1,2], A.S. Alshamsi[1,2], A.A. Al Muhairi[1,2], K.W. Khawaja[1,2], I.Q. Shaalan[1,2], R.A. Namas[1,2], G. ElGhazali[1,2]

[1]Tawam Hospital, Al Ain, UAE, AHS, Al Ain, and
[2]Sheikh Khalifa Medical City, Abu Dhabi, United Arab Emirates

Background: MDA5 is an RNA sensor that triggers interferon production by recognizing double-stranded RNA viruses. AMA-DM is a rare autoimmune disease characterized by three clinical phenotypes, with RP-ILD being the most severe. We report three Emirati AMA-DM patients with varying clinical presentations and outcomes. This case series study shows three case presentations of dermatomyositis to study the impact of the disease and presentation of the patients.

Case 1: A 24-year-old Emirati man presented with flu-like symptoms, elevated liver enzymes, and a lower limb rash. Blood tests revealed elevated levels of various markers, including ferritin, CRP, anti-RO-52, and anti-MDA5. He developed type 1 RF and required oxygen therapy. An HRCT revealed ground-glass opacities mixed with airspace opacities in the bilateral lower lobe; he was diagnosed with AMA-DM with RP-ILD. Treatment with IV methylprednisolone, cyclophosphamide, and plasma exchange was initiated but failed, and he was transferred to another facility for ECMO. Despite efforts, the patient ultimately succumbed to his illness after 40 days in the hospital.

Case 2: A 62-year-old Emirati with rheumatoid arthritis and interstitial lung disease presented with lethargy, poor appetite, exertional dyspnea, and a wet cough. Physical examination revealed muscle atrophy, weakness, and a hyperpigmented macular rash. Laboratory tests showed elevated LDH and ferritin, normal aldolase and creatine kinase, and positive anti-CCP, anti-MDA-5, and anti-RO-52. Following that, a chest CT scan revealed bilateral ground-glass opacities. He was diagnosed with AMA-DM and treated with IV methylprednisolone, induction rituximab, nintedanib, and mycophenolic mofetil. While the CT scan showed no disease progression 2 months posttreatment, there was no clear improvement. The patient eventually needed home oxygen after being admitted to the hospital for pneumonia.

Case 3: A 13-year-old Emirati male presented to ED with significant weight loss and generalized data analysis that more specifically addresses the stiffness, especially hands with dry patches over his knuckles, joint pains, and social isolation. Creatinine kinase was normal. Later, the anti-MDA5 antibody was positive. Then, a thigh muscle MRI confirmed myositis. He was briefly lost to follow-up, then returned and was worse. He was treated with IV methylprednisolone (30 mg/kg 3 doses) and IVIG (1.5 g/kg due to global shortage during the COVID-19 pandemic). After eight treatments, his condition improved significantly—another brief loss to follow-up with deterioration. Then, treatment with IVIG resumed. Further, after 10 months of treatment, he showed significant improvement with normal strength and posture, gained 15 kg, and his social communication returned to normal. CMAS was normal. MRI of thigh muscles was normal.

Conclusions: AMA-DM is a severe dermatomyositis triggered by environmental factors in genetically susceptible individuals. It presents with distinct clinical phenotypes and is caused by an environmental event that generates anti-MDA5, possibly triggered by SARS-Cov-2 or vaccines. RP-ILD is the most important survival predictor, and the prognosis for patients with ILD and anti-MDA5 antibodies is poor. High-resolution CT scans show ground glass opacities, while pneumomediastinum is a life-threatening complication. Combination therapy, including steroids, tacrolimus, and IV cyclophosphamide, has shown benefits, with plasmapheresis and JAK inhibitors also being effective treatments. Timely diagnosis and treatment are crucial to reduce mortality rates.

OC23-014. Early Prediction of Response to Trastuzumab Deruxtecan in Metastatic Breast Cancer and Toxicity: A Retrospective Clinical Study

Mohammad Hourani[1], Jawaher Ansari[1], Khaled Alqawasmeh[1], Aydah Alawadhi[1], Emad Dawoud[1], Nouri Bennini[1], Selvaraj Giridharan[1], Diaeddin Trad[1]

[1]*Department of Medical Oncology, Tawam hospitalHospital, Al Ain, United Arab Emirates*

Background: Globally, breast cancer is currently the most common cancer, accounting for 12.5% of all new annual cancer cases worldwide and 21.4% of all cancer cases recorded in UAE in 2020. It is also the leading cause of cancer death in women in many developed countries worldwide. Trastuzumab deruxtecan (TDx) is an antibody–drug conjugate consisting of a humanized monoclonal antibody covalently linked to the topoisomerase-I inhibitor deruxtecan. It is approved by the U.S. Food and Drug Administration to treat unresectable or metastatic HER-2 high-expression breast cancer in those who have previously received an anti-HER2 medicine.

Methods: This study aims to report the efficacy and safety of TDx in metastatic HER-2 high-expression breast cancer patients in the period 2021 to 2022 in Tawam Hospital. Thirty patient records were reviewed through the Tawam Cancer Registry and analyzed. Retrospective data analysis were conducted to identify the outcomes and toxicity.

Results: A total of 27 (90) patients out of the 30 had high HER-2 expression, while 3 (10%) patients only had HER-2 low expression with an immunohistochemistry score of +1. Estrogen and progesterone receptors were found positive in 16 (53.3%) patients, while both estrogen and progesterone receptors were negative in 9 (30%) patients. Grade 3 IDC was the predominant histology in 16 (53.3%) patients. Most of our patients were in the 40 to 60 age group: 21 (70%). In addition, the majority of the patients had a high proliferation marker percentage (K_i-67 >20%) in 20 (19%) patients. All of our study patients had received Trastuzumab deruxtecan during their palliative management. Most received it as a third line: 12 (40%) patients. Of the rest of the patients, 7 (23.3%), 5 (16.6%), and 2 (6.6%) patients received TDx in their fourth, fifth, and sixth lines, respectively. The patient has a median follow-up of 6 months; 20 (66.6%) patients had significant disease response upon follow-up. Three patients (10%) had a complete radiological response, while the rest (56.6%) had a partial response. The median time to respond was 6.5 months. Images did not yet assess eight (26.6%) patients, but clinically they were responding. Of the 30 patients, 1 (3.3%) lost his follow-up. Among all the patients compliant with the follow-up, 93.1% were alive until the data collection date. The common adverse events of any grade in the TDx group were thrombocytopenia in 5 patients, classified in 4 of them as grade 2 and the fifth patient as grade 1, followed by blurry vision grade 2 in two patients. Grade 5 drug-induced hepatic toxicity was reported in one patient. Grade 2 drug-induced pneumonitis was also reported in one patient. The rest of the side effects were grade 2 nausea and vomiting, fatigue, neutropenia, and grade 1 skin rash.

Conclusion: Our data showed a significant and durable response after using TDx in high expression HER-2 with a manageable toxicity. Although it is an early prediction of its efficacy and toxicity, our institution's early results are promising. Further evaluation of our data on this group of patients and others will follow. All TDx patients should be monitored for possible hematological toxicity, interstitial lung disease, and drug-induced hepatitis.

OC23-017. Short-Term Effect of Norepinephrine on Circulatory Parameters, Acidosis, Kidney Function, and Survival in Neonates with Severe Hypotension and Shock

Nisha Viji Varghese[1], Tasnim Dawoud[1], Aiman Rahmani[1], Mohammad Khassawneh[2], Mustafa AliAbdullatif[1]

[1]*Pediatric Department, Tawam Hospital, Al Ain, United Arab Emirates, and*

[2]*Department of Pediatrics, Jordan University of Science and Technology, Amman, Jordan*

Background: Norepinephrine is the preferred vasopressor for treating septic shock in children and adults, which a low SVR characterizes. The clinical literature on norepinephrine use in neonates predominantly involves refractory shock and demonstrates increased BP, improved oxygenation, and decreased serum lactate within hours of initiation. However, owing to the marked variation in the management of hypotension in extremely preterm and preterm babies, there is a comparable lack of experience with norepinephrine in neonates compared with older children and adults.

Methods: A total of 47 neonates admitted to our NICU with severe hypotension and shock were selected for the study to determine the effect of norepinephrine on circulatory parameters, acidosis, kidney function, and survival. To evaluate the changes, parameters such as the heart rate, SBP, DBP, MBP, Fio2, pH, bicarb, BE, lactate, and body weight were measured before and after administering the norepinephrine injections to the neonates. All the recorded data were statistically analyzed. A tailed or paired student *t*-test was used to compare the mean differences between the values collected before and after norepinephrine administration. The *p*-value was calculated at a confidence interval of 95% with a 0.05 α level. A *p*-value less than 0.05 is considered statistically significant.

Results: After starting the norepinephrine infusion, the mean blood pressure (MBP) rose from 34.15 ± 11.83 to 45.66 ± 15.54 mm Hg, which is an average increase of 11 mm Hg and was statistically significant with a *p*-value of 0.001. The diastolic BP (DBP) increased from 27.79 ± 12.24 to 38.47 ± 14.49 mm Hg, and the systolic BP (SBP) increased from 47.17 ± 13.47 to 57.57 ± 16.37 mm Hg which were statistically significant with a *p*-value of 0.001. The heart rate of the neonates increased from 165.28 ± 29.85 to 170.96 ± 23.37 beats. However, the increase was not statistically significant. The FiO2 increased from 57.57 ± 29.97 to 62.38 ± 32.01 percent, and the difference was statistically insignificant ($p = 0.253$). The urine output increased by an average of 0.822 mL/kg from 2.063 ± 1.761 to 2.885 ± 2.023 mL/kg, statistically significant with a *p*-value of 0.015. The blood pH values dropped from 7.1881 ± 0.1712 to 7.173 ± 0.1786, $p = 0.64$, which was not statistically significant. The bicarbonate levels increased from 18.74 ± 7.48 to 19.29 ± 7.35, which was not statistically significant ($p = 0.50$). The serum lactate levels increased significantly from 6.279 ± 5.255 to 7.572 ± 6.261 ($p = 0.01$). The body post-norepinephrine also increased significantly by 0.1169 kg from 1.568 ± 1.213 to 1.685 ± 1.286 kg.

Conclusion: Norepinephrine effectively raises blood pressure and urine output in hypotensive neonates without causing major short-term side effects.

OC23-022. Limonene, a Monoterpene, Mitigates Rotenone-Induced Dopaminergic Neurodegeneration by Modulating Neuroinflammation, Hippo Signaling, and Apoptosis in Rats

Lujain Bader Eddin[1], Azimullah Shamsulislam[1], Niraj Jha[2], Nagoor Meeran Mohamed[1], Rami Beiram[1], Shreesh Ojha[1]

[1]*Department of Pharmacology; United Arab Emirates University, Al Ain, United Arab Emirates, and*

[2]*Department of Biotechnology, Sharda University, Greater Noida, Uttar Pradesh, India*

Background: Rotenone (ROT) is a naturally derived pesticide and a well-known environmental neurotoxin associated with the induction of Parkinson's disease (PD). Limonene (LMN), a naturally occurring monoterpene, is ubiquitously in citrus fruits and peels. PD is one of the prevalent slow-progressing disorders, pathologically featured by the degeneration of dopamine-producing neurons in substantia nigra pars compacta (SNpc) with no current pharmacological agents to cure or halt the progression of PD completely. There is enormous interest in finding novel therapeutic agents that can cure or halt progressive degeneration. Therefore, the main aim of this study is to investigate the potential neuroprotective effects of LMN employing a rodent model of PD, measuring parameters of oxidative Stress, neuro-inflammation, and apoptosis to elucidate the underlying mechanisms.

Methods: PD in experimental rats was induced by intraperitoneal injection of ROT (2.5 mg/kg) 5 days a week for 28 days. The rats were treated with LMN (50 mg/kg orally) and the intraperitoneal injection of ROT (2.5 mg/kg) for the same duration in ROT-administered rats.

Results: ROT injections induced a significant loss of dopaminergic (DA) neurons in the substantia nigra pars compacta (SNpc) and DA striatal fibers following the activation of glial cells (astrocytes and microglia). ROT treatment enhanced oxidative stress, altered NF-κB/MAPK signaling and motor dysfunction, and enhanced the levels/expressions of inflammatory mediators and proinflammatory cytokines in the brain. There was a concomitant mitochondrial dysfunction followed by the activation of Hippo signaling and intrinsic apoptosis pathway and altered mTOR signaling in the brain of ROT-injected rats. Oral treatment with LMN (50 mg/kg) corrected most of the biochemical, pathological, and molecular parameters altered following ROT injections.

Conclusion: Our study findings demonstrate the efficacy of LMN in protecting against ROT-induced neurodegeneration. This experimental study supports the nutritional application or pharmaceutical development of LMN for PD, though further preclinical and clinical studies on safety and pharmacokinetics are warranted before human usage.

OC23-023. Mutations in DNASE1L3 Causing Familial Hypocomplementemia Urticarial Vasculitis and Early Onset Systemic Lupus Erythematosus

Najla Aljaberi[1], Hiba Alblooshi[2], Afra Al Dhaheri[3]

[1]Department of Pediatrics, Tawam Hospital

[2]Department of Genetics, College of Medicine & Health Sciences, UAE University, and

[3]Department of Rheumatology, Tawam Hospital, Al Ain, United Arab Emirates

Background: Systemic lupus erythematosus (SLE) is a multisystemic autoimmune disease with several aberrancies in the immune system. Genetic factors are central to understanding the pathophysiology, especially in patients with monogenic lupus (single-gene mutation). Anecdotally, we observe a relatively high prevalence of familial SLE in our region (UAE/Arab regions). Studying such cases' genetics has yielded gene mutations known to cause SLE. Here, we report three siblings with mutations in DNAES1L3 causing SLE and hypocomplementemic urticarial vasculitis (HUVS). This study aims to report the clinical and genetic presentation of three siblings with monogenic SLE and HUVS and discuss clinicopathologic correlations.

Methods: The patients were identified through our SLE clinical cohort. Informed consent was obtained from the patients/guardians to participate in our institution's "Mendelian Project" research study. The local IRB committee approves the study. Whole exome sequencing (WES) was performed. The initial sequencing results were analyzed in the context of the clinical presentation of SLE and HUVS.

Results: Genetic analysis via WES revealed a homozygous *DNASE1L3* variant at c.572A>G; p. Asn191Ser for the three affected siblings classified as variants of unknown significance (VUS). The mother and healthy sibling were heterozygous (carrier) for the variant. This indicates that the variant is segregating with the family for SLE. *DNASE1L3* variant c.572A>G, p.Asn191Ser is a novel variant not reported previously in the literature or human genetic mutation database (HGMD). Computational (in-silico) pathogenicity prediction tools predicted the damaging effect of the variant (PolyPhen: damaging, SIFT: Deleterious, Conservation: high). All three siblings developed HUVS as the initial manifestation, confirmed by skin biopsy. In the older siblings who eventually met the criteria for SLE, the HUVS resolved as other SLE symptoms emerged. The youngest sibling has not met the criteria for SLE and only has skin involvement with debilitating HUVS (tender lesions and swollen hands/feet). This patient was found to have very low levels of C1q without anti-C1q antibodies. Screening for mutations in C1q was negative. Of note, the HUVS has been the most severe in this patient.

Conclusion: DNASE1L3 genetic variants contribute to monogenic SLE. This report supports prior literature linking DNAES1L3 deficiency to HUVS and SLE. Further analysis of the effect of this variant on the immune system and its link to C1q deficiency or consumption may shed light on relevant immune mechanisms related to SLE.

OC23-024. Using a Novel Rabbit Model to Understand the Role of Epstein–Barr Virus in the Pathogenesis of Multiple Sclerosis

Gulfaraz Khan[1], Asma Hassani[2], Narendran Reguraman[1], Safa Shehab[3]

[1]Department of Medical Microbiology & Immunology, United Arab Emirates University, College of Medicine and Health Sciences, Al Ain, United Arab Emirates

[2]Department of Neurology, Harvard Medical School, Beth Israel Deaconess Medical Center, Boston, United States

, 3Department of Anatomy, United Arab Emirates University, College of Medicine and Health Sciences, Al Ain, United Arab Emirates

Background: Multiple sclerosis (MS) is a chronic inflammatory disease of the central nervous system (CNS), believed to be caused by the autoimmune destruction of the myelin sheaths surrounding the nerve fibers of the brain and spinal cord, leading to inflammation, demyelination, and scarring. What causes MS remains unknown. Both genetic and environmental factors have been implicated. Of the environmental risk factors, there is now substantial and credible data from numerous independent studies implicating Epstein–Barr virus (EBV), a common herpesvirus, in the pathogenesis of MS. Our previous study on over 1,000 brain samples revealed the presence of EBV in the brain of 90% of MS cases. However, how EBV induces the pathology seen in MS has been frustratingly difficult to address, primarily due to the need for a naturally susceptible animal model of EBV infection.

Methods: We recently established a novel rabbit model of EBV infection, which recapitulates EBV infection in humans. We have been using this model to understand the biology of EBV and its associated diseases. In this study, we investigate if peripheral EBV infection can lead to the dissemination of the virus to the CNS and what pathological impact this would have on the brain and spinal cord. We injected EBV intravenously in one group of animals and

isotonic saline in another. Animals were sacrificed at 2 to 4 weeks postinfection, and all major organs were collected. Molecular and histopathology techniques examined histopathological changes and viral dynamics in peripheral blood, spleen, brain, and spinal cord.

Results: In the current study, using our rabbit model of EBV infections, we aimed to address some of the prominent questions related to the role of EBV in the pathogenesis MS. Our findings revealed that: (1) intravenous administration of EBV results in widespread infection with readily detectable virus in the spleen, PBMCs, and plasma, (2) circulating infected cells and not free virus correlate with CNS infection, (3) peripheral infection induces the formation of distinct inflammatory cellular aggregates in the brain and spinal cord, (4) the aggregates are made up of EBV-infected cells, reactive astrocytes, infiltrating lymphocytes and macrophages, (5) demyelination is present within the inflammatory aggregates, (6) the expression EBV latent transcripts, EBER1 and EBNA1, correlates with the levels of expression of proinflammatory cytokines such as IL1β and IL6.

Conclusion: Our study provides, for the first time, direct evidence that primary peripheral EBV infection can lead to the virus crossing the blood–brain barrier and entering the CNS. Importantly, EBV infection in the CNS was associated with the formation of neuroinflammatory cellular aggregates similar to what has been reported in the brain of EBV-positive MS lesions in humans. Moreover, like MS, cellular aggregates in the rabbit brain were also devoid of myelinated nerve fibers. Finally, the rabbit model of EBV infection we have established shows great potential for unraveling the mechanisms of EBV-associated diseases and testing vaccines and antivirals against EBV.

OC23-028. Epidemiology and Potential Risk Factors of Congenital Anomalies in the Gulf Cooperation Council Countries: A Scoping Review

Hiba Adam[1], Nadirah Ghenimi[2], Iffat Elbarazi[1], Rami H. Al-Rifai[1], Luai. A. Ahmed[1]
[1]Institute of Public Health, , and
[2]Department Family Medicine, College of Medicine and Health Sciences, United Arab Emirates University, Al Ain, United Arab Emirates

Background: Congenital anomalies (CA) are a major worldwide cause of mortality and morbidity. The Gulf Cooperation Council Countries (GCC) region has a high burden of CA, but a systematic assessment of this epidemiology has yet to be performed. This scoping review aims to synthesize the literature and report the epidemiology of CA diagnosed perinatally in the GCC countries. This review aims to provide an overview of the epidemiology of CA in the GCC countries, highlighting the prevalence, incidence, and risk factors associated with CA.

Methods: We conducted a scoping review following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. A comprehensive literature search was performed in MEDLINE-PubMed, Embase, Scopus, and Web of Science for articles published between 2007 and 2022. Studies reporting the epidemiology of perinatally diagnosed CA in the GCC countries were included. Two reviewers independently screened the abstracts and full texts of potentially eligible records, followed by data extraction.

Results: We identified 37 studies reporting the epidemiology of CA in the GCC countries between 2007 and 2022. Saudi Arabia contributed to the largest volume of literature (72.9%), while Qatar and Bahrain had the least (2.7%). Most anomalies were diagnosed postnatally (70.2%) and reported by prevalence (78.4%). Cleft lip and palate were the most researched anomalies (21.6%), while head and neck anomalies, anorectal malformations, and congenital hip dysplasia were the least researched. Congenital dysplasia of the hip had the highest incidence (31/1,000), while congenital heart disease reported the highest prevalence (71/1,000). Multiple anomalies had an overall prevalence of 8.1–68.7/1,000. The UAE had the highest prevalence, with only one study reporting incidence. Consanguinity, advanced maternal age, and maternal diabetes were identified as the main risk factors for CA.

Conclusion: This scoping review provides an overview of the epidemiology of congenital anomalies in the GCC countries. The data showed significant variability across countries and highlighted the need for national surveys to estimate the epidemiological burden accurately and identify potential risk factors. Such surveys help guide public health policies to prevent and manage CA in the region.

OC23-035. Prevalence and Risk Factors for Metabolic Syndrome in Schizophrenia, Schizoaffective, and Bipolar Disorder

Hind Mohd Ahmed[1], Emmanuel Stip[2], Abeer Al Ammari[1], Mohammed Galadari[1], Aaisha Alsaadi[3], Aysha Alhassani[3], Fatima Al Marzooqi[3], Mohammed AlAhbabi[3], Hind Alsheryani[2], Meera Bahayan[2], Reem Ahmed[2], Sara Alameri[2], Karim Abdel Aziz[2]
[1]Alain Hospital
[2]United Arab Emirates University
[3]Tawam Hospital, Al Ain, United Arab Emirates

Background: Metabolic Syndrome (MetS) is a medical condition characterized by central abdominal obesity, hyperglycemia, elevated lipids, and high blood pressure. It is a risk for developing cardiovascular and cerebrovascular diseases. The prevalence of MetS is especially high in psychiatric patients. To date, there are limited data from the United Arab Emirates (UAE) on the prevalence of MetS. Therefore, we aimed to investigate the prevalence of MetS in a large sample of patients in the UAE with schizophrenia, schizoaffective, and bipolar affective disorder and to investigate possible risk factors for MetS.

Methods: A cross-sectional study was conducted at the Behavioral Sciences Institute (BSI) at Al-Ain Hospital in Al-Ain City, UAE. We collected demographic and clinical data on all patients with a diagnosis of schizophrenia, schizoaffective, and bipolar affective disorder in the period between January 2017 and December 2020. This included their primary psychiatric diagnosis, any secondary diagnosis (psychiatric or medical), vital signs (heart rate, systolic and diastolic blood pressure, body mass index [BMI]), metabolic parameters (fasting blood glucose, cholesterol, triglycerides, low-density lipoprotein [LDL], high-density lipoproteins [HDL]) and prescribed medications. We used the American Association of Clinical Endocrinology (AACE) criteria to diagnose MetS.

Results: We included 889 subjects (schizophrenia $=402$, schizoaffective $=43$, bipolar disorder $=444$). Of these, 79.8% ($N=709$) had a BMI $\geq$25 kg/m^2, and 9.8% ($N=87$) had no abnormal metabolic parameters. Overall, 28.1% ($N=250$) met the criteria for MetS, with 27.6% ($N=111$) of schizophrenia subjects, 39.5% ($N=17$) of schizoaffective subjects, and 27.5% ($N=122$) of bipolar subjects meeting criteria for MetS, with no statistical difference between the three groups ($p<0.05$). Female gender, fasting blood glucose level, abnormally elevated triglycerides, and receiving quetiapine were significant predictors for MetS.

Conclusion: Our study found that around one in three patients had MetS and no significant difference in prevalence

between the three diagnoses under investigation. Several variables were significant predictors for MetS. Our findings were consistent with other studies and warranted the need for regular screening and management of abnormal metabolic parameters.

OC23-037. Annals of the Development of an Internationally Recognized Health Literacy Tool in the UAE

Satish Chandra Nair[1], Sreedharan J.[2], Vijayan K.[3], Ibrahim H.[4]
[1]*Tawam Hospital, Department of Academic Affairs, College of Medicine& Health Sciences, United Arab Emirates University, Al Ain, United Arab Emirates*
[2]*Department of Community Medicine, Gulf Medical University, Ajman*
[3]*College of Medicine, Shri Satya Sai Medical College, Nellikuppam, Tamil Nadu, India*
[4]*Khalifa University, School of Medicine, Abu Dhabi, United Arab Emirates*

Background: Low health literacy can affect the social determinants of health, health outcomes, and the use of health care services. Current tools need modern patient-reported experience, objectivity, and inbuilt item controls. The study aimed to develop an internationally recognized survey tool to assess health literacy within the context of Middle Eastern and Eastern cultures, adhering to regional culture. Different socioeconomic statuses among the Eastern and Middle Eastern countries may restrict health information access and utilization for those with low literacy.

Methods: By employing an expert panel, the Delphi technique, focus group methodologies, and pretesting using participants ($N = 2{,}349$), a survey tool for the Eastern-Middle Eastern cultures was developed. Reliability was assessed using Cronbach's α and validity using Factor analysis. Kaiser–Meyer–Olkin (KMO) sampling adequacy and Bartlett's tests were used to assess the strength of the relationship among the items. The chi-square test was used to analyze the association between health literacy and demographic variables. Ordinal regression was adopted to analyze the data for statistically significant independent variables.

Results: In total, 2,349 of 2,971 patients responded (79% response rate). Slightly less than one-quarter (23.9%) of patients surveyed demonstrated adequate health literacy. Over a third of women respondents (31.7%) possessed adequate health literacy, as compared with only 13% of men surveyed ($p < 0.001$). Participant age was significantly ($p < 0.001$) associated with health literacy levels, with approximately 50% of participants above age 50 years (51–75 years) demonstrating inadequate health literacy. Education was also positively correlated with health literacy. Adequate health literacy levels were twofold higher (30.5%, $p < 0.001$) in patients with high school education compared with patients without secondary education. Only 11% of patients with diabetes (T2DM) had adequate health literacy levels. Patients under the age of 50 years had statistically significant higher rates of marginal (44.5%) and adequate literacy (28.2%, $p < 0.001$) than the older population with diabetes.

Conclusion: The Eastern-Middle Eastern Adult Health Literacy screening instrument is brief, simple, and a useful indicator of health literacy. It differentiates the patient's ability to comprehend health and non-health-related items. The low health literacy in outpatients with diabetes may be a major challenge to optimizing diabetes care in the UAE. In addition to health services strategies, targeted educational and behavioral interventions for the older population and those with less formal education are necessary. The tool EMAHL13 is now used in 9 countries such as Spain, Japan, China, India, Canada, and Oman.

OC23-040. Effectiveness of Interleukin-23 Inhibitors in Axial Spondylarthritis and Axial Psoriatic Arthritis: A Systematic Review and Meta-analysis

Shamma Al Nokhatha[1], Sinead Maguire[2], Khalid Alnaqbi[1]
[1]*Division of Rheumatology, Tawam Hospital, Al Ain, United Arab Emirates and*
[2]*Department of Rheumatology, St. James's Hospital Dublin*

Background: Axial spondylarthritis (axSpA) is an immune-mediated systemic chronic inflammatory arthritis involving the axial skeleton that may involve peripheral joints. Nonsteroidal anti-inflammatory drugs are first-line therapy in managing axSpA; however, NSAID monotherapy is insufficient for many patients to induce disease remission. Given the known efficacy of biologics in spondyloarthritis and the heterogenicity of these conditions, treatment choices should consider all relevant disease domains. Based on evidence, interleukin-23 has been identified as a promising therapeutic target in SpA and PsA. Interleukin 23 inhibitors have produced inconsistent results when used to treat axial spondylarthritis and axial psoriatic arthritis. Thus, there is a need for a holistic understanding of the use of IL23 inhibitors in axial conditions, in particular spondylarthritis and psoriatic arthritis, to provide appropriate evidence-based management and mitigate the growing burden of these diseases. The aim is to explore the latest reported literature on the effectiveness of IL 23 inhibitors in axial spondylarthritis and psoriatic arthritis.

Methods: A systematic literature review was conducted. The following databases were searched: Pubmed, Mendeley, EMBASE, MEDLINE (OVID), CINAHL, Cochrane Library (central), and Web of Science. The search strategy included terms related to axial spondylarthritis and axial psoriatic arthritis and specifying the medications of study interest: Ustekinumab, Risankizumab, Guselkumab, or Tildrakizumab. The search was restricted to studies published in English from inception until June 2022. Randomized controlled trials, observational studies, or systematic reviews were eligible. Outcomes assessed were BASDIA, BASDAI 50, modified BASDAI, BASFI, and ASDAS.

Results: A total of 4,456 studies were identified, nine studies of which five studies examining axial spondylarthritis (four RCTs and one prospective study) and four studies examining axial psoriatic arthritis (two prospective observational studies and two post-hoc-analysis) were deemed suitable for inclusion. In contrast to one prospective observational study, 4 RCTs (3 ustekinumab, 1 risankizumab) did not support using IL23 inhibitors in axSpA based on the analyzed outcome measures of interest. Pooling of results for the three ustekinumab trials (BASDAI50, BASFI, and ASDAS) demonstrated that the drug was not efficacious in treating axSpA. However, trials in axial PsA investigations showed improved BASDAI, modified BASDAI, and ASDAS.

Conclusion: The results of this meta-analysis would support the use of IL-23-inhibiting medications in the treatment of axial PsA. However, this is different for axSpA, as these drugs are needed to significantly improve patient outcomes in axSpA patient populations. This meta-analysis raises several interesting questions regarding differences in the pathogenesis of axSpA and axial PsA. It also supports the need for ongoing drug development in axSpA, as biological options remain limited compared with other forms of inflammatory arthritis.

OC23-042. Uterine Artery Embolization in the Management of Morbidly Adherent Placenta: A Retrospective Study

Nourah Alkindi[1], Kareema Mohamed Helal[1], Jamal AlKoteesh[1], Hanna Khayoun[1]
[1]*Tawam Hospital, Al Ain, Abu Dhabi, United Arab Emirates*

Background: To measure outcomes of conservative treatment of morbidly adherent placenta with intraoperative uterine artery embolization of patients treated in Al Ain hospital, United Arab Emirates, in a retrospective study.

Methods: Medical records of all patients with morbidly adherent placenta who had intraoperative uterine artery embolization in Al-Ain Hospital between March 2015 and August 2018. Thirty-one patients aged 22 to 44 years were included in the study. Measured outcomes included the following [intraoperative blood loss, transfusion requirement, bulk of the placenta left in the uterus, match between the diagnosis of placental localization by ultrasound and intraoperatively, intensive care unit (ICU) admission, hospital length of stay, duration of placenta tissue resolve, postoperative complication (secondary PPH, hysterectomy, follow-up), and maternal mortality rate]. Fetomaternal-specialized doctors followed up with patients with retained placenta using ultrasound and measured the resolution time. Data were analyzed using Minitab.

Results: Our study contains 31 female patients with an average age of 33.9 years old, and all underwent intraoperative uterine artery embolization (UAE). The average estimated blood loss was 1.97 L 95% CI (1.54, 2.41). Ultrasound diagnosis of placenta localization and invasion correctly identified 58.1% (18) of patients. 32.3% (10 patients) required ICU admission. 75% of patients (3 out of 4) required a cesarean hysterectomy, and one required a hysterectomy after one month for massive secondary PPH. The average time for the placenta to be resolved was 6.6 months, 95% CI (3.5, 9.7). After 3 months of conservative management, 3.2% (one patient) required hysteroscopic resection of the retained product of concepts, given persistent mild vaginal bleeding. No cases were reported with postpartum infection or disseminated intravascular coagulation (DIC). No mortality has been reported or encountered in the PPH group who underwent UAE.

Conclusion: Intraoperative uterine artery embolization is an effective tool in the management of patients with morbidly adherent placenta and has been shown to decrease the amount of blood loss, the requirement for blood transfusion and hysterectomy rate, allowing women to preserve their future fertility and keep the potential of having a larger family.

OC23-060. The Associated Risk of Blastocystis Infection in Cancer

Lena Labania[1], Sumaya Zoughbor[1], Suad Ajab[2], Marie Olanda[1], Sulaiman N. M. Shantour[3], Zakeya Al Rasbi[1]
[1]*Departmements of Microbiology and Immunology, Tawam Hospital*
[2]*Public Health, College of Medicine and Health Sciences, UAE University, and*
[3]*Division of General Surgery, Department of Surgery, Tawam Hospital, Abu Dhabi, United Arab Emirates*

Background: Gastrointestinal cancer (GI) is one of the most diagnosed malignancies and mortalities globally. Microbial composition is an associated factor that might increase the possibility of developing gastrointestinal disorders and also affects cancer therapy efficacy. An investigation of stool samples' microbial content collected during therapy establishes a link between gut microbiota composition, disease, and subsequent therapeutic response. Blastocystis is an anaerobic intestinal protozoan. Nine *Blastocystis* subtypes (STs) were detected in humans. A subtype-dependent association between Blastocystis and different cancer types has been debated in many studies. Thus, this study assesses the possible association between Blastocystis infection and colorectal cancer (CRC). We also screened the presence of gut fungi and their association with *Blastocystis*. We also screened the presence of gut fungi and their association with *Blastocystis*.

Methods: We used a case–control design for cancer patients and cancer-free (CF) participants. The cancer group was further sub-group into the CRC group and cancers outside the gastrointestinal tract (COGT) group. Macroscopic and microscopic examinations were performed to identify intestinal parasites in participants' stool samples. Molecular and phylogenetic analyses were conducted to identify and subtype Blastocystis. Furthermore, gut fungi were investigated molecularly.

Results: A total of 104 stool samples were collected and matched between CF ($n = 52$) and cancer patients ($n = 52$), CRC ($n = 15$), and COGT ($n = 37$). There were more diverse nonpathogenic protozoa observed in COGT compared with GI patients. For example, the prevalence of *Blastocystis* was significantly higher among cancer patients (OR = 2.98) compared with CF participants. Furthermore, this study revealed that the prevalence of *Blastocystis* spp. is significant in colorectal cancer (CRC) patients (OR = 5.66) compared with the CF group. As anticipated, *Blastocystis* prevalence was significantly higher among CRC patients (60%, $p = 0.002$) and insignificant in COGT patients (32.4%, $p = 0.161$) compared with the CF group (17.3%). The most common subtypes were ST2 among the cancer group and ST3 in the CF group.

Conclusion: Cancer patients have a higher risk of *Blastocystis* infection than CF individuals (OR = 2.98, $p = 0.022$). Increased risk of *Blastocystis* infection was associated with CRC patients (OR = 5.66, $p = 0.009$). Nevertheless, further studies are required to understand the underlying mechanisms of Blastocystis and cancer association. Thus, routine *Blastocystis* infection screening in cancer patients might be a useful tool to be added to the usual patient care.

OC23-074. Optimum Timing of Cesarean Section after Two or More Previous Cesareans for the Best Maternal and Neonatal Outcomes. A Two-Centered Study

Anila Aravindan[1], Anupama Bondili[1], Sumita Datta[2], Nilanjana Singh[2]
[1]*Tawam Hospital, and 2Kanad Hospital, Al Ain, United Arab Emirates*

Background: In recent decades, the cesarean section (CS) rate has increased to approximately 30% of births in high-income countries. Many CSs are electively planned without an urgent medical reason for the mother or neonate. The optimal gestational age for a planned cesarean section (CS) generally reflects a balance between two opposing risks. An early CS, though, may harm the newborn. To evaluate and assess the effect of the scheduled gestational age for a repeat planned CS on the risk of the need for an unplanned CS and adverse pregnancy outcome in women with two or more previous CS.

Methods: A two-centered retrospective cohort study of women with ≥2 previous cesarean sections scheduled for a repeat or who had an emergency CS. Data will be collected from January 1, 2019 to January 1, 2020. Women were divided into groups by gestational age at which the planned CS was scheduled and several previous cesarean sections. Gestational age was examined by completed weeks (e.g., 37 completed weeks = 37 0/7 to 37 6/7 weeks). Cases will be included regardless of gestational age if a complication is due

to the previous cesarean section. Cases complicated by placenta previa and its spectrum, maternal cardiac, renal, lung diseases, major fetal anomalies, and multiple gestations will be excluded from the study.

Results: A total of 415 were included in the study (236 patients from Tawam and 179 from Kanad Hospital). 35, 38, and 8% of participants had a cesarean section at 37, 38, and 39 weeks of gestation, and 23, 13, and 13% had an unplanned cesarean section, respectively. The unplanned cesarean rate was similar in the 38 and 39 weeks of gestation. However, the maternal complications were high in the group of 39 weeks of gestation. There was no significant difference in the rate of adverse neonatal outcomes between the groups. The most common indication for the emergency cesarean section was scar pain. The lowest neonatal morbidity was associated with the 39-week gestation group. The most common neonatal complications were respiratory distress syndrome and transient tachypnea in newborns.

Conclusion: In women after two cesarean sections, scheduling a planned cesarean delivery after 39 weeks compared with 38 weeks of gestation was associated with increased maternal morbidity and with no significant advantage in neonatal outcomes.

OC23-107. A Study on the Stress and Quality of Life among Arab Mothers of Children with Congenital Heart Disease in the United Arab Emirates

Aya Bin Taleb[1], Mohammed T. Alsamri[1], Elhadi Husain Abu Rawi[1], Eiman Alkaabi[1]
[1]*Tawam Hospital, Al Ain, United Arab Emirates*

Background: The quality of life of mothers of children with chronic illnesses has become increasingly important as the mortality rates associated with such illnesses have decreased and survival rates have increased. The incidence of CHD has remained stable over the last three decades, suggesting little improvement in CHD prevention strategies and highlighting the importance of etiological studies.

Methods: A cross-sectional study was conducted in the United Arab Emirates, in the one main hospital that treats children with heart diseases. Two hundred Arabic mothers of children with congenital heart diseases were recruited. Assessment of quality of life and disease-related data were collected. WHO Perceived Stress Scale (PSS) and B-WHOQOL Questionnaires (Arabic language copy) were used.

Results: The study sample consisted of 204 mothers of CHD children. One hundred fifty-one mothers of children with noncyanotic CHD (74.0%) compared with 53 mothers of children with cyanotic CHD (26.0%). Using the Perceived Stress Scale, there was a significant effect on the mother's physical health, psychological, environment, and social relationships. QOL of mothers of cyanotic heart disease was not significantly different compared with QOL of mothers of noncyanotic heart disease.

Conclusion: The QOL of mothers of children with heart diseases was impaired, and several factors influenced it. Psychological status, social support, and reassurance of the mothers should be considered when making treatment decisions for their children.

POSTERS PRESENTATIONS:

P23-002. Comparison of International Guidelines for Managing Chronic Heart Failure with Reduced Ejection Fraction (HFrEF) and Its Associated Burden

Saeed Nabil[1], Mariam Ali[1]
[1]Tawam Hospital, Al Ain, United Arab Emirates

Background: Heart failure (HF) is one of the common cardiovascular diseases characterized by the inability of the heart to pump enough blood to meet the body's needs due to structural and/or functional abnormalities. HF prevalence and associated costs have increased in recent decades and are expected to increase as the population ages. Continuous updates in Guidelines for treating heart failure, especially for heart failure with reduced ejection fraction (HFrEF), have become evident in the last 5 years.

Methods: An extensive literature search was conducted to extract the most recently published guidelines and recommendations for managing HFrEF: China, Canada, Europe, Portugal, Russia, and the United States. We compared guidelines to find differences in treatment recommendations and associated burdens regarding mortality, morbidity, and associated costs.

Results: There is a convergence in the class of medications used in managing HFrEF, focusing on four classes in most guidelines searched that form the backbone of treatment and are known as the "fantastic four" due to their proven effectiveness in reducing mortality, morbidity, and hospitalizations. These disease-modifying classes include angiotensin II-receptor blocker + neprilysin inhibitor (ARNI) that might be alternated with angiotensin-converting enzyme inhibitor (ACEI) or angiotensin II-receptor blocker (ARB) alone, beta-blockers (BB), mineralocorticoid receptor antagonists (MRA) and sodium/glucose cotransporter-2 inhibitors (SGLT2i). Still, there are differences in the recommendations regarding initial and target dosing, the timely management of the treatment plan, and the presence of additional or missing medicines in some drug classes. Regarding disease burden, there were differences as well. In Russia, the percentage was the highest in terms of prevalence (9.8%) and incidence (17.8%) despite the lowest annual costs (487$). Canada also had a relatively low prevalence (3%) and the highest annual costs (50000$). Portugal had a relatively high prevalence (5%) and low annual costs (2875$). There is a similarity between the percentages in the United States and Europe in the burden of disease (prevalence: 2%, incidence: 3%, annual cost: USD 15,000), as is the case in the guidelines between them. China has the lowest disease prevalence (1.8%), incidence (1%), and relatively low annual costs (4600$). However, the five-year morality of HF ranged between 50 to 70 percent globally. Additionally, regarding cited studies in these guidelines, United States-based research was the highest source (35.8%).

Conclusion: This study indicates the presence of differences between guidelines and recommendations for the management of HFrEF as well as disease burden. This provides a clear way of improving an important aspect that can make a difference in heart failure and help lower its associated burden for the patient and health care systems worldwide. A unified global collaborative effort is required to produce guidelines ensuring better disease burden outcomes.

P23-004. Prevalence and Management of Latent Tuberculosis Infection In in Rheumatology Patients In in United Arab Emirates: A Retrospective Study

Merna Abdelsalhen[1], Maryam Alfalasi[2], Fatima AlKhyeli[3], Fatima AlKindi[1], Shamma Al Nokhatha[4]
[1]Department of Internal Medicine, Tawam Hospital, Al Ain
[2]Sheikh Khalifa Medical City, Abu Dhabi
[3]United Arab Emirates University, Alain, and
[4]Department of Rheumatology, Tawam Hospital, Al Ain, United Arab Emirates

Background: Before immunosuppression, rheumatology patients are routinely screened for latent tuberculosis (LTBI) using interferon-gamma release assays (IGRA). Managing positive and indeterminate IGRA results varied among institutions, and long-term outcome data need to be improved.

Methods: To retrospectively examine the frequency and management approach of positive and indeterminate IGRA in Rheumatology patients at Tawam Hospital, United Arab Emirates, between April 2010 and April 2022. The hospital's electronic medical system was used to obtain the needed information.

Results: A total of 39 rheumatology patients had indeterminate IGRA results; 24 (61.5%) were females, the mean age was 38.6 years, and 22 (56.4%) were UAE nationals. The predominant rheumatic conditions were SLE ($n = 21$, 53.8%), followed by rheumatoid arthritis ($n = 4$, 10.2%), psoriatic arthritis ($n = 4$, 10.2%), and small vessel vasculitis ($n = 4$, 10.2%). Most patients ($n = 33$, 84.6%) were covered with immunosuppression for a median duration of 8 weeks (IQR: 1–130 weeks) before IGRA testing. A total of 9 (23.07%) patients received anti-TB medications, including seven patients diagnosed with LTB (isoniazid monotherapy and Vit B6 for 9 months) and two patients with active TB infection. Positive IGRA tests were identified in 123 rheumatology patients; 90 (73.2%) patients were female, the mean age was 55.7 years, and 78 (63.4%) were UAE nationals. The most common rheumatic conditions were rheumatoid arthritis ($n = 67$,54.4%), systemic lupus erythematous ($n = 18$,14.6%), psoriatic arthritis ($n = 11$,8.9%), and Behcet's disease ($n = 6$,4.8%). 86 (69.9%) patients were on immunosuppression medications before IGRA testing for a median duration of 52 weeks (IQR: 16–156 weeks). 61% ($n = 75$) of patients were treated with anti-TB medications, including active TB infection ($n = 5$) and LTB ($n = 70$). Two patients had previous history of treated TB infections and did not receive repeated courses despite positive IGRA testing, and there was no evidence of active infection during follow-up.

Conclusion: The risk of tuberculosis activation in positive and indeterminate IGRA results for rheumatological conditions was low over time.

P23-006. Maternal and Perinatal Outcomes in Women Conceiving after Bariatric Surgery in the United Arab Emirates: A Cohort Study

Sadia Solaiman[1], Omaema Baghdadi[1], Hassan Elbiss[2], Shabana Kapadia[1], Thin Thin[1]
[1]Department of Obstetrics and Gynecology, Tawam Hospital, and
[2]Departments of Obstetrics and Gynecology, College of Medicine and Health Sciences United Arab Emirates University, Al-Ain, United Arab Emirates

Background: Obesity in women is a global issue and is being widely managed with bariatric surgery worldwide. According to recommended guidelines, pregnancy should be avoided for 12 to 24 months following surgery due to various risks. Considering gestational weight gain, we

assessed if surgery-to-conception time relates to pregnancy outcomes.

Methods: A cohort study between 2015 and 2019 followed-up pregnancies after various types of bariatric surgeries performed (e.g., Roux-en-Y gastric bypass, sleeve gastrectomy, gastric banding, gastric bypass with Roux-en-Y gastroenterostomy) in Tawam Hospital, Al Ain, United Arab Emirates. There were five surgery-to-conception groups: <6 months, 6–12 months, 13–18 months, 19–24 months, and >24 months. There were three gestational weight gain groups: inadequate, adequate, or excessive (based on the National Academy of Medicine classification). Maternal and neonatal outcomes were compared using analysis of variance and chi-square tests.

Results: There were 158 pregnancies. Booking maternal body mass index (BMI) and weight were higher among mothers who conceived <6 months following surgery ($p < 0.001$). Gestational weight gain was not related to the type of bariatric surgery ($p = 0.24$), but it was far more often inadequate in mothers who conceived <12 months following surgery ($p = 0.002$). Maternal outcomes (including pregnancy-induced hypertension and gestational diabetes mellitus) and neonatal outcomes were not statistically significantly associated with surgery-to-conception duration. However, birth weight was lower when gestational weight gain was inadequate ($p = 0.03$).

Conclusion: A negative relationship exists between shorter bariatric surgery-to-conception interval and gestational weight gain, a feature related to neonatal birth weight. Conception should be delayed to improve pregnancy outcomes following bariatric surgery.

P23-008. Mental Health Literacy Scale (MHLS) Validation Studies: A Scoping Review

Rouwida ElKhalil[1], Emad Masuadi[1], Luai A. Ahmed[1], Rami H. AlRifai[1], Matt O'Conner[2], Rasha Bayoumi[3], Mohamad AlMekkawi[4], Iffat Elbarazi[1]

[1]United Arab Emirates University, Al Ain, United Arab Emirates
[2]ConnectEd Counselling and Consultancy, Queensland, Australia
[3]Birmingham University Dubai, Dubai, United Arab Emirates
[4]Fatima College of Health Sciences, Al Ain, United Arab Emirates

Background: Following a systematic assessment of mental health literacy tools in 2014, O'Conner and Casey developed a comprehensive health literacy measure in 2015 based on the six attributes endorsed by Jorm et al in 1997. Since it was first developed, the Mental Health Literacy Scale (MHLS) has found widespread application in mental health literacy research worldwide. This scoping review aims to map the existing MHLS validation research and summarize its validity in different populations.

Methods: A scoping review was conducted following the guidelines of the Joanna Briggs Institute. A comprehensive literature search was conducted in December 2022 on PubMed, PsycINFO, Embase, CINAHL, Cochrane Library, Scopus, Medline, and ERIC from 2015 to 2022. The review focused on validation studies of O'Conner and Casey MHLS. The study participants and locations were not limited in the search. Reference list search and publication suggestions from MHLS authors were performed as well. Non-English studies and gray literature were excluded.

Results: The study included 14 articles that have validated the MHLS worldwide. The scale was validated and translated into Chinese, French, Persian, Portuguese, Slovenian, Arabic, Turkish, Chinese, Vietnamese, Japanese, and Urdu. Ten studies performed exploratory factor analysis, eight performed confirmatory factor analysis (CFA), and one used partial least square methodology. The sample size average was 662 (282–1,189), the expert panel average was 9 (4–21), the Cronbach's α average was 0.818 (0.744–0.89), and the interclass correlation coefficient (ICC) average was 0.85 (0.741–0.99). In addition, items 20, 21, and 22 were commonly removed based on the individual article's CFA results.

Conclusion: This review provided a compendium of MHLS validation research by systematically searching, selecting, and synthesizing existing publications. It also provided an evidence map for future researchers utilizing the MHLS in their local settings.

P23-009. Attitude of the Community of the United Arab Emirates toward Secondary Genetic Findings: A Cross-Sectional Study

Azhar Rahma[1], Aminu Abdullahi[1], Giulia Graziano[2], Iffat ElBarazi[1]

[1]Institute of Public Health, College of Medicine & Health Sciences, United Arab Emirates University, Al Ain, United Arab Emirates, and
[2]Sapienza Università di Roma, Rome, Italy

Background: Genome sequencing has utility but may reveal secondary findings. While Western bioethicists have been occupied with managing secondary findings, specialists' attention in Arabic countries has yet to be captured. We aim to explore the attitude of the United Arab Emirates (UAE) community toward secondary findings.

Methods: We conducted a cross-sectional study among the community of the UAE. We opened the validated and piloted questionnaire online using SurveyMonkey software from July to December 2022. We followed the Checklist for Reporting the Results of Internet E-Surveys (CHERRIES). We calculated the sample size using the WHO sample size calculator (sample-size-calculator.xls (live.com)), and our estimated sample size was 384. The Social Science Re has approved this study—324 search Ethics Committee of United Arab Emirates University (UAEU) ERS_2017_5671. We employed convenient sampling techniques as well as snowball sampling. Chi-squared and Fisher's exact tests investigated associations between categorical variables. All data analyses were performed using R software version 4.1.2.

Results: In total, 343 participants, mostly female (67%), participated in the study. The median age of respondents was 35 (IQR = 28, 42). More than half were married (56%) and had no children (51%). About 4 in 5 participants (82%) had a monthly salary of more than 10,000 AED. The majority (71%) were employed, with about half (51%) having a health-related job. Overall, only 12% of the participants were advised by their doctors to take a genetic test. Those in health care professions were more likely to have been advised by their doctors to take a genetic test (13%). Being advised by a doctor to take a genetic test was found to be significantly associated with having a genetic test, as taking a genetic test was significantly more prevalent among those whom a doctor advised to take a genetic test compared with those who were not (32 vs. 7%, $p < 0.001$). Willingness to know about one's secondary findings of a genetic test was generally high among the participants, with more than four-fifths (83%) expressing their willingness to know the secondary findings irrespective of whether the diagnosed secondary condition has a treatment. When asked about whether one with a genetic disease could marry their cousins, the majority of the participants said: "no" (69%), others said "they were not sure" (16%), while the rest said "yes" (15%). It depicts the distribution of the responses to whether a person with a genetic disease could marry their cousins by demographic characteristics.

Conclusion: The present study provides valuable data that can guide stakeholders' statements and policies toward disclosure of secondary findings. The positive attitude of the

UAE community might help produce specific national guidelines on bioethics in the UAE and other GCC countries.

P23-011. Electroconvulsive Therapy: Evaluating the Current Practice in Al Ain Hospital: The United Arab Emirates

Aravinthan Subbarayan[1], Hind Ahmed[1], Zahra Ahmed[1], Aysha AlHassani[1], AlYazia, AlKaabi[1], Omar Bin Abdulaziz[1]
[1]*Al Ain Hospital, Al Ain, United Arab Emirates*

Background: Electroconvulsive therapy (ECT) has been used since the 1930s to treat depressive illness, mania, and catatonia. This audit aimed to appraise the ECT pathway followed by the Behavioral Sciences Institute at Al Ain Hospital, United Arab Emirates. The authors analyzed the pathway's compliance against the standards in the local Al Ain Hospital guidelines and the Royal College of Psychiatrists (RCPsych) standards, focusing on capacity and consent issues.

Methods: This audit involved a retrospective review of case notes. After obtaining the relevant ethical approval for the audit, we collected the case notes of all patients who received ECT over 3 years between May 2019 and June 2022. The audit sample comprised 30 patients from the inpatient and outpatient services in Al Ain Hospital. A questionnaire was developed to capture the required information anonymously. Data collection took place between September and November 2022.

Results: Of the 30 patients, 21 (70%) were males. The average age of the sample was 31 years, with a range of 19–71 years. Twelve patients (40%) were Emirati citizens, with Ethiopian nationals (17%) being the second largest ethnic group. Most (90%) of the patients who received ECT were under the inpatient psychiatric services at Al Ain Hospital. The sample studied received, on average, eight sessions of ECT. Major depressive disorder (43% of the sample) was the most common diagnosis, followed by severe mania at 37% and catatonia at 17%. Of 30 patients, 16 (53%) had no documentation of their mental capacity to accept ECT on the consent papers. Out of 8 patients deemed needing more capacity, only 4 had proper documentation of the reasons for lacking capacity. Reviewing the consent papers demonstrated that 20 patients (67%) needed documentation to discuss the risks and benefits of the procedure.

Conclusion: This audit has identified areas for improvement in implementing Al Ain Hospital's current ECT pathway. The authors have suggested enhanced staff training on consent issues involving ECT, emphasizing better documentation of the decision-making process. Considering the possible medicolegal consequences, a particular area for documenting discussions of the risks and benefits of the procedure should be included in the ECT consent form. After 1 year of implementing the above action plan, we aim to re-audit the practice.

P23-012. Serum Prolactin Level Monitoring in Children and Adolescents on Antipsychotic Treatment: Evaluating the Current Practice in Al Ain, United Arab Emirates

Aysha Afzal[1], Zahra Ahmed[1], Syed Javaid[1]
[1]*Al Ain Hospital, Al Ain, United Arab Emirates*

Background: The use of antipsychotics in children and adolescents requires close supervision in a specialist clinic. The decision to commence antipsychotics should be made jointly with the young person, their parents, carers, and health care professionals. It is critical to provide age-appropriate information and discuss the possible benefits and side effects, including raised serum prolactin levels, potentially leading to serious consequences such as reduced bone density and abnormal pubertal development.

Methods: This audit aimed to appraise the antipsychotic prescribing practice in children and adolescents in psychiatric outpatient clinicians in Al Ain Hospital, United Arab Emirates. The authors analyzed the compliance against the standards set out in the National Institute for Health and Clinical Excellence (NICE) Clinical Guidance 155 concerning monitoring prolactin levels in children on antipsychotic medications at baseline, 12 weeks, and every 6 months after that. This hospital-wide audit involved a retrospective review of case notes. A questionnaire was developed to capture the required information anonymously. The audit sample comprised 135 children under 16 who were on antipsychotics for more than 6 months and were followed up in the child psychiatry clinic between January 2018 and December 2019. We chose this pre-COVID period when services were running as usual. Data collection took place between September and December 2022.

Results: Out of 135, 28 (21%) patients were males, with 51 (38%) being Emirati citizens. The sample age ranged between 6 and 16 years, with a mean of 13.5 years. Risperidone was the most commonly used antipsychotic. The majority of patients (63%) had a diagnosis of psychosis in the context of attention deficit hyperactivity disorder (ADHD), autistic spectrum disorder, and intellectual disability. None of the patients had a baseline prolactin measurement performed, while only 10 (7%) had prolactin levels checked at 12 weeks. No patient had prolactin levels checked at 6-monthly intervals.

Conclusion: This audit has identified a clear need to develop local guidance on monitoring antipsychotic side effects in children and adolescents. We recommend enhanced staff training in monitoring the relevant side effects and introducing a mechanism to electronically alert the prescribing clinician when the monitoring time is due. We suggest educating the patients about symptoms of high prolactin levels and re-audit the practice after 1 year of implementing the above action plan.

P23-013. Camel-Related Facial Injuries: A Seven-Year Retrospective Study

Ashraf F. Hefny[1], Mohamed A. Al-Ali[2], Hussam Mousa[1], Isabelle Nibelle[3]
[1]*Department of Surgery, College of Medicine and Health Sciences*
[2]*Department of Otolaryngology, College of Medicine and Health Sciences, UAE University, and*
[3]*Department of Otolaryngology, Al Ain Hospital, Al Ain, Abu Dhabi, United Arab Emirates*

Background: Interactions between humans and animals can result in different types of injuries to humans. These injuries vary depending on the animal's type, size, and behavior. Large animal injuries are associated with considerable morbidity and mortality worldwide. Camels are domestic animals in many areas of the world, including the UAE. More than 300,000 camels are already registered in Dubai city. Camels are an important food, milk, transport, and wealth source. In addition, camel racing is one of the most famous traditional sports in the UAE. Camel-related injuries accounted for 84.3% of animal-related injuries in the UAE. Due to the immense force involved, camel injuries are considered high-energy trauma. Previous reports showed that the head and face were the second most common camel-related injuries, following the upper and lower extremities. Facial injury may include soft tissue lacerations and facial bone fractures that often require surgical management. Nevertheless, the injuries may psychologically impact cosmetic disfigurement

and increased demand for aesthetics. Despite the apparent potential to produce a variety of serious injuries, there remains a scarcity of research regarding camel-related facial injuries (CRFIs). Therefore, we aimed to study the incidence, mechanisms of injury, anatomical distribution, management, and outcome of camel-related facial injuries in Al-Ain city, UAE, which will help to improve the management and preventive measures.

Methods: We retrospectively collected data from all patients admitted to our hospital with camel-related facial injuries from January 2014 through January 2021.

Results: The study included 36 patients; all were males having a median (range) age of 30 (14–66) years, 29 (80.5%) were camel caregivers. The most common mechanisms of injury were falling while riding a camel and camel kicks. The head was the most commonly associated injured region in 52.7%. In total, 23 (63.8%) patients had facial bone fractures. The middle third of the face accounted for 71.4% of the bony fractures. Maxillary and orbital bone fractures were the most frequent mid-facial fractures. Our patients' most performed surgical procedures were soft tissue laceration repair and open reduction with internal fixation of fractures (ORIF).

Conclusion: Camel-related facial injuries affect young adult male camel caregivers working on camel farms. Orbital and maxillary bone fractures are the most predominant fractures requiring operative management. Legislation for compulsory helmet usage may reduce the incidence of these injuries and their serious consequences.

P23-018. Making the Emergency Room a Better Place: Roadmap to Implementing an Emergency Department Observation Unit

Jalal Trad[1], Shaima AlQrain[1]
[1]*Department of Emergency Medicine, Tawam Hospital, Al Ain, United Arab Emirates*

Background: The emergency department (ED) provides health care continuously to any service user with no exception. Nonetheless, its operational flow can be compromised by internal and external factors. At the top of these is overcrowding of the department, which is mainly attributable to patients waiting for admissions, known as "boarding patients." It has been identified that some of these patients may present with conditions that do not require a lengthy stay in the hospital. Thus, such patients are amenable to observation medicine. Essentially, care is delivered within less than 24 hours. Emergency department observation units (EDOUs) were developed to care for similar patients and alleviate the burden of many patients waiting for admission. These are implemented largely in the United States but must be sufficiently in the Middle East. Problem situation: for patients, emergency visits are generally unpleasant. However, their experience can be negatively impacted at times of overcrowding. Patients leaving the ED without being seen may return with further deterioration that requires a higher level of care. Additionally, patients waiting for admission still need specialized care; otherwise, emergency staff may need to be equipped and have the time to manage, thus compromising their safety. Such a situation leads to patient dissatisfaction and the staff dealing with hectic shifts or being asked to deliver care beyond their skills or workforce.

Methods: This study is a systemized literature review on the operational and managerial aspects of EDOUs, as well as their health care effects, emphasizing the change process required by organizations for implementation. Electronic database searches were performed in PubMed, Scopus, and CINHAL in combination with snowballing. Two researchers conducted data charting independently, and charting forms were developed and iteratively refined using recurring themes observed. Areas of change were extrapolated from the literature review, and a roadmap was developed using the Senior and Swailes Organizational Development Model.

Results: Forty-nine studies were included to guide the development of a change roadmap that includes vision, reasons, benefits of change, stakeholders to be involved, and strategic areas of change with activities using the Senior and Swailes organization development model with evidence from the literature for EDOU implementation.

Conclusion: EDOU is an efficient and beneficial strategy to improve ED operations and patient flow. The development and implementation phase requires attention to the design and structure of the unit, the scope of conditions managed with clear protocol development, and strong leadership with regular monitoring of performance parameters.

P23-019. Trauma Deaths of Hospitalized Patients in Abu Dhabi Emirate: A Retrospective Descriptive Study

David O Alao[1,2], Arif Alper Cevik[1,2], Fikri M. Abu-Zidan[3]
[1]*Department of Internal Medicine, College of Medicine and Health Sciences, United Arab Emirates University*
[2]*The Department of Emergency Medicine, Tawam Hospital*
[3]*The Research Office, College of Medicine and Health Sciences, United Arab Emirates University, Al-Ain, United Arab Emirates*

Background: Major trauma is the leading cause of death for ages below 44 years. Annually, 4.4 million people die, and tens of millions more have trauma-related disabilities globally. In 2017, transport, self-harm, and interpersonal injuries accounted for more than 1.3 million deaths, while falls were responsible for over 695,000 deaths. Injury is now the second leading cause of death in the UAE. There is a paucity of studies on trauma-related deaths in the UAE. Previous studies have focused mainly on specific patient groups. We aimed to study the epidemiology and pattern of trauma-related deaths of hospitalized patients in Abu Dhabi Emirate, United Arab Emirates, to improve trauma management and injury prevention.

Methods: The Abu Dhabi Trauma Registry prospectively collects data on all hospitalized trauma patients from seven major trauma centers in the Abu Dhabi Emirate. We studied all patients who died on arrival or after admission to these hospitals from January 2014 to December 2019.

Results: In total, 453 deaths constituted 13.5% of all trauma deaths in the Abu Dhabi Emirate. The patients' median (IQR) age was 33 (25–45) years, and 82% were males. 85% of the deaths occurred in the emergency department (ED) and the intensive care unit (ICU). Motor vehicle collision (63.8%) was the leading cause of death. 45.5% of the patients had a head injury. Two of the seven hospitals admitted around 50% of all patients but accounted for only 25.8% of the total deaths ($p < 0.001$). Those who died in the ward (7%) were significantly older, median (IQR) age: 65.5 (31.75–82.25) years ($p < 0.001$), 34.4% of them were females ($p = 0.09$). The median (IQR) GCS of those who died in the ward was 15 (5.75–15) compared with 3 (3–3) for those who died in the ED and ICU ($p < 0.001$).

Conclusion: Death from trauma predominantly affects young males, with motor traffic collisions as the leading cause. Over 85% of in-hospital deaths occur in the ICU and ED, mainly from head injuries. Injury prevention of traffic collisions through law enforcement and improved hospital care in the ED and ICU will reduce trauma death.

P23-020. Multidisciplinary Checklist for Safe Transitions to Home Total Parenteral Nutrition from Hospital-Based Palliative Care: A Case Study from Al Ain, Abu Dhabi

Nandan M Shanbhag[1], Dina Aljawamis[1], Noor Abdellbari[1], Mehad Araki[1], Mouza Alshamsi[1], M. Zafar Javed[1], Afroz Samad Anna Monette Onte[1], Omnia Hamed[2], Richelle Basso[2], Kavitha Paramasiva[2], Fatima Hassan[2]
[1]*Tawam Hospital, Al and*
[2]*Royal Privilege Home Health Care, Al Ain, United Arab Emirates*

Background: The escalating global population of individuals aged 60 and above necessitates appropriate palliative care to meet their multifaceted needs. Home Total Parenteral Nutrition (HTPN) is a critical element of palliative care, especially in Al Ain, Abu Dhabi, where its implementation is limited. This study aims to develop and implement a comprehensive, multidisciplinary checklist to manage elderly palliative patients requiring HTPN.

Methods: A multidisciplinary team was established to oversee the HTPN requirements of palliative patients. The checklist included patient eligibility, necessary equipment, support systems, and follow-up plans. Patient and family involvement was deemed essential. Our test case was an 82-year-old man with colon cancer and multiple co-morbidities.

Results: Staff training was the initial step, followed by patient and caregiver education. Postdischarge, regular monitoring and support were provided by the multidisciplinary team (MDT). The team remained available for the patient and caregivers, addressing any concerns as they arose.

Conclusion: This study demonstrates the successful application of a multidisciplinary checklist for managing elderly palliative patients on HTPN in Al Ain, Abu Dhabi. Positive outcomes suggest the potential for expanding this approach to a broader patient base. Further research should include cost-effectiveness and impact on health care resources, fostering innovation and collaboration in palliative care management.

P23-021. Outcomes and Prognostic Factors for Radical Chemo-radiotherapy for Cervical Cancer: A Tertiary Care Hospital Experience

Shilpi Roy[1], Khalid Balaraj[1], Omran El Koha[1]
[1]*Tawam Hospital, Al Ain, United Arab Emirates*

Background: Cervical cancer is the fourth most frequently diagnosed cancer and the fourth leading cause of cancer death in women, with an estimated 604,000 new cases and 342,000 deaths worldwide in 2020. Globally, the average age for cervical cancer diagnosis was 53, ranging from 44 to 68 years. The global average age at death from cervical cancer was 59 years, ranging from 45 to 76 years.

Methods: All patients with cervical cancer treated with concurrent Cisplatin chemotherapy and radiotherapy followed by dose rate brachytherapy were identified from the Tawam Hospital database. Patient demographics, staging investigations, treatment details, and outcomes were compiled and analyzed. Kaplan–Meier curves were used to estimate treated survival cancer patients' disease-free survival (DFS) rates. In contrast, the log-rank test was used to compare differences in DFS across categories of selected clinical and demographic factors.

Results: Between January 2009 and December 2021, we identified 275 patients with cervical cancer, meeting the inclusion criteria for this study. Patients were staged with the International Federation of Gynecology and Obstetrics (FIGO) system. The median age of the patients was 48 years (IQR = 46–64). Most patients (87.6%) were at stage IIB and above. The median follow-up for the entire group was 21.4 months (IQR = 7.4–40.2). The overall 5-year DFS rate was 63%. The 5-year DFS rates for Stage II, III, and IVA patients were 85, 48, and 33%, respectively [$p < 0.001$], similar to the previous findings in more extensive trials. In other factors, lymph nodes were also significantly associated with DFS rates.

Conclusion: This is the most extensive study from the UAE to assess outcomes and prognostic factors for cervical cancer patients receiving radical chemo-radiotherapy. Outcomes from our cohort were comparable to published international standards. Lymph node involvement and higher FIGO stage were independent poor prognostic factors for 5-year DFS. Our findings demonstrate that concurrent chemo-radiotherapy with cisplatin and HDR brachytherapy is a safe and effective treatment per international guidelines. However, although concurrent chemo-radiotherapy is a very effective regimen for cervical cancer, newer and more effective treatment strategies may be needed for patients with poorer prognoses, such as those identified in this study. Since most of our patients were at an advanced stage at diagnosis, more robust screening and awareness programs are required.

P23-025. An Integrative Approach to Teaching Ullman's Experiential Dreamwork Group Approach (UEDGA) to Clinical Psychologists in the UAE: Strategies to Favor Well-beingBeing

Maria Campo-Redondo[1]
[1]*College of Medicine and Health Sciences (CMHS), United Arab Emirates University (UAEU), Al Ain, United Arab Emirates*

Background: There is strong scientific support for: (1) the benefits of having students learn and working in groups; and (2) dream sharing enhances empathy. Under these two premises, we designed and implemented a seminar on mental health, in which UEDGA was the primary experiential teaching strategy. The UEDGA was used to train students to (1) develop clinical skills in interviewing people (clinical and nonclinical populations) with open-ended and nonleading statements; (2) deal with and understand metaphors that appear in dream narratives; and (3) deploy how sharing of dreams could contribute to increasing the well-being of both students and patients. The UEDGA is based on the idea that dreams can be a powerful tool for personal growth and self-discovery, provide insights into unconscious thoughts and feelings, and help people better understand themselves and their relationships with others. Participants seek new perspectives and insights by exploring dreams in a group setting. They can connect more deeply with their inner selves and engage in practices that promote well-being. The UEDGA has been used in various settings, including therapy, personal growth workshops, and educational and organizational settings.

Methods: Burns and Schubert's (2020) postulates on *action research in the classroom* were followed to implement and evaluate the effectiveness of the UEDGA in learning strategies that favor emotional well-being and its relationship with dream narratives. A seminar in mental health was designed and implemented (as part of the Study plan of the Master's program in Clinical Psychology of the CMHS at UAEU) in which the UEDGA was the experiential teaching strategy. During the academic periods of Summer 2021, Fall 2021, Fall 2022, and Spring 2023, a total of 32 UEDGA were conducted by the instructor (Professor with extensive expertise in the UEDGA) and the students. 42 UEGDA were conducted of 42, with 103 academic hours and 35 students as participants. Topics such as empathy, creativity, active listening, reflective thinking, self- and cultural awareness, leadership, and dream narratives were covered in depth. At the end

of the seminar, students submitted individual essays reflecting on the experience.

Results: 35 Qualitatively and anonymously written reports completed by the participants indicate that most of the students' experiences with the UEDGA were "*very useful*," "*transformative*," and "*amazing*." The series of seminars provided an opportunity to develop students' techniques for interviewing with open and nonleading questions and the processing of emotional content in dream narratives. Students could reflect on the importance of dreams in human beings and consider the relationship between dream narratives and well-being, mental health, and psychopathology. The groups reported greater self-exploration and improved relational functioning.

Conclusion: Preliminary results showed that the UEDG is consistent with the ingrained practice of dream analysis in Islam-inspired societies such as the UAE. The UEDGA could be combined with other group interventions to increase well-being. This is the first time the UEDGA is used as a teaching strategy in a Master's program in Clinical Psychology in the UAE. The need for quantitative evaluation of this experiential modality must be the next step of this line of research.

P23-027. Colonic B-Cell Lymphoma Induced Intussusception in 18-Year Female: A Case Report

Mohammed El Habiel[1], Fatima Alharmoodi[1], Mira Almatrooshi[1], Katherina Kessler[1]
[1]*Tawam Hospital, Al Ain, United Arab Emirates*

Background: Adult intussusception is a rare entity that differs from childhood intussusception. It can be challenging to diagnose due to its nonspecific presentation.

Case Report: An 18-year-old female presented with unspecific abdominal pain and was diagnosed with intussusception on CT. Further workup showed a mass, and a biopsy confirmed a lymphoma.

Conclusions: Intussusception in adults is an infrequent cause of bowel obstruction but can be a challenge to diagnose due to the nonspecific presentation. The most helpful tool for investigation is an abdominal CT. Treatment in adults is often surgical and requires resection of the involved bowel without attempted reduction due to the commonly associated secondary pathological condition. Malignancy should be considered in adults with intussusception, as those malignant lesions, like lymphoma, can act as leading points and lead to intussusception. The GI tract is the most common extranodal site for lymphoma. Treatment of lymphoma is multimodal, with surgical resection and chemotherapy being the mainstay of the management.

P23-029. Altered Expression of MicroRNA-155 in Type 2 Diabetes Mellitus

Mouza Alaleeli[1], Suneesh Kaimala[1], Sahar Mohsin[1]
[1]*Department of Anatomy, College of Medicine and Health Sciences, UAE University, Al Ain, United Arab Emirates*

Background: Type 2 diabetes mellitus (T2DM) alters the bone remodeling cycle, making diabetic patients susceptible to increased fracture risk. Previous studies have addressed how T2DM induces osteoporosis; the underlying mechanism remains elusive. Osteoporosis is a result of bone loss that occurs by uncoupled remodeling. The evidence indicates that short noncoding microRNAs (miRNAs) are the critical posttranscriptional repressors of gene expression. Micro-RNAs activate bone remodeling by regulating various signaling pathways. MiR-155 suppresses osteoblast differentiation by acting on the SOCS1 (Suppressor of Cytokine Signaling 1) gene. This study aims to determine the expression of miR-155 and its target gene SOCS1 in bones and sera at different durations of diabetes.

Methods: Three-month-old female Wistar rats were grouped into control and T2DM. T2DM rats were fed a high-calorie diet for three weeks, followed by intraperitoneal injection of two lower doses of streptozotocin at weekly intervals (Srinivasan et al, 2005). The rats were sacrificed after 8, 10, and 14 weeks of the onset of diabetes. Total RNA was extracted from tibia bones and sera (mirVana miRNA isolation kit). QRT-PCR quantified MicroRNA-155 and SOCS1 gene expressions. U6 snRNA and Actin-Beta were used for normalization. MiR-155 and SOCS1 expression was measured at the different durations of diabetes from the bones and sera of the rats.

Results: MiR-155 expression was raised in sera ($p < 0.01$), and bones ($p > 0.05$) were obtained from 14-week T2DM rats, and SOCS1 gene ($p < 0.05$) expression was significantly lowered in bones of 8 and 14-week T2DM rats. A significant decline in miR-155 ($p < 0.05$) expression and a nonsignificant increase in SOCS1 gene expression were seen in bones from 10 weeks of T2DM rats. miR-155 was not detected in the sera of 8- and 10-week T2DM rats.

Conclusion: We found that miR-155 expression in the sera of 14 weeks was significantly increased, and the expression of SOCS1 decreased significantly at 8 and 14 weeks, suggesting that the mode of modulation in the bone remodeling cycle is more toward suppressing osteoblast differentiation at an early and late stage of T2DM. MiR-155 expression was significantly decreased, and SOCS1 expression was nonsignificantly increased in the bones obtained 10 weeks after the onset of T2DM, which indicates a partial reduction in suppressing osteoblast differentiation. However, it is known that decreased expression of miR-155 causes hyperglycemia, impaired glucose tolerance, and insulin resistance. MiR-155 expression was detected in the sera at a late stage of T2DM and could be used as a potential clinical tool to assess fracture risk.

P23-030. Urethrocavernous Fistula Post-Forceful Sexual Intercourse: A Case Report and Literature Review

Rawan Elhennawy[1], Abdulla Al Hammdi[1], Muwafak Salman[1]
[1]*Tawam Hospital, Al Ain, United Arab Emirates*

Background: Urethrocavernous fistula is a rare consequence of forceful sexual intercourse. It presents with hematuria; it is diagnosed by a penile angiogram and resolves via conservative management in most cases. Urethrocavernous fistula usually occurs due to blunt penile trauma, saddle injury, and certain penile surgeries such as circumcision. Usually, after forceful sexual intercourse, penile fracture is the most common injury. However, hematuria is usually due to urinary tract infection (UTI), prolonged abstinence for over 3 months, testicular orchitis or epididymitis, or even systemic diseases such as hemophilia.

Case presentation: A 34-year-old male, medically free, presented with urethrorrhagia and frank hematuria that occurred after forceful sexual intercourse and has lasted for two months. He denied other associated symptoms such as dysuria or urethral discharge, penile fracture history, penile pain, and outside sexual activities. He was admitted due to continuous bleeding, and a Foley catheter was inserted. Laboratory investigations were unremarkable, urine test which showed gross hematuria and negative STD PCR. Standard investigations included flexible cystoscopy, and US KUB was unremarkable. CT pyelogram and XR urethrocystography were unremarkable. Because of his ongoing hematuria, the patient underwent a penile angiogram, which showed active

bleeding and contrast extravasation from the right bulbourethral artery. Embolization was offered, but he refused and was discharged on Foley's catheter, Hyoscine butyl bromide (Buscopan), Solifenacin, and Tamsulosin. The patient was followed up in the clinic with a Foley catheter in place due to ongoing hematuria for two months. Foley's was removed, and no bleed demonstrated full recovery.

Conclusion: Another rare case of incidental finding of urethrocavernous fistula in a male presenting with hematuria following vigorous sexual intercourse that responded well with conservative management.

P23-031. Management Is One of the Largest Reported Goiters in the Region

Nouraddine Al Hasan[1], Noura Al Neyadi[1]
[1]*Department of ENT, Tawam Hospital, Al Ain, United Arab Emirates*

Background: Benign multinodular goiter is a common problem affecting 5% of the general population in nonendemic and 15% in endemic areas. It is a medical condition that needs to be addressed, especially if there are pressure symptoms. The mainstay of treatment is thyroidectomy. Some of these goiters have a retrosternal extension, making removing it challenging.

Case presentation: The study presents the case of a 44-year-old lady who was previously healthy but has been having a neck mass for the past two years. It has been increasing in size, causing pressure symptoms (continuous dyspnea), especially at night while lying down. She was seen in February 2022 because of her dyspnea deterioration. CT scan showed tracheal/esophageal compression by massive multinodular goiter with significant retropharyngeal extension, encasing the larynx, trachea, hypopharynx, and esophagus. The patient was found to have uncontrolled hyperthyroidism, a thyroid-stimulating hormone (TSH) level of $<$0.005 mIU/L, and a free T4 level of 41.9 µg/dL. Free T3 12.20. She was started on propranolol 10 mg and steroids carbimazole 15 mg BID by the endocrinologist. Her laboratories after TSH $<$0.005 T3 7.49 and T4 30.3 pmol/L HI. She was taken for surgery on 20th April (it lasted 5 hours). She was extubated and relieved immediately (breathing was much better; she could sleep generally for the first time in a while). We continuously checked her calcium and PTH postoperation, which was expected. The patient was discharged postoperative day 5.

Conclusion: Multinodular goiter is a common medical condition that should be addressed in the early stages, especially if the patient is complaining of compressive symptoms, as once they are identified, surgical removal by an expert surgeon should be considered.

P23-032. Utility of the Supraclavicular Artery Island Flap Use for Head and Neck Reconstruction: A Case Series

Khalid Abdelgalil[1], Noura Saeed Al Neyadi[1]
[1]*Department of ENT, Tawam Hospital, Al Ain, United Arab Emirates*

Background: Reconstruction following ablative head and neck surgery can pose a challenge relating to the best choice of technique for defect cover. In many cases, free tissue transfer has emerged as the gold standard, but the need for reliable regional flap options remains paramount in specific complex settings. The supraclavicular artery island flap is a versatile flap with the advantages of both the original flap in terms of reliability and ease of harvest and a free flap, namely, thin, pliable skin with a good color match to the recipient skin. Purpose of the study: to emphasize the utility and efficacy of supraclavicular flaps in head and neck reconstruction surgeries.

Methods: The use of a pedicled supraclavicular artery island flap for reconstruction in five patients following ablative head and neck surgery will be detailed. Case selection, surgical anatomy, technique of flap raising, and bespoke reconstruction in each case are demonstrated with operative images. The variety of recipient defects includes oral, facial, and cervical sites. The presented cases include primary and secondary/salvage reconstructive procedures, including using the flap adjacent to free tissue transfer.

Results: The cases demonstrate the utility of this flap in head and neck reconstruction with applicability of use in various settings. The flap has the advantages of a wide arc of rotation, good skin color matching to recipient sites, and relatively shorter flap harvesting time.

Conclusion: The supraclavicular artery flap is a thin, versatile, reliable flap that is easy to harvest with good cosmetic and functional outcomes for reconstructing head and neck oncologic defects; it has gained popularity and emerged as a viable alternative option for head and neck reconstruction. It should be included in the armamentarium of head and neck reconstructive surgeons.

P23-033. Complex Basosquamous Carcinoma of the Nasal Bridge with Metastasis: A Case Report of Clinicopathological Presentation and Literature Review

Khalid Abdelgalil[1], Muwaffeq Al Ani[1], Noura Al Neyadi[1]
[1]*Department of ENT, Tawam Hospital, Al Ain, United Arab Emirates*

Background: Basosquamous carcinoma (BSC) is a rare epithelial neoplasm with features of both basal cell carcinoma (BCC) and cutaneous squamous cell carcinoma (SCC). It is locally invasive, aggressive, and more likely to metastasize than other forms of BCC. It primarily arises in the head and neck region. This presentation presents a challenging, complicated case of Basosquamous carcinoma over the nasal bridge with cervical metastasis requiring complex ablative and reconstructive surgery. We aimed to demonstrate the importance of early detection and the role of reconstructive surgeries.

Methods: Review of a case of advanced BSC of the head and neck requiring complex ablative and reconstructive surgery. Review of clinicopathological features of a case of advanced BSC skin cancer.

Case presentation: The patient is a 70-year-old Eritrean ex-soldier who was previously healthy and presented to our facility with a long-standing neglected nasal bridge lesion that has been ulcerating for a long time, along with a periauricular lesion. A biopsy from the lesions confirmed basal cell carcinoma with squamous differentiation. The lesion is in a critical area of the face extending toward the medial canthus. The patient underwent CT imaging, which showed the nasal lesion extending into the anterosuperior midline nasal septum with extension into left nasal soft tissues and causing erosions and rarefaction of left nasal bone with erosions of the antero-inferior wall of the right frontal sinus. During his clinical evaluation, the patient was noted to have forearm swelling (he gave a history of bullet injury). The Head & Neck Tumor Board discussed the case and agreed to undergo staged surgery. In the first stage, he underwent tracheostomy, excision of nasal BCC, and reconstruction with a free forearm osseocutaneous flap. The second stage of surgery involved parotidectomy, bilateral neck dissection, and left ear lesion excision. The patient made a satisfactory recovery following this. Definitive postoperative histopathology confirmed pT2, pN2(Lt3/27-Rt.0/22),M0 disease.

Conclusion: Early detection of the disease will lead to less complex treatment. The role and the importance of reconstruction surgery and the choice of technique are discussed.

P23-034. Impact of Pharmacist Role on the Rational Use of Proton Pump Inhibitors for Better Patient Outcome in Ambulatory Setting

Dalia El Badrawi[1], Wafa Mansour[1], Saja Jasim[1], Muhammad Selman[1], Iman Mouhab[1], Asmaa El Anawar[1], Nishat May Darweesh[1]
[1]*Bahia Pharmacy, Ambulatory Health Care Services, SEHA, Abu Dhabi, United Arab Emirates*

Background: PPIs (proton pump inhibitors) became like idols, too much relieving, covering symptoms for 24 hours, highest adherence, believing that it is a long-term life treatment while ignoring proper use and long-term risk (osteoporosis, anemia, hypomagnesemia, neuropathy, dementia in elder due to vitamin B12 deficiencies, pneumonia…). We need to disseminate the proper use of PPI among health practitioners and patients to alleviate the burden on patient health and the health care system.

Hypothesis: Can pharmacist intervention and counseling mitigate long-term use of PPI? Can we establish the belief that PPI is for 4 to 8 weeks for ulcer healing or reflux and that there are no existing guidelines for the long term?

Method: This is a retrospective cohort study. Group A: in-clinic pharmacist routinely interventions with a physician to give prescription (RX) of 28's–56's tablets to each patient suffering from ulcer or reflux and to commit to on-demand (RX) "quantity limitation of 14's–28's tablets" per 3 months to each patient on continuous long-term use of PPI (more than one year use). We reduce patient PPI needs through food habits counseling and through discussing patient medications contributing to hyperacidity, such as decreasing aspirin dose from 100 to 75 mg and enhancing its administration after food, also as giving different medication options if the patient develops dyspepsia from bisphosphonates, dihydropyridine calcium channel blocker, cortisone, nonsteroidal anti-inflammatory, acetylcholinesterase or diabetic gastroparesis. Group B for home care patients: no pharmacist interventions or patient counseling due to difficult accessibility. Data are pooled from Cerner to avoid bias.

Result: The two groups of 334 patients on long-term PPI use (2013–2018) were compared using Chi-Square: Σ4.8, *p* 0.03. Group A: out of 289 cases who got interventions and counseling, 90% (260/289) accepted intervention and counseling and shift to on-demand (where 45% (130/289) were on aspirin, 8% (24/289) were on bisphosphonates). Group B: out of 45 home care cases of no given interventions or counseling: 96% (43/45) remain on daily PPI use (where 56% (25/45) on aspirin, 9% (4/45) alendronates, and 13% (6/45) on rivastigmine). The graph reflects decreased PPI consumption due to overall pharmacist intervention and counseling.

Conclusion: Because pharmacists are likely to be the first contact for individuals having GIT-related symptoms in the ambulatory care setting, they can assist with selecting appropriate therapy duration and provide education regarding the effective and safe use of PPI. Pharmacist interventions with physicians and adequate patient counseling are the key elements. Most patients previously on continuous long-term use of PPI became coherent to on-demand treatment, and physicians adhered to PPI quantities limitations for this patient category.

P23-038. Dysembryoplastic Neuroepithelial Tumor (DNET) Presenting in Unusual Manifestations of Dizziness and Abnormal Sensations: A Case Report from Sheikh Khalifa Medical City, Abu Dhabi, UAE

Feras Al-Majmoai[1], Mariam Al-Marar[2], Mohamed Arnaout[2], Fatima Al-Jaberi[2]
[1]*Sheikh Shakhbout Medical City, Abu Dhabi, United Arab Emirates*
[2]*Sheikh Khalifa Medical City, Abu Dhabi, United Arab Emirates*

Background: Dysembryoplastic neuroepithelial tumor (DNET) is a benign brain tumor of the pediatric age group. The WHO 2021 classification of brain tumors is classified under neuronal and mixed neuronal-glial tumors. 80% of DNETs tend to occur in patients less than 30 years of age. It is a surgically curable, nonrecurring tumor with an excellent prognosis. We aimed to highlight a rare brain tumor that may present with unusual manifestations of dizziness and abnormal sensations.

Clinical Case: A previously healthy, 6-year-old female was brought to the emergency with a complaint of dizziness for 1 month, which increased in the last few days. She feels unstable while standing and has episodes of falls after losing her balance. She was also complaining of abnormal sensations—suddenly feeling cold and having stomach aches (possible temporal lobe seizures). The patient was seen in another country, and EEG and MRI were done. EEG positive for seizures (no official report) and started on valproate. MRI suggested a cystic brain lesion and possibly dilated Virchow's Robin space. The family declined surgery and came back to the UAE. The patient was stable in the ER, and the examination was normal, with no focal neurological deficits. MRI images were reviewed, which showed a lobulated midline frontoparietal cortical lesion. The MRI signal characteristics were not typical for a cyst and were more suggestive of a tumor, particularly a dysembryoplastic neuroepithelial tumor (DNET). She was seen by neurosurgery, and no urgent intervention was needed as there was no hydrocephalus. Repeat MRI brain and observation is an option, especially when there is no papilledema on ophthalmological examination. Surgery is required for definitive tissue diagnosis.

Conclusion: DNETs are benign tumors of young adults, with a differential including oligodendrogliomas and gangliogliomas. Surgery forms the mainstay of treatment. Careful observation of the entire tissue sample is necessary before diagnosing its differentials. When DNET is diagnosed, the need for adjuvant Radiotherapy and chemotherapy is avoided. Hence, identifying this tumor has therapeutic and prognostic implications because aggressive therapy can be avoided.

P23-039. Physical and Metabolic Characteristics of Adolescents with Severe Obesity Referred for Bariatric Surgery: Observational Study from Abu Dhabi, United Arab Emirates

Feras Al-Majmoai[1,2], Reem Beck[1,2], Imrana Afrooz[1,2], Muhamed Suhail[1,2], Rama Watad[1,2], Asma Deeb[1,2]
[1]*Sheikh Shakhbout Medical City*
[2]*Sheikh Khalifa Medical City, Abu Dhabi, United Arab Emirates*

Background: Bariatric surgery is becoming a treatment modality for severe obesity in adolescents. Referral to surgery is governed by certain policies that mandate certain comorbidities. A family history of bariatric surgery might encourage families to seek surgery referrals for adolescents with severe obesity, as anti-obesity medications are not widely available and lifestyle modifications are challenging. We aimed to identify the noticeable physical and metabolic

characteristics of adolescents with severe obesity referred for bariatric surgery.

Methods: The study design is observational retrospective inclusive of patients between 12 and 19 years referred to bariatric surgery. The study was conducted between January 2020 and June 2022, where patients were recruited from the pediatric endocrine clinic. Medical notes are examined for age, sex, family history, and clinical and biochemical profiles.

Results: A total of 58 patients (33 females) were enrolled. The mean (range) age was 15.9 (12.2–19). Fifty-one patients (86.4%) had a family history of obesity, and 41 (69.4%) had a family history of bariatric surgery in a first-degree relative. Nine patients (15%) tried Metformin with or without Liraglutide. Twenty-nine patients (49%) had a history of obstructive sleep apnea. The average weight was 128.7 kg, with a weighted Z score of 3.1. Average BMI Z score of 2.8 with an average BMI centile of 99.6. Twenty-one patients (36%) had normal blood pressure, 8 (15%) had elevated blood pressure. Twenty-three patients (39%) and 6 (10%) had stage 1 and stage 2 hypertension, respectively. Two subjects (3.4%) had type 2 diabetes, 12 (20.6%) were in the pre-diabetes stage, and 34 (58.6%) had normal HbA1c. 11 (20.75%) had an elevated ALT. Four had a level of more than twofold upper limit of normal. Fifty-three patients had a fasting lipid profile. 39 (73.58%) had normal total cholesterol levels, 12 (22.64%), and 2 (3.77% had borderline and high levels, respectively. 51 (96.22%), 1 (1.88%), and 1 (1.88%) had normal, borderline high, and high LDL levels, respectively. HDL levels showed normal levels in 31 patients (58.49%), borderline low levels in 7 (13.2%), and low levels in 15 (28.3%). Thirty (56.6%) patients had normal triglyceride levels, and 12 (22.64%) and 11 (20.75%) had borderline high and high levels, respectively.

Conclusion: Referral of adolescents with severe obesity to bariatric surgery is becoming a common practice, particularly in families with a history of obesity and bariatric surgery. Sleep apnea is a common comorbidity among adolescents with severe obesity. In contrast, hypertension, elevated liver transaminases, dyslipidemia, and glucose intolerance might not be present at the time of referral to bariatric surgery.

P23-041. Inguinal Hernia Prevention in Penile Prosthesis Implantation via Peno-scrotal Approach

Javereeya Abduljabbar[1], Shadi Al-Bahri[1]
[1]Tawam Hospital, Al Ain, United Arab Emirates

Background: Inflatable penile prosthesis implantation is a well-established procedure for treating erectile dysfunction. A known but rare complication is reservoir herniation, which is placed by piercing and dilating the transversalis fascia to place the reservoir in the space of Retzius. Patients present with undiagnosed direct inguinal hernias, exacerbated by reservoir placement, requiring another procedure for repositioning and inguinal hernia repair.

Case Presentation: Six patients underwent prior elective penile prosthesis implant placement from 2019 to 2022. All of these presented with reservoir herniation ranging from the immediate perioperative period to 2 years following placement. All were found to be associated with direct herniation and were repaired with the same modified Lichtenstein technique. Postoperative follow-up showed one recurrence 6 months later, as his repair involved the tubing passing under the mesh instead of through it as described. No postoperative complications were noted.

Conclusion: All patients undergoing penile prosthesis implantation should undergo an ultrasound of the abdominal wall by an experienced technician. Weakness in the wall or direct inguinal hernia is associated with Postoperative reservoir herniation, particularly when associated with strenuous activity or coughing. A multidisciplinary approach is key to treating these cases, where the urologist repositions the reservoir, and the general surgeon repairs the wall and inserts the mesh.

P23-044. Ambulatory Distance as an Outcome Measure: Perceived versus Actual Distance of Walking and the Ways to Minimize Measurement Errors

Srinivasan Shanmugam[1], Daniel Fischer[1], Senthilnathan Ramakrishnan[2], Jihane Zayour[1], Fazarullah Khan[3]
[1]Tawam Hospital, Al Ain
[2]Al-Dhafra Hospital, Abu Dhabi, United Arab Emirates
[3]Coventry University, Coventry, United Kingdom

Background: The multidisciplinary team often refers patients to physiotherapy services for mobility-related problems. For those patients, the primary goal of physiotherapy is to enhance mobility and ambulatory distance is considered an important outcome measure. There are multiple ways to measure ambulatory distance, and perceiving the approximate distance walked is one of the common approaches physiotherapists use to measure ambulatory distance. However, the accuracy of such measurement could be more reliable, yet the therapists widely use this approach. Any errors in measuring ambulatory distance could greatly influence the outcome for patients. Since the ambulatory distance is a key performance indicator in cases where patients are referred for mobility issues, these measurements must be highly accurate and reliable. Therefore, there is a need to improve the accuracy of perceived ambulatory distance. The main aim of this study was to identify errors in perceived ambulatory distance within an inpatient rehabilitation unit. Also, the secondary aim was to provide a reference point for measuring the ambulatory distance with accuracy.

Methods: Two randomized distances, distance A (21 m) and distance B (49 m), were marked along a corridor inside an inpatient unit of Tawam Hospital. Fifteen members of the Rehabilitation department were asked to estimate both distances in meters. The same individuals were then provided with distance B as a reference point in meters and asked again to estimate distance A. The data were quantitatively analyzed using the Student's *t*-test.

Results: Fifteen ($n = 15$) physical therapists in the inpatient unit participated in this study. In the study's first phase, the mean of participants' estimated distance from X to A was 16 m, and X to B was 34 m. The mean scores were compared with the actual distance of X to A = 21 m and X to B = 49 m with an accuracy of 76 and 70%, respectively. Therefore, the baseline error in measuring distance from X to A was 24%, and X to B was 30%. In the study's second phase, participants were informed that the distance from X to B is 49 m. Then, they were again asked to estimate the distance from X to A. The mean estimated distance from X to A was 21.18 m, which was 99% accurate with just 1% of baseline error.

Conclusion: The study's findings suggest that providing a measured reference point to the person estimating any random distance walked inside a hospital inpatient setting significantly improves the estimation accuracy. These results also suggest that without a reference point, most individuals estimate a distance shorter than the actual distance and that the longer the actual distance to estimate was, the greater the error in accuracy.

P23-045. Atypical Presentation of Behçet's Disease Following SARS-CoV-2 Vaccination: A Case Report

Noor Alnuaimi[1], Hajar Almansoori[1], Sara Alhosani[1], Mozah Almarshoodi[2], Shamma Al Nokhatha[3]
[1]*UAE University, Al Ain*
[2]*Department of Hematology, Tawam Hospital*
[3]*Department of Rheumatology, Tawam Hospital, Al Ain, Abu Dhabi, United Arab Emirates*

Background: Behçet's disease is a multisystem vasculitis that affects vessels of all sizes. It is a rare condition characterized by recurrent oral and genital ulcers, skin lesions, and ocular and other organ systems involvement. The pathogenesis of BD is not fully understood, but it is believed to involve an autoimmune response triggered by environmental factors in genetically susceptible individuals. Since there is no pathognomonic diagnostic test, BD is ascertained through diagnostic criteria. Here, we would like to shed some light on whether vaccines might also trigger autoimmune diseases through the immune cross-reactivity mechanism. We report an atypical presentation of Behçet's disease (BD), presenting as a severe vascular involvement in a young Emirati male following the SARS-CoV2 vaccine (Pfizer) who required initiation of immunosuppression.

Case description: A 16-year-old healthy male with no prior medical history of rheumatic or hematological conditions presented with a series of thrombotic events 4 weeks after receiving Pfizer's COVID-19 vaccine. Thrombophilia screening and vasculitis workup was negative, and ultrasound confirmed left lower limb deep venous thrombosis at his initial presentation. It was decided to prescribe anticoagulation (Rivaroxaban). A month later, he presented with symptomatic right lower limb pain, and a diagnosis of deep venous thrombosis was made despite anticoagulation. He was switched to therapeutic low molecular weight heparin (Enoxaparin), and no risk factors were identified. Two months later, the patient complained of bilateral leg pain when walking, accompanied by swelling and chest pain, prompting his hospitalization. He was diagnosed with extensive lower limb deep venous thrombosis and pulmonary embolism despite compliance with anticoagulation. There are no features of systemic upset other than fever. Stable vitals. The skin examination was remarkable for acneiform folliculitis at the chest and lower limbs. No lymphadenopathy. No oral or genital ulcers. No ocular involvement. Mild tenderness and swelling at bilateral lower limbs. The rest of the physical examination, including musculoskeletal, was unremarkable. Signs of inflammation were given by atypical findings (ESR 75 mm/h, CRP 63 mg/L, fibrinogen 2.4 mg/L, HB 9 mg/dL), while other basic blood tests were normal. Except for positive HLA B51, autoimmune diseases were ruled out by negative ANA, ENA, Anti-dsDNA, Rheumatoid factor, ANCA, C3, and C4. Serological, culture, and pan-CT testing ruled out serious infection and malignancy.

Results: He was diagnosed with probable BD based on the international criteria for the BD scoring system due to his vascular and cutaneous presentations followed by a positive pathergy test. All clinical symptoms were resolved by corticosteroid therapy (prednisone 40 mg) and azathioprine 100 mg; however, relapse occurred when the corticosteroid dose was reduced, and infliximab was added with a favorable clinical outcome.

Conclusion: The diagnosis of BD is challenging, and atypical symptoms are uncommonly observed. BD is a diagnosis of exclusion following vaccination, and only a temporal relationship is observed in this case. However, further research is required to understand the autoimmune pathogenesis following the SARS-CoV-2 vaccination. With ongoing vaccination efforts worldwide, clinicians must be aware of the associations we encounter.

P23-046. The Characteristics and Outcomes of Patients with DNR in Al Ain City, United Arab Emirates

David Alao[1,2], Snaha Abraham[1], Nada Mohammed[1], Mohammed Farid[1], Roxanne Roby[1], Arif Cevik[1]
[1]*Department of Medicine, Tawam Hospital*
[2]*Department of Medicine, College of Medicine and Health Sciences, United Arab Emirates University, Al Ain, United Arab Emirates*

Background: Cardiopulmonary resuscitation (CPR) restores cardiac functions and supports ventilation during a cardiopulmonary arrest. However, CPR has significant side effects, including costs and injuries to the patients and providers. Reported outcomes of CPR are generally poor, with survival rates ranging from 4 to 30% for in-hospital cardiac arrest. Therefore, many countries recommend a Do-Not-Resuscitate (DNR) policy in cases where the outcome is likely unfavorable. The rate of DNR in admitted patients who suffered in-hospital cardiac arrest varies from 28 to 90%, reflecting different countries' prevalent cultural beliefs and institutional practices. DNR practice is uncommon in developing countries, including the UAE, leading to futile CPR in patients. We previously discussed the effects of the DNR policy on the outcomes of IHCA in our setting.

Methods: A retrospective study of all patients admitted to Tawam Hospital, UAE, from June 2021 to May 2022, who had a DNR order during the hospital admission. Patients' socio-demographics, physiologic parameters, primary diagnosis, and comorbidities were abstracted from the electronic medical records. The primary outcome measure was the characteristics of the patients with DNR orders. The secondary outcomes are the IHCA rate and human and material costs.

Results: There were 28,866 acute admissions over the study period, and 786 patients had DNR orders. The median age (IQR) was 71 (27) years, and 50.1% were males. There was zero comorbidity in 141 (17.9%), one to three comorbidities in 488 (62.1%), and four or more comorbidities in 154 (19.6%). The most prevalent primary diagnosis was sepsis, 431 (54.8%), followed by malignancy, 225 (28.6%), and stroke, 37 (4.7%). Respiratory and cardiac causes were 31 (3.9%) and 11 (1.4%), respectively. Two hundred and fourteen patients (27.2%) had a previous DNR. Overall, 293 (37.3%) of the patients survived to discharge. Of the survivors, 68.9% were admitted to the medical service compared with 55.8% in the group that died ($p < 0.001$). One hundred and nineteen (40.6%) survivors had a previous DNR compared with 95 (19.3%) of those who died. Cancer was the primary diagnosis in 56 (19.1%) of those who survived, compared with 139 (28.2%) of those who died ($p = 0.005$). The median (IQR) age of those who survived was 77 (23) years compared with 68 (27) years for those who died ($p < 0.001$). The median GCS (IQR) was 13 (5) in those who survived compared with 15 (4) in those who died ($p < 0.001$). There was no significant difference in the mean admission physiological parameters nor the length of hospital stay between the two groups. Over the study period, 126 patients had IHCA and underwent CPR, giving an IHCA incidence of 4.36 per 1,000 hospital admissions. Without a DNR policy, 493 patients would have undergone CPR, leading to an IHCA incidence of 21.4 per 1000 hospital admissions. Assuming a 40% ROSC rate, an additional 197 patients would have required post-cardiac arrest ICU care.

Conclusion: Most DNR patients in our setting had sepsis, complicating multiple comorbidities. The DNR policy

reduced our IHCA incidence by 80% and prevented unnecessary ICU care in 197 patients.

P23-047. Integrated EFAST Training: Not All Components of EFAST Are Equal

Munawar Farooq[1], Arif Cevik[1,2], David Alao[1,2], Virgie Guy[1], Fikri Abu-Zidan[3]
[1]*Department of Internal Medicine, Emergency Medicine Section, CMHS, UAEU*
[2]*Department of Emergency, Tawam Hospital, and*
[3]*Research Office, CMHS, UAEU, Al-Ain, United Arab Emirates*

Background: Ultrasound training in undergraduate medical education is still in its infancy, and proper incorporation requires careful planning. Extended Focused Assessment Sonography for Trauma (EFAST) is an essential bedside tool for managing multiple trauma patients. A study at a trauma center revealed that 31% of false negative EFAST scans required either operative or interventional radiology management. There is evidence that initial EFAST training can be adequately delivered to medical students with a 3-hour dedicated teaching and hands-on training using simulated patients. While students may exhibit acceptable performance on the EFAST, it is crucial to understand and identify the specific components of this skill where challenges may arise, leading to false negative or false positive results. In this study, we aim to address an important gap in the literature regarding the components of EFAST that medical students perform poorly after initial training. This information will help educators to facilitate targeted interventions to improve overall performance.

Methods: This was a prospective observational study. Final year medical students of CMHS, UAEU, who completed their EM Clerkship in 2016 to 2018, were assessed in EFAST components after uniform training provided to all students during the clerkship. All validated components of the standard EFAST exam were included in the assessment form. Two academic year cohorts were combined, giving 90 students. The assessment was divided into two parts: preparation and investigation. Descriptive analysis was done using Statistical Package for the Social Sciences (IBM-SPSS version 28, Chicago, IL).

Results: There were no differences between the two academic year cohorts in gender distribution, final EM marks, final OSCE marks, EFAST station marks, OSCE marks (without EFAST station), or marks by gender. In the preparation phase, more than 90% of students selected the correct ultrasound probe and applied it in the correct orientation. However, 19% of students did not introduce themselves, and 52% did not warn the simulated patient that the ultrasound gel was cold. Regarding the components of EFAST, the pericardial fluid component was fully completed by 70% of students, Right pneumothorax by 61%, and left pneumothorax by 57% of students. However, only 28% of students fully completed the assessment of the hepatorenal and splenorenal areas. Similarly, students' full completion rates for right and left thoracic free fluid investigations were low (31 and 33%, respectively). Most students needed to catch up on the fanning required to complete the assessment of these areas. Hepatorenal (57%) and Splenorenal (55%) areas were among the most partially completed components. Reporting of the findings should have been included in 11 to 45% of the different components of EFAST.

Conclusion: There were significant incomplete assessments for free intraperitoneal fluid, mostly due to a lack of fanning in the hepatorenal, splenorenal, and pelvic areas. Future studies can determine if a similar pattern of partially completed components of EFAST exists in EM residents or physicians. By targeting these challenging areas, trainers can effectively enhance student awareness and understanding, promoting improved performance and outcomes.

P23-048. Traumatic Lumbar Hernia—When Should I Operate? A Case Report

M. Al-Sheryani[1], F. Alharmoodi[2], S. Al-Bahri[1]
[1]*CMHS, UAEU*
[2]*Department of Surgery, Tawam Hospital, Al-Ain, United Arab Emirates*

Background: Blunt abdominal trauma manifests in a variety of presentations. A rare but potentially missed pathology includes traumatic lumbar hernias. Less than 1% of all abdominal wall hernias are thought to occur secondary to trauma.

Case description: We present a case of traumatic lumbar hernia after blunt trauma a 42-year-old otherwise healthy male presented to the emergency department following a quadbike accident. The patient was a backseat passenger who was rear-ended and ejected. He arrived at the ER in stable condition with an unremarkable primary and secondary survey except for left pelvic pain and a visible mass in the left flank. A computed tomography scan showed a traumatic lumbar hernia on the left side, a comminuted left iliac bone fracture, and L2–L5 left vertebral transverse process fractures. The patient was shifted after 24-hour observation to the orthopedic surgery team for treatment of the iliac bone fracture after clearance by the trauma team. The iliac bone fracture was treated conservatively. The patient was advised for elective traumatic lumbar hernia repair but was unfortunately lost to follow-up.

Conclusion: Management of traumatic lumbar hernias depends on patient stability and symptoms. They can be treated conservatively or surgically via open or laparoscopic techniques, with mesh or without. If not repaired in the acute setting, follow-up is required to plan surgical intervention following the acute phase.

P23-049. Factors Affecting Mortality of Blunt Chest Trauma Patients in Intensive Care Unit

Ashraf F. Hefny[1], Eyad S. Raya[2], Ashraf A. Elkamhawy[3], Mahmoud M Fakhri[2], Nirmin A. Mansour[4], Shadi Al Bahri[1]
[1]*Department of Surgery, CMHS, UAEU, Al Ain*
[2]*Emergency Department, Madinat Zayed Hospital*
[3]*Intensive Care Unit, Sheikh Khalifa Medical City*
[4]*Ambulatory Health Services, SEHA, Abu Dhabi, United Arab Emirates*

Background: Trauma is a major health problem in the United Arab Emirates (UAE), especially road traffic collisions (RTCs). Trauma is the second leading cause of death in UAE. Compared with other body regions, blunt chest trauma has increased in RTC due to the use of seatbelts. Critically ill patients are usually treated in the intensive care units (ICUs), where the hospital's highest mortality rates occur. We aimed to study the factors affecting the mortality of blunt trauma patients who had chest injuries and were treated in a general ICU at Al-Ain Hospital, UAE.

Methods: We retrospectively collected data from all patients with blunt chest trauma admitted to the ICU, Al Ain Hospital from December 2014 through January 2017. The demographic data and injury details were retrieved from the Al Ain Hospital trauma registry. A specially designed study protocol collected more information from the patient's files. Data collected included demography, Glasgow Coma Score (GCS) on admission, mechanism of injury, anatomical location and severity of injuries, length of hospital stay (LOS), and

management. Overall injury severity was determined using the Injury Severity Score (ISS) and New Injury Severity Score (NISS). All statistical analyses were performed using IBM SPSS Statistics software (version 28). The Chi-Square test was used for categorical data in comparisons between groups. The Mann–Whitney U test was used to compare two independent groups for continuous or ordinal data. In contrast, Fisher's exact test compared two independent groups for categorical data. A p-value of <0.05 was considered statistically significant.

Results: During the study period, 669 patients with blunt chest trauma were admitted to the hospital. 94 (14.1%) patients were admitted to the ICU. There were more male patients (83, 88.3%) than female patients (11, 11.7%), with a male:female ratio of 7.6: 1. The median (range) age was 29 (1–82) years. UAE nationals (24, 25.5%) were the most admitted nationality to the ICU. The most common mechanism of injury was RTC in 71 (75.5%) patients, followed by falls in 14 (14.9%) patients. 51(54.3%) patients were car drivers. The most commonly associated injured body region was the head in 61 (64.9%) patients, followed by the abdomen in 37 (39.4%). Ten patients died (overall mortality is 10.6%). The median (range) ISS was 20 (5–45), the median (range) NISS was 22 (5–50), and the median (range) GCS was 15 (3–15). Age, ISS, and NISS were not significantly related to the mortality ($p = 0.115$, $p = 0.069$, and $p = 0.216$, Mann–Whitney U test, respectively). GCS was significantly related to the mortality ($p = 0.001$, Mann–Whitney U test).

Conclusion: Road traffic collisions are the most common cause of serious blunt chest trauma, followed by falls. The majority of trauma patients who were admitted to the ICU had head injuries. GCS was the most significant factor that predicted mortality in the ICU trauma patients in our setting.

P23-050. The Relationship between the Presence of Scapular Fracture and Injury Severity in Blunt Thoracic Trauma

Ashraf F. Hefny[1], Khalid S. Saber[2], Ashraf S. Meligy[3], Hani El Farran[3], Mohamed A. Fathi[4], Nirmin A. Mansour[5]

[1]*Department of Surgery, CMHS, UAEU, Al Ain*

[2]*Emergency Department, Sheikh Khalifa Medical City*

[3]*Emergency Department, Madinat Zayed Hospital, Abu Dhabi, United Arab Emirates*

[4]*Department of Surgery, Ain Shams Faculty of Medicine, Cairo, Egypt*

[5]*Ambulatory Health Services, SEHA, Abu Dhabi, United Arab Emirates*

Background: Scapular fractures in blunt trauma patients usually result from high-energy trauma. Scapular fractures are best diagnosed with a CT scan. A scapular fracture could indicate a life-threatening condition since a strong group of muscles covers the scapula. In this study, we aim to identify associated injuries with scapular fractures and their relation to injury severity and mortality in blunt chest trauma patients.

Methods: We retrospectively collected data from all patients admitted to the Al Ain Hospital with blunt chest trauma associated with scapular fracture from December 2014 through January 2017. A comparison was performed between blunt chest trauma patients who sustained scapular fractures and those without fractures. The demographic data and injury details were retrieved from the Al Ain Hospital trauma registry. Data collected included demography, vital signs, and Glasgow Coma Score (GCS) on admission, mechanism of injury, anatomical location and severity of the injury, associated injuries, length of hospital stay (LOS), and outcome. Overall injury severity was determined using the Injury Severity Score (ISS) and New Injury Severity Score (NISS). Both were calculated according to the AIS 2008 handbook. All statistical analyses were performed using IBM SPSS Statistics software (version 28). The Chi-square test was used for categorical data in comparisons between groups. The Mann–Whitney U test was used to compare two independent groups for continuous or ordinal data. In contrast, Fisher's exact test compared two independent groups for categorical data. A p-value of <0.05 was considered statistically significant.

Results: There were 4,779 patients in the Trauma Registry of Al-Ain Hospital; 669 (13.9%) patients had blunt chest trauma. There were more male patients (573, 85.7%) than female patients (96, 14.3%). The median (range) age was 32 (1–103) years. 29 (4.3%) patients were found to have scapular fractures. All are males except one female patient. The most common mechanism of blunt chest injury was road traffic collision (RTC) (56.5%), followed by falls (14.6%). Work-related trauma was significantly more common in patients with scapular fracture (34.5%) compared with other patients with blunt chest trauma (17.7%) ($p = 0.017$ Chi-square test). There was no statistically significant difference between those patients with scapular fracture and other patients regarding GCS and ICU admission ($p = 0.328$ and $p = 0.032$, Chi-square test, respectively). Pneumothorax, lung contusion, multiple rib fracture, and first and/or second rib fracture were significantly associated with scapular fracture ($p = 0.020$, $p = 0.029$, $p = 0.012$, and $p < 0.001$ Chi-square test, respectively). ISS and NISS were significantly higher in patients with scapular fracture than other patients ($p = 0.04$ and $p = 0.003$ Mann–Whitney U test, respectively). Two (6.9%) patients died of scapular fracture compared with 13 (2%) patients in other patients, which was not statistically significant ($p = 0.084$ Chi-square test).

Conclusion: Scapular fracture in blunt chest trauma is associated with severe injuries and higher injury severity scores. Scapular fractures should increase suspicion of the clinician for associated thoracic injury, which may require further intervention.

P23-051. Facilitating Quicker Emergency Room Turnover: The Benefits of a Rapid Access CT KUB for Renal Colic

Roxanne Maria[1], Neema Francis[1], Mohammed Khan[1], Thiagarajan Jaiganesh[1], Mini Sunil[1]

[1]*Departments of Emergency Medicine and Urology, Tawam Hospital, Al Ain, United Arab Emirates*

Background: One of the common presentations to the ED (emergency department) is acute flank pain due to suspected renal colic. Approximately three times more common in males, urolithiasis occurs in ages 30 to 60 years and has a lifetime incidence of 12%. CT KUB (kidney, ureters, and bladder) is the investigation of choice for suspected renal colic. Diagnostically superior, safer, quicker, and increased sensitivity for detecting calculi, this is recommended by various Urological societies and the Royal College of Radiologists, UK (RCOR) guidelines. We evaluate whether the CT KUB requested at Tawam Hospital ED meets the recommended standards. Standards that we used are: (1) CT KUB should be used to investigate acute renal colic in all adults $\geq$18 years old (excluding pregnant women), and (2) CT KUB should be performed within 24 hours of presentation.

Methods: Data were reviewed from the annual audit given the standards of the international guidelines set by the RCOR, UK, and NICE guidelines, UK. Per the sampling guidelines, the population was patients diagnosed with renal colic and had undergone CT KUB investigation. This study evaluated 50 cases of renal colic between January 1, 2022 and March 31, 2022 who presented to the Tawam ED. Patient

demographics, CT KUB requests for arrival to the ED, and scan timings (in hours) were studied. The dataset was used at our convenience.

Results: CT KUB used to investigate acute renal colic unless contraindicated ($N = 50$) showed a 100%. CT KUB performed within 24 hours of presentation to the ED ($N = 50$) also showed 100% compliance. Further analysis revealed that the time to CT KUB in Tawam ED was done within 6 hours of presentation was 100%. Subgroup analysis: as per RCOR, UK guidelines, CT KUB should detect calculi in 44 to 64% of patients, with alternative diagnoses noted in a further 6 to 18%. 82% of CT KUBs showed renal stones. An alternate radiological diagnosis was noted in 18%. A higher percentage of alternative diagnoses was seen in females.

Conclusion: 100% compliance with RCOR, UK, guidelines; all the scans were done within 6 hours of presentation to the ED.

P23-052. Advanced Next-Generation Sequencing and Bioinformatics to Facilitate the Characterization of Antibiotic-Resistant Bacteria and Microbiota Using Portable Sequencers

Farah Al-Marzooq[1], Noora Al Ali[1], Lana Daou[1], Hala El-Zayat[1]
[1]Department of Microbiology & Immunology, CMHS, UAEU, Alain, Abu Dhabi, United Arab Emirates

Background: With the increasing burden of antimicrobial resistance (AMR), quick diagnostic tools are needed to unravel bacterial properties and promptly secure appropriate antibiotic therapy. Using genomic techniques for pathogen identification and characterization offers a promising tool to mitigate suboptimal antimicrobial therapies, which can potentially exacerbate morbidity and mortality. Next-generation sequencing technology (NGS) for whole genome sequencing (WGS) of bacteria can provide comprehensive information and potentially detect all AMR-encoding genes present in any bacteria. The human microbiome is a dynamic ecosystem with diverse microbial species whose varied composition is linked to many diseases. NGS technologies producing long reads are useful to explore the microbiome in depth down to the species level to improve our understanding of the microbiome and its role in the pathogenesis of diseases. This study aimed to explore the applications of nanopore technology with a portable sequencer to characterize the whole genome of antimicrobial-resistant bacteria and for bacterial identification from clinical samples.

Methods: DNA was extracted from 10 clinical isolates of *K. pneumoniae* and tested for susceptibility to different antibiotics. Whole genome sequencing (WGS) was done, and bioinformatic tools were used to confirm the bacterial identity and to detect AMR genes and resistance plasmids. To test the possibility of bacterial profiling from phyla to species, DNA was extracted from various oral samples from patients with different health issues compared with healthy controls. 16s rRNA sequencing was done, and appropriate bioinformatic tools were used for analyses.

Results: WGS confirmed the bacterial identity and revealed multiple AMR genes for aminoglycosides (rmtf, aac(6')-Ib-cr, aadA1, aadA2, aph(3')-VI, armA), β-lactams (blaCTX-M-15, blaNDM-1, blaOXA-1, blaOXA-232, blaOXA-9, blaSHV-28, blaSHV-11, blaTEM-1B, blaDHA-1), trimethoprim (dfrA1, dfrA12, dfrA14), sulfonamides (sul1, sul2, sul3), chloramphenicol (catB4), fosfomycin (fosA6), tetracycline (tet(A), tet(D)), macrolides (mph(E), MSR(E), erm(B)), fluoroquinolones (qnrB4, qnrS1), efflux pumps (oqxA, oqxB), and multiple plasmid replicon types (IncFII, IncFII(K), IncR, IncFIA, IncFIB(K), IncFIB(Mar), IncFIB(pQil), IncHI1B, ColKP3). 16s rRNA sequencing uncovered the microbiota down to the species level, with microbial signatures unique for patients grouped based on their health status. Linear discriminant analysis revealed multiple species that can be used as disease biomarkers.

Conclusion: Bacterial characterization and microbiome profiling are feasible using nanopore technology. The portable sequencing platform occupies a relatively small benchtop area, with integrated computing capacity and analysis software, making it suitable for users with basic bioinformatics skills. It can be faster than conventional culture; thus, a therapeutic regimen could be tailored faster, decreasing mortality and morbidity. Furthermore, a combination of machine learning algorithms and laboratory testing can help accelerate the discovery of new antimicrobials and aid in identifying disease biomarkers.

P23-053. Sphericity Index for Bedside Diagnosis of Acute Myocarditis

Antoine Abdel-Massih[1,2], Manal AbdelHameed[1], Alaa Sobeih[1], Hala Agha[1]
[1]Pediatric Cardiology, Cairo University Children Hospital, Cairo, Egypt
[2]Cardiac Sciences' Institute, Sheikh Khalifa Medical City, Abu Dhabi, United Arab Emirates

Background: Differentiating acute myocarditis (AM) from dilated cardiomyopathy (DCM) in a patient presenting with acute heart failure and poor systolic function is important to initiate anti-inflammatory treatment in acute myocarditis. Using Cardiac magnetic resonance (CMR) or endomyocardial biopsies as gold standards might be limited due to the hemodynamic compromise. Eccentric myocardial remodeling as measured by sphericity index (SI), which is calculated as the ratio of the transverse diameter of the left ventricle (LV) to its longitudinal diameter, might be useful in discriminating between both entities due to the progressive increase in transverse LV diameter in DCM. The primary outcome parameter of our study was to test the diagnostic accuracy of SI in the discrimination of AM from DCM, while the secondary outcome parameter was to compare the diagnostic accuracy of SI to Troponin I in the same context.

Methods: This retrospective study involved a chart review of the files of 60 patients admitted with acute heart failure due to hypokinetic left ventricles in the pediatric intensive care unit of Cairo University Children's Hospital between September 2021 and September 2022. Inclusion criteria included the pediatric age group, while exclusion criteria included incomplete patients' files. Patients were divided after CMR imaging into two groups based on Lake Louise criteria Group 1 with AM ($n = 30$) and Group 2 with DCM ($n = 30$). Demographic and clinical characteristics of the patients, including heart rate, need for mechanical ventilation, use of milrinone, epinephrine, and norepinephrine, Troponin I and 2D derived sphericity index, were collected from patients' files, to test their diagnostic accuracy in the differentiation of the two groups.

Results: It is discernible from our results that patients with acute myocarditis had a higher need for mechanical ventilation inopressors and vasopressors; 73% of AM patients required mechanical ventilation and epinephrine use, compared with less than 50% of DCM patients. Troponin I elevation was more marked in AM compared with DCM patients (0.25 ± 0.04 vs. 0.21 ± 0.03, respectively). SI was significantly higher in DCM than AM cases, denoting a spherical configuration of the myocardium acquired due to progressive remodeling and the pathology's chronicity. Multivariate regression showed that the best variable for discrimination between the two study groups was SI. A receiver operating characteristic analysis revealed that an SI ≤ 0.38 was 100% sensitive in

differentiating DCM from AM, compared with a 53% sensitivity with the commonly used Troponin I.

Conclusion: Diagnosis of AM can be achieved by the assessment of sphericity index rather than Troponin I. SI's bedside nature and noninvasiveness should re-shape the practice in this context. Assessment of SI can easily be taught to pediatric intensivists as part of the point-of-care echocardiography, which can hasten intravenous immunoglobulin administration to AM patients, increasing their chance for recovery. . Multicentric studies with larger study groups are needed to be able to give more solid conclusions.

P23-055. School Bullying in Al Ain City: A Cross-Sectional Study

Alfan Al-Ketbi[1], Ismail Elkonaisi[1,2], Iffat Elbarazi[1], Bayan Abu-Hamada[1], Aminu Abdullahi[1], Michal Grivna[1]

[1]*Institute of Public Health, CMHS, UAEU, Al-Ain, United Arab Emirates and*

[2]*Population Health and Environmental Sciences, Faculty of Life Sciences and Medicine, King's College London, United Kingdom*

Background: Bullying in schools constitutes a significant concern, influencing the mental health of perpetrators, victims, and bystanders, as well as directly impacting academic performance. Bullying happens in various forms, such as physical, verbal, relational, and cyberbullying. Limited research has explored the prevalence and associated factors of school bullying in the United Arab Emirates (UAE). The present study aims to evaluate students' exposure to bullying as victims, perpetrators, and bystanders and examine their perspectives on this issue within Al Ain City, UAE.

Methods: Multi-stage random sampling was used for data collection. Initially, schools were selected from Al Ain's public and private schools. In grades 6 to 9, pupils from randomly selected classes were asked to complete a validated self-reported questionnaire. Those students who were present in the school during the data collection and whose parents had consented to participate in the study were included. IBM SPSS software, version 28.0. was used for data analysis.

Results: A total of 792 students participated in the study, 61% ($n = 480$) from 4 public schools and 39% ($n = 312$) from 3 private schools. Most participants in private schools were females (51%), while in public schools, it was males (78%). 35% of pupils reported being bullied in public schools and 39% in private schools; 38% were bullied daily in private schools and 23% in public schools. More than half of the students in both private (59%) and public (58%) schools had seen a student being bullied in the past 12 months. The most common place of bullying was the classroom for both types of schools (82% in private and 65% in public schools). The second most common place in public schools was the bus (36%), while in private it was the playground (30%). The major form of bullying in both types of schools was verbal and emotional bullying (70% in private and 61% in public schools). Physical bullying (including "attacked me," "pushed or shoved me," and "broke my things") was reported in 49% of pupils in private and in 41% of public schools. The pupils stated that the teachers (31% in private and 21% in public schools) and the parents (47% in private and 42% in public schools) knew about the bullying. The most common effect of bullying, as reported by pupils in both private (82%) and public (59%) schools, was "made me feel bad or sad." Additionally, 25 and 29% of the victims in private and public schools were absent from school due to being bullied.

Conclusion: The study reveals that bullying is prevalent in both private and public schools in Al Ain city, affecting a significant proportion of the student population. The findings indicate that bullying occurs in various forms, with verbal and emotional bullying being the most common. The study results highlight the urgent need for comprehensive anti-bullying programs and interventions to address and mitigate the occurrence of bullying in schools, fostering a safer and more supportive learning environment for all students.

P23-059. The Impact of Bariatric Surgery on the Course of Mood Disorders in the UAE: A Retrospective Study

Fatima Mohamed Elameen[1], Essra Mohamed Elameen[2], Mohamed Abdullah Jaber[3]

[1]*Tawam Hospital*

[2]*AHS, Al Ain, and*

[3]*Sheikh Khalifa Medical City, Abu Dhabi, United Arab Emirates*

Background: Obesity is highly prevalent in the United Arab Emirates (UAE) and is associated with physical and psychological health problems. Bariatric surgery is an effective obesity treatment, but its impact on mood disorders in the UAE remains poorly understood. This retrospective study aims to investigate the effects of bariatric surgery on mood disorders in UAE patients.

Methods: Electronic medical records of patients who underwent bariatric surgery between 2010 and 2021 at a single center in the UAE will be analyzed. Informed consent will be obtained, and mood disorders will be assessed using the Beck Depression Inventory-II (BDI-II) and the Hospital Anxiety and Depression Scale (HADS). Structured interviews will be conducted with a subset of patients for qualitative data.

Results: The study will investigate the impact of bariatric surgery on mood disorders in the UAE. The findings will contribute to understanding the potential benefits of bariatric surgery for mood disorders in this population.

Conclusion: Given the high prevalence of obesity in the UAE, this study may have significant implications for managing mood disorders. Future research should focus on larger, prospective samples and explore the underlying mechanisms connecting bariatric surgery and mood disorders in the UAE population.

P23-070. Role of Folic Acid in Gastric Epithelial Cell Biology

Wilson Anyaba[1], Sherif Karam[1]

[1]*Department of Anatomy, College of Medicine and Health Science United Arab Emirates University, Al Ain, United Arab Emirates*

Background: We are in an era of widespread overingestion of folates due to intake from natural supplements (folic acid). On the other hand, a subset of the population falls into the category of those with folate deficiency due to alcoholism, poor nutrition, and malabsorption disorders resulting from genetic or pathological conditions. Folate, vitamin B-9, has numerous cellular importance in all tissues, such as folate-mediated one-carbon metabolism, a precursor to other vital pathways for DNA or RNA synthesis, amino acid production, and S-adenosylmethionine—a primary methylating agent.

Methods: Mouse gastric stem cells (mGSC) cell lines and mice models were used in the study. The control mice were fed a normal rodent diet, while experimental mice were fed a folic acid-deficient diet for 3 to 5 months. All mice received bromodeoxyuridine by a single injection to identify proliferating progenitor cells in the S-phase of the cell cycle before sacrifice. Immunohistochemistry was performed with antibodies specific to folate transporters, parietal and chief

cells. Image J software was used for quantification of staining intensity.

Results: The result shows that the proton-coupled folate transporter (PCFT) localization is restricted within the gastric surface up to the isthmus region of the gastric gland. Beyond these regions, the staining fades significantly. The results also reveal significant upregulation of PCFT in a fashion that is linearly related to the duration of FA deficiency. A similar relationship was noticed for pepsinogen and Hk-ATPase localization and intensity for folic acid-deficient mice. Lastly, results from PCFT-stained kidneys of mice fed with normal folic acid (2 mg/kg) diet (control), mice injected with 25 mg/kg, 100 mg/kg, and folic acid deficient mice for five months reveals intense expression and localization of the protein compared with the rest three where expression and localization is barely noticed.

Conclusion: The fading and absence of PCFT protein stain beyond the Isthmus region of the gland may indicate that this is the crucial protein responsible solely for the transport of folate to stem cells and, by extension, progenitor cells. Furthermore, results of the kidney stain suggest that there may be a built-in mechanism for folate management during deficient folate in the system, and recourse to that leads to the upregulation of PCFT; thus, PCFT may play a role in the economy of folate reabsorption in the kidney during extremely low folate availability.

P23-071. The Role of Folic Acid in The Homeostasis of Stomach Stem Cell Lineages

Wilson Anyaba[1], Subi Sugathan[1], Sherif M. Karam[1]
[1]*CMHS, UAE University, Al Ain, United Arab Emirates*

Background: We are in an era of widespread over-ingestion of multivitamins, such as vitamin B9, also known as folate or folic acid. On the other hand, poor nutrition, malabsorption, or alcoholism may lead to folate deficiency. This study aims to determine the biological effects of excessive folic acid ingestion and deficiency on the stomach, focusing on the gastric epithelial stem cell lineages.

Methods: First, immunohistochemistry was applied using an antibody specific to folate transporter to determine whether the stomach is a target organ for folic acid. Then, C57BL/6J mice were used for two main experiments: 1) adult mice of both genders were given folic acid (5 mg/kg body weight) by oral gavage for 3 weeks, and 2) folate deficiency was induced by feeding 3-week-old mice with diet deficient in folic acid for 3 and 6 months. Two hours before euthanization, all mice received a single injection of bromodeoxyuridine to quantify proliferating progenitor cells in the S-phase of the cell cycle. Immunohistochemistry was performed with antibodies for proliferative stem cells and cells secreting acid and pepsinogen. ImageJ software was used for the quantification of staining intensity and cell numbers.

Results: Immunohistochemistry revealed that folate transporter is localized in the gastric epithelium with intensified immuno-labeling in the lateral membranes of cells in the middle zone of the gastric glands. This is the same zone where proliferative stem cells are located. Cell lineage analysis revealed that excess folic acid (experiment 1) was associated with consistent down-regulation in the production of pepsinogen-secreting chief cells. However, changes in the parietal cell immuno-labeling were not striking. Results of the folic acid-deficient mice (experiment 2), especially those of the 6-month group, will provide further insights into the role of folic acid in the production of gastric epithelial stem cell lineages.

Conclusion: Gastric epithelial cells are targets for folic acid, and its excess affects the differentiation program of epithelial stem cells. Further studies on folic acid deficiency will provide an understanding of its role in the stem cell proliferation and differentiation program in the stomach. Therefore, with the similarities in the differentiation programs of mouse and human gastric stem cells, folate transporter might provide a new therapeutic target for some stomach disorders such as cancer or ulcers.

P23-073. Subacute Thyroiditis: Is There a Seasonal Pattern?

Hind Alshamsi[1], Mohammad Fahad[1], Asma Alneyadi[1], Jawaher Alshamsi[1], Fatima Alkaabi[1], Khaled M Aldahmani[1]
[1]*Department of Internal Medicine, Tawam Hospital, Alain, United Arab Emirates*

Background: Subacute thyroiditis (SAT) is a self-limited inflammatory thyroid disease. Some studies suggested that it has a higher prevalence during summer, whereas other studies showed no obvious clustering of cases throughout the year. The study aimed to evaluate the prevalence of subacute thyroiditis and seasonal distribution.

Method: A retrospective chart review of all patients who underwent thyroid uptake scans in Tawam Hospital between January 2011 and December 2020. Diagnosis of SAT was established by biochemical evidence of hyperthyroidism and low uptake on thyroid scan. Demographics, clinical presentation, seasonal distribution, and management of patients with SAT were studied. Data were analyzed using Excel software.

Results: Out of 943 patients, 120 were diagnosed with SAT, most of whom were women ($n = 88$). The age of the patients ranged between 10 and 89 years. The diagnosis was most frequent in the age group 20–39 years ($n = 75$, 62.5%). The most common symptoms at presentation were palpitation ($n = 58$, 48.3%), weight loss ($n = 24$, 20%), heat intolerance ($n = 23$, 19.1%), sweating ($n = 19$, 15.8%), tremor ($n = 19$, 15.8%) and neck pain ($n = 12$, 10%). For the whole cohort, the distribution of SAT diagnosis was as follows: 44 cases in Summer (June–September), 37 cases in Winter (December–March), 20 cases in transitional months (October–November), and 19 cases in transitional months (April–May). With regards to management, 57 patients required treatment with the following medications: B blocker (28), NSAID (5), carbimazole (3), steroids (3), B blocker/NSAID/steroids (2), B blocker/steroid (5), B blocker and carbimazole (3), B blocker and NSAID(5), NSAID and steroids (3). Fifty-three patients did not receive any treatment, while the management for nine patients was unknown. The duration of follow-up ranged from 2 weeks to 12 years. About 19.1% of patients developed the classic triphasic phase (hyperthyroidism, hypothyroidism, euthyroidism). None of our patients developed permanent hypothyroidism requiring thyroxine (2 patients had subclinical hypothyroidism). Recurrence of SAT was observed in 5% of patients.

Conclusion: Our preliminary analysis did not show any specific seasonal distribution for SAT in Al Ain City. Of interest nondeveloped permanent hypothyroidism, while 5% had recurrent transient hyperthyroidism.

P23-077. Effectiveness of Methotrexate in Treating Granulomatous Mastitis with Sustained Outcome

Hiba Khogali[1], Ahmed Shehada[1], Walaaeldin Elkhalifa[1], Aseed Mestarihi[1], Yahya Al Waqfi[1]
[1]*Tawam Hospital, Al Ain, United Arab Emirates*

Background: Idiopathic granulomatous mastitis (IGM) is a chronic benign inflammatory breast disease entity reported in the literature for a long time since 1972. Its

clinical presentation and course of disease mimic the more dangerous breast entity of breast adenocarcinoma. The primary management was surgical extraction plus/minus the use of high doses of oral steroids, with few reports about using Methotrexate as adjuvant therapy. We report four cases of IGM, which failed management through surgery and the use of high doses of steroids and responded to oral Methotrexate with sustained cure.

Case Descriptions:: Case 1: 37-year-old Emirati lady married with three children – —all breastfed presented to breast clinic Tawam Center in April 2020 with painful breast lumps at 3,12 o'clock for over two weeks. The prolonged antibiotic course failed to achieve resolution. Case 2: 42-year-old Emirati lady with six children, all breastfed, presented in March 2020 with pain. Breast lumps at 1–4 o'clock. Antibiotics for six weeks failed to contain the lesions. Case 3: 42-year-old Palestinian lady with three breastfed children presented to the breast clinic in October 2020 with a painful breast lump at 5 o'clock, which progressed to abscess formation. Although the lady was managed through incision, drainage, and a prolonged course of antibiotics for two weeks, the lesions persisted and grew. Case 4: 33-year-old female Emirati lady with a history of diabetic mellitus for several years, married with two children all received normal lactation, presented to the breast center in January 2020 complaining of breast lump at 12 o'clock. Lady received an antibiotic course for four weeks with no benefit. All cases received high-dose oral prednisolone ranging from 25 to 30 mg for 6 to 8 weeks, but unfortunately, no lesions regression; instead, some cases showed progression of lesions in number and sizes. Methotrexate was introduced at a dose of 15 mg Po weekly. In 4 to 6 weeks, prednisolone was successfully tapered and stopped. Lesions continue to regress in size and achieve complete resolution in a maximum of nine months. Cases were followed for a year, and no recurrence occurred.

Conclusion: The use of oral Methotrexate in the dose of 15 mg weekly has shown an auspicious effect not only in treating IGM but also in a sustained effect for an entire year after treatment. This should be taken into consideration when managing future cases of IGM.

P23-080. Rare Co-existence of Acute Intermittent Porphyria with Systemic Lupus Erythematous: Case Report and Literature Review

Asmaa Yusuf[1], Omar Alhaj[1], Afra Aldaheri[2], Aisha AlShamsi[3], Mozah AlMarshoodi[4], Fatima AlKindi[1], Farooqi Mohammed[1], Raya Almazrouei[5,6]

[1]*Department of Internal Medicine*
[2]*Division of Rheumatology*
[3]*Division of Genetics and Metabolic, Department of Pediatrics*
[4]*Department of Hematology & Oncology*
[5]*Division of Endocrinology, Department of Internal Medicine*
[6]*Department of Medicine, CMHS, UAEU, Al Ain, United Arab Emirates*

Background: Acute intermittent porphyria (AIP) is a rare genetic disorder that affects the heme biosynthesis pathway, leading to the accumulation of porphyrins and their precursors in the body as a consequence of a partial deficiency of the heme biosynthetic enzyme porphobilinogen deaminase (PBGD), also called hydroxymethylbilane synthase (HMBS). On the other hand, systemic lupus erythematosus (SLE) is a chronic autoimmune disease involving multiple organ systems, including the skin, joints, and kidneys. While SLE is relatively uncommon and AIP is relatively rare, the co-existence of AIP and SLE is exceptionally rare, with only a few cases reported in the literature. The two conditions present a unique diagnostic and management challenge, as both have different spectrums of signs and symptoms and variables in their presentations that might not be specific to a particular disease. We present here a case report with a literature review.

Results: We report a concomitant diagnosis of AIP and SLE in a 21-year-old woman who presented with recurrent acute abdominal, chest, and back pain associated with nausea and vomiting, followed by arthralgia, multiple joint pain, and rash. Investigations revealed severe hyponatremia related to SIADH with a positive SLE antibody panel and a positive urine screen for porphobilinogen. Skin biopsy was suggestive of subacute lupus erythematosus. The molecular test revealed a heterozygous pathogenic nonsense mutation c.594G>A (p.W198X) in the hydroxymethylbilane synthase (*HMBS*) gene, confirming the diagnosis of autosomal dominant acute intermittent porphyria. Following the diagnostic criteria, an SLE diagnosis was made, and a parenteral steroid was initiated (0.5 mg/kg IV Methylprednisolone). The patient had dramatic clinical improvement and was discharged home on oral prednisolone. Currently, she is on tapering prednisolone dose and azathioprine 100 mg daily. Hydroxychloroquine (HCQ) 200 mg daily was added for the first few months and stopped later after improvement of the condition to avoid the possibility of precipitating further porphyria attacks. She was educated about acute intermittent porphyria's symptoms and the provoking factors. An alert card was also provided, and standby medication (Hemin) was arranged in case it was needed during future attacks. She did not have any further attacks until writing this report.

Conclusion: This case adds to the previously published 15 cases of this rare co-existence of AIP and SLE. It also highlights the importance of taking detailed clinical presentations and family history to reach the diagnosis and the need for a multidisciplinary approach to care for these complex patients.

P23-081. Auricular Avulsion Injuries: Literature Review and Management Algorithm

Mohamed A. Al-Ali[1], Fikri M. Abu-Zidan[1]

[1]*Department of Surgery, CMHS, UAE University, Al Ain, United Arab Emirates*

Background: Traumatic ear avulsion may have tremendous psychological consequences if not appropriately managed. There needs to be clear guidelines on the surgical management of these injuries, especially in countries lacking microsurgical facilities. We aimed to review the literature on surgical management of traumatic ear avulsion, focusing on direct re-attachment to develop a surgical management algorithm that can be applied without microsurgical facilities.

Methods: We have extensively reviewed the relevant literature on papers indexed in PubMed describing traumatic ear avulsion repaired with direct re-attachment. Only papers in English were included and reviewed without restriction to a specific publication time window. Articles reporting direct re-attachment of the ear following complete and incomplete ear amputation were included.

Results: 28 cases in 18 publications were reviewed and analyzed. Most of the reported cases were male (80.7%). The patients' median (range) age was 33 (3–70) years. The most common mechanism of injury was cutting injury (44%), followed by motor vehicle injury (36%) and bite injuries from humans and animals (20%). All cases with incomplete ear amputations have been reported in the literature, but one has achieved satisfactory clinical and esthetic outcomes. The most commonly applied adjunct therapies were anticoagulants, Hyperbaric oxygen therapy (HBOT), and leeches. Our

analysis indicates that in the acute setting with no available microvascular expertise, direct re-attachment of auricular avulsion injuries can be better than other nonmicrosurgical techniques in generating good esthetic results, especially in incomplete auricular avulsion and small segment avulsion. A developed algorithm for surgical management of traumatic auricular avulsion injuries in acute settings based on available evidence from the available literature.

Conclusion: Direct re-attachment of the auricular avulsion injuries is an accepted approach. It produces good cosmetic outcomes while preserving the auricular area for future reconstruction in case of re-attachment failure. The success rate of direct replantation could be augmented by applying postoperative adjuvant therapies.

P23-082. The Metformin Miracle: Antiaging and Anticancer Properties

Sara Mohammad[1], Basma Alomar[1], Zaina Nafees[1], Abdul Rehman[1]
[1]RAK Medical Health Sciences University, Ras Al Khaimah, United Arab Emirates

Background: Diabetes Mellitus (DM) is a chronic metabolic illness affecting millions of people worldwide, and its prevalence has risen in recent decades. Metformin is a biguanide that is commonly used to treat type 2 diabetes. However, there has been a surge of interest in metformin's ability to provide benefits other than antihyperglycemic action. Metformin offers anti-aging and anti-cancer characteristics, prompting substantial research efforts to investigate its potential as a treatment agent for these disorders. This research aims to present the mechanism by which metformin brings about its anti-aging and anti-cancer properties and to analyze the potential advantages of using metformin as an anti-aging and anti-cancer agent.

Methods: A literature search through different databases such as Google and PubMed was conducted using the keywords "metformin," "metformin and cancer," "metformin and aging," and "metformin mechanism of action." Articles and Published Papers on Metformin that were found to be relevant were chosen. The selected papers were analyzed for quantitative and qualitative information on using metformin as an anti-cancer or anti-aging drug. The gathered information was organized sequentially to understand the basics of metformin and its anti-cancer and anti-aging properties.

Results: The anti-cancer and anti-aging effects of metformin have been thoroughly investigated in preclinical and clinical trials. In preclinical studies, metformin has been shown to inhibit cancer cell proliferation, induce apoptosis, and sensitize cancer cells to chemotherapy. Additionally, it has been discovered that metformin lessens oxidative stress, mitochondrial dysfunction, and cellular senescence, all contributing to aging and age-related disorders. It makes this possible through activating 5′ adenosine monophosphate-activated protein kinase (AMPK) and autophagy. In clinical studies, metformin has been shown to improve health outcomes in patients with cancer and reduce the risk of cancer recurrence. In healthy-aged people, metformin has also been shown to enhance insulin sensitivity, lessen inflammation, and enhance mitochondrial activity.

Conclusion: Metformin is promising in reducing the risk of age-associated diseases, cancer, and neurodegenerative diseases. It has been proven to have few adverse effects and is reasonably priced, making it a potentially cost-effective intervention in preventing and treating age-related illnesses and cancer. However, more investigation is required to establish the ideal metformin dosage, course, and timing for preventing cancer and the aging process. Nonetheless, current research suggests that metformin has the potential to improve health outcomes and reduce the burden of age-related illnesses and cancer.

P23-083. The First Real-Life Effectiveness of Mepolizumab Use in Severe Eosinophilic Asthma Management in Tawam Hospital

Amel Alameeri[1], Ramzi Khashkosha[1]
[1]Department of Pulmonary, Tawam hospital, Al Ain, United Arab Emirates

Background: Eosinophilic inflammation is associated with frequent asthma exacerbations and disease severity and is sustained by the biological activity of IL-5. Due to the role of IL-5 in the maturation, proliferation, activation, and survival of eosinophils, treatments targeting IL-5 have been investigated and developed for their therapeutic effects on patients with severe asthma. Biologics targeting IL-5 mepolizumab (Nucala) have been approved and incorporated into national and international guidelines as add-on therapy for severe eosinophilic asthma· The efficacy and safety of mepolizumab in patients with severe eosinophilic asthma in randomized controlled trials is well established.

Methods: Following the approval of mepolizumab as an add-on therapy for severe eosinophilic asthma in multiple regions worldwide, this study is the first report on the effectiveness of mepolizumab in severe asthma in the Al-Ain region. We have assessed the evidence of clinical outcomes, safety, and effectiveness in reducing severe asthma exacerbations. Data sources: retrospective and prospective review of all severe asthma patients who started or received mepolizumab 100 mg SC every four weeks for severe eosinophilic asthma in our center.

Results: The primary endpoint was the annual rate of clinically significant exacerbations; blood eosinophil count and secondary endpoints were Asthma Control Questionnaire-5 score, need of oral corticosteroids treatment, and forced expiratory volume in 1 second at study end. A total of 10 patients on mepolizumab from 2019 until 2022 have been involved in the study. Across the comorbidity subgroups, mepolizumab reduced the rate of clinically significant exacerbations by 50 to 100%; a progressive decrease in blood eosinophil levels was also noted from week 4, with the maximal reduction at week 12. Asthma Control Questionnaire-5 score continues to improve after 3, 6, and 12 months post-mepolizumab start date. The mepolizumab-treated group showed a 50% reduction in OCS. Prebronchodilator forced expiratory volume in 1 second was improved by 27.1–286.9 mL. Mepolizumab showed good safety and tolerability profiles with low proportions of injection-site reactions.

Conclusion: Findings show that patients with severe asthma consistently demonstrate clinically relevant benefits with mepolizumab treatment, significantly reduced asthma exacerbations, and was associated with improvements in markers of asthma control.

P23-084. Impact of Negative Trauma CT-Scan in Blunt Trauma Cases on Hospital Admission Rate

Iqbal Qureshi[1], Dania Sajid[1], Sulaiman Shantour[1], Khalid Makhdoomi[1]
[1]Tawam Hospital, Al Ain, United Arab Emirates

Background: Trauma accounts for 37 million ED visits and 2.6 million hospital admissions annually in the United States. The estimated cost of which is around $406 billion. Therefore, trauma causes a significant burden on hospital resources. So effective measures are needed to combat this

high burden. Early and safe discharge from the hospital, preferably from the ED for a trauma patient, is desirable to keep the financial burden under control. 'CT trauma' or the whole-body CT is the quickest way to diagnose life-threatening internal injuries, including intracranial, intrathoracic, intra-abdominal, and spinal injuries. CT trauma comprises a combination of CTs of the brain, cervical spine, thorax, abdomen, pelvis, and thoraco-lumbo-sacral spine. The chances of serious internal injury are negligible in the case of negative CT Trauma. Most patients can be safely discharged from ED after a brief observation period in cases of adverse findings in CT trauma. So, CT trauma in the ED can help prevent unnecessary admissions and save hospital resources. The purpose of the study was to estimate the impact of a damaging CT trauma on the number of our hospital admissions.

Methods: We conducted a study on the blunt trauma cases of the patients who visited the Emergency Department (ED) of Tawam Hospital between March 1, 2022 and May 31, 2022 as a retrospective review of computer-based medical records. In this study, we examined 5299 individual CT scans for the patients who visited the ED of Tawam Hospital with a history of high-energy trauma. We found 411 CT traumas among these CT scans, which belonged to 411 patients. Out of these 411 patients, we found adverse results of CT trauma in 145 patients. We selected 100 patients as our 'sample,' out of these 145 patients with negative results of CT traumas who were potential candidates for admission if the CT trauma was not performed on them. The inclusion criteria were high energy trauma, age <65 years, and presence of other injuries.

Results: Out of these 100 patients, we found the following results: 26 (26%) patients were admitted, and 74 (74%) patients were discharged from ED.

Conclusion: With the advent of trauma CT, its negative result has a positive impact in reducing the admissions of trauma patients, as in our study, 74% of patients have been discharged from ED, the majority of which might have been admitted otherwise. Therefore, the negative trauma CT has a strong positive impact in reducing admissions and cutting hospital costs on trauma-related expenses.

P23-085. Effectiveness of Canakinumab in Adult-Onset Still's Disease: A Case Report

Mohammed Al Rubaiani[1], Afra AlDhaheri[2], Shamma Al Nokhatha[2]

[1]*Department of Internal Medicine*

[2]*Department of Rheumatology, Tawam Hospital, Al Ain, United Arab Emirates*

Background: We report a favorable response to Canakinumab in a disease-modifying antirheumatic drug (DMARD)-naïve patient presented with adult-onset Still's disease (AOSD). Canakinumab, a human monoclonal anti-human IL-1β antibody, is approved for treating active AOSD.

Case description: The patient is a 20-year-old woman who presented to our institution with an eight-month history of intermittent fever, lymphadenopathy, unintentional weight loss, evanescent rash, pharyngitis, abdominal pain, and migratory polyarthralgia. Her vital signs were stable apart from tachycardia HR. The skin examination was significant for multiple erythematous, nonblanchable macules on the anterior aspect of the chest and upper limbs. Mild diffuse abdominal tenderness and hepatomegaly. Lymphadenopathy of the cervical and axillary regions. The rest of the physical examination, including the musculoskeletal examination, was unremarkable. Investigations showed anemia, raised serum level of C reactive protein, erythrocyte sedimentation rate (ESR), ferritin level, negative rheumatoid factor, and antinuclear antibodies. Hepatosplenomegaly was confirmed by ultrasound, and screening tests for infection were negative. Lymph node biopsy showed mixed cortical and paracortical hyperplasia and focal effacement of lymph node structure. She met the Yamaguchi criteria and was diagnosed with adult-onset Still's disease. The diagnosis is of clinical suspicion, requiring the exclusion of infection, malignancy, and systemic disease. She was treated with corticosteroids (1 mg/kg daily) and nonsteroidal anti-inflammatory drugs (NSAIDs), with subsequent improvement in her clinical symptoms and inflammatory markers. She was discharged on oral prednisolone with a tapering dose. Attempts to discontinue prednisolone during the follow-up period resulted in disease relapse after two months of quiescence, with recurrence of symptoms in addition to synovitis at right wrist and left ankle as well as an elevation of inflammatory markers necessitating reintroduction of corticosteroids (0.5 mg/kg) and Canakinumab (150 mg subcutaneously daily) was added. Patients showed an excellent clinical response on the second day of Canakinumab use, and the glucocorticoid was successfully tapered off in less than a month.

Conclusion: This case report showed Canakinumab's efficacy in reducing systemic and articular manifestations while reducing the need for corticosteroids.

P23-086. Pediatric Celiac Disease in the Emirate of Abu Dhabi: Compliance and Obstacles, Multicenter Cross-Sectional Study

Sara Adnan Alhajali[1], Haifa Al Awadhi[1]

[1]*Tawam Hospital, Al Ain, United Arab Emirates*

Introduction: Celiac disease (CD) is a condition caused by the ingestion of gluten, a protein found in wheat, barley, rye, and oats. The treatment for this autoimmune enteropathy is a lifelong adherence to a gluten-free diet (GFD). However, following such a diet can be challenging, as gluten-containing cereals are widely consumed worldwide. Compliance with the diet can also have psychological and social implications, as it changes the lifestyle and habits of patients and their social environment. Therefore, it is crucial to identify and address CD patients' challenges to develop viable solutions to overcome them.

Methods: This cross-sectional study included 102 patients under 16 years of age who regularly followed up for CD at the pediatric gastroenterology clinic of Tawam and Sheikh Khalifa Medical City Hospitals. The study utilized a celiac disease-specific questionnaire to assess dietary compliance and difficulty identifying gluten-free foods. The data were collected from the patient's electronic medical records and by the questionnaire and analyzed using appropriate statistical methods and programs.

Results: The study included 47 male and 54 female participants, with 91.2% Emirati and 7.8% non-Emirati nationalities. Most patients were diagnosed in governmental hospitals, indicating the availability of appropriate diagnostic methods within these facilities. Nearly 93% of the sample received information about the disease and the required diet, but only 73.5% knew about gluten-free food sources. Approximately 59 participants were involved in support groups for patients with CD, while 42 participants were not aware of these groups. Compliance with the gluten-free diet varied within the sample, with 4 participants being noncompliant, ten partially compliant, 17 moderately compliant, 48 mostly compliant, and 22 fully compliant. Reasons for noncompliance included lack of motivation, availability of gluten-free food options in stores and restaurants, and inadequate diet implementation in schools and community institutions. Psychosocial factors such as fears and anxiety about societal

acceptance of the illness and discomfort with the disease also affected compliance. Regarding medical follow-up, 68.6% of participants were committed to regular reviews, and 89.2% received advice and consultation during each visit. Demographic variables did not significantly impact compliance, with no relationship found between gender and compliance.

Conclusion: The study highlights the need to increase CD awareness and knowledge among patients and their families. Educational seminars and support groups can guide to adhere to the GFD and overcome its associated challenges. Economic studies on the prices of gluten-free products can help make them more affordable and accessible for patients. Encouraging restaurants and schools to include gluten-free options can also help. Including information about CD in school books can increase awareness among children, helping them accept the disease and comply with the GFD. The study emphasizes the importance of regular follow-up visits with health care providers to ensure compliance with the GFD.

P23-087. Clinical and Biochemical Characteristics of Pediatric Diabetic Ketoacidosis Admissions to COVID-19 Free UAE Tertiary Center During Pandemic

Shoroogh Marei[1], Dalia Ra'a Said[1], Raya Almazrouei[1], Walid Kaplan[1], Noura Al Hassan[1]
[1]Tawam Hospital, Al Ain, United Arab Emirates

Background: The COVID-19 pandemic led to delayed diagnosis and an increase in the number and severity of Type 1 Diabetes Mellitus (T1DM) and Diabetic Ketoacidosis (DKA) cases in the pediatric population worldwide—the indirect impact of the pandemic on pediatric DKA admissions to COVID19 free hospitals worth to be evaluated. We aimed to evaluate the characteristics and severity of DKA admissions before and during the pandemic.

Methods: This retrospective observational study included 130 DKA episodes for patients under 16 years admitted to Tawam Hospital, a COVID-19-free hospital, between March 2017 and Feb 2021. The March 2020–2021 (pandemic) data were compared with the previous three years, March 2017—Feb 2020 (pre-pandemic). Data were retrieved from the electronic records and analyzed using STATA13.

Results: We evaluated 130 DKA admissions (63 pandemic and 67 prepandemic). The majority of patients in the pandemic group were in the age group of (6–11.9 years) (54% versus 23.9%, $p = 0.001$), and a higher proportion of them were diagnosed with new-onset diabetes (42.9% vs. 25.4%, $p = 0.035$). Overall, there was no significant difference in symptom duration, DKA severity, or time to DKA resolution. However, there was a difference in the median (IQR) HbA1C, 11% (9.4–12.95) vs. 10.15% (9.27–11.80) ($p = 0.0297$) in the pandemic and prepandemic groups, respectively.

Conclusion: In our COVID-19-free hospital, the pandemic and service reallocation have increased DKA admissions and newly diagnosed T1DM patients. Clinical presentation and severity were not adversely affected.

P23-088. Classification of Diabetic Foot Ulcers: A Comparison of Commonly Used Classification Systems

Iqbal Ahmed Qureshi[1], Khalid Rashid Makhdoomi[1], Mohammed Omar Sadek[1], Sulaiman Saif Al Shamsi[1]
[1]Department of Vascular Surgery, Tawam Hospital, Al Ain, United Arab Emirates

Background: Diabetic foot ulcers (DFU) affect 15% of diabetic patients in their lifetime. A comprehensive assessment of diabetic foot is the key to success in managing morbidity and mortality and improving the patient's quality of life. Several classification systems and scores for the assessment of DFUs are commonly used. This study aimed to identify the best classification systems to plan treatment and predict outcomes.

Methods: An online literature search was performed using MEDLINE and PUBMED. Keywords used were diabetic foot, classification, and ulcers.

Results: We found many classification systems, each assessing the DFU comprehensively, planning the treatment, and predicting the outcome. Following are the most commonly used systems: Wagner Classification system, University of Texas classification system, SINBAD (site, ischemia, neuropathy, bacterial infection, and depth) classification system and score, PEDIS (perfusion, extent, depth, infection, sensation) classification system and score. Chuan et al compared Wagner, SINBAD, and PEDIS systems and found that, predicting the adverse outcomes, PEDIS has a sensitivity of 93%, while Wagner and SINBAD were 88% AND 90%, respectively. The specificity of PEDIS was 82%, better than Wagner and SINBAD, 80% and 73%, respectively.

Conclusions: The PEDIS scoring system for assessing DFUs is easy to use, reproducible, and predicts outcomes. To standardize the DFU assessment, the PEDIS scoring system should be used for all DFUs.

P23-089. The Need for Tobacco Cessation in Dental School Curriculum in the UAE: A Survey

Simy Mathew[1], Alexander M. Luke[2], Hazim K. Anwar[2], Mohammad N. Al-Hashemy[2], Raghad Hashim[2]
[1]Institute of Public Health, UAEU, Al Ain, 2College of Dentistry, Ajman University, Ajman, United Arab Emirates

Background: Dentists in clinical practice do not report themselves as thoroughly trained to motivate patients into tobacco cessation counseling. Literature reports that most dentists in the UAE require access to training for proper smoking cessation interventions. Dental students report not offering tobacco cessation services as they lack the confidence to do so. Thus, the literature suggests gaps in providing tobacco cessation services in the UAE.

Methods: The study's objectives were to identify if dental students perceive a need for inclusion or modification of a tobacco cessation program in the current curriculum and to assess students' perceptions of the current tobacco cessation curriculum in dental universities in the UAE. A convenient sample was obtained from dental students in their clinical years and general dental practitioners (GDP) at three major universities in the UAE. The self-administered questionnaire was distributed among 400 dental students and GDP. A response rate of 81.5% was attained.

Results: The sample consisted of 68.6% females. 45% of the sample stated that they regularly recorded tobacco habits among their patients, and only 16% recorded patient interest to quit the habit. 77% of the respondents felt they were not trained to provide tobacco cessation services, and 64% agreed that the dentist plays a significant role in ceasing the tobacco habit. Only 23% of the participants felt adequately trained to provide tobacco cessation services. Except for oral diseases related to tobacco use (45%), the participant's responses varied from 5 to 20% on various concepts of tobacco cessation, which were included in the current curricula.

Conclusion: There is a lack of adequate training on tobacco cessation among dental students, which translates into the lack of these services being administered to a population easily accessible to the dental community.

P23-090. A Rare Case of Gastrointestinal Basidiobolomycosis

Razan Saud Ahmad[1], Asma AlNeyadI[1], Arshad Khaliq Bhat[1]
[1]*Tawam Hospital, Al Ain, United Arab Emirates*

Background: Basidiobolomycosis is a rare fungal infection caused by *Basidiobolus ranarum* among immunocompetent hosts in tropical and subtropical climates. It commonly manifests as a subcutaneous infection among children but can rarely cause gastrointestinal infection. Acquisition of infection is believed to be through ingestion of contaminated food. Diagnosis is difficult due to its rare nature and overlapping clinical picture with other pathologies. Treatment usually employs surgical resection and/or oral antifungal therapy.

Case description: A 24-year-old healthy male from the eastern region of Sudan working as a camel farmer in UAE presented with a two-month history of worsening abdominal pain, nausea, vomiting, abdominal distension, and unintentional weight loss of 20 kg. Physical examination revealed an emaciated patient and a solid mass in the epigastric region, occupying the left and right upper quadrants and extending to the lower quadrants. Labs showed leukocytosis with neutrophilia, eosinophilia, and elevated IgE levels. CT scan showed a large mass involving the lower gastric, pyloric, and upper duodenal portions, causing gastric outlet obstruction with infiltrates in the omentum and peritoneum, causing omental caking. Upper endoscopy revealed extraluminal gastric and pyloric compression. Extensive laboratory investigations for autoimmune diseases and tumors were negative, except for elevated IgG1, IgG4, and CA-125 of 69 u/mL. Initial biopsies from the gastric wall showed inflamed tissue with eosinophilic infiltrate predominantly, with histiocytes and multinucleated giant cells with degeneration and necrosis. No organisms were identified on routine and special stains. Empiric treatment with oral albendazole 400 mg twice daily for two weeks on the grounds of suspected fungal infection resulted in the resolution of peripheral eosinophilia. The patient was transferred to another facility where a biopsy from the pyloric wall thickening showed fibrosis and chronic inflammation with lymphocytes, eosinophils, and epithelioid-rich granulomas with multinucleated giant cells—granular eosinophilic material surrounding empty rounded or elongated spaces within the granulomata, suggesting the Splendore–Hoeppli phenomenon. PAS (Periodic acid–Schiff) stain and GMS (Grocott's methenamine silver or Gömöri) stains showed occasional wide and swollen highly irregular structures with sparse septations resembling fungal organisms. This picture was suggestive of basidiobolomycosis. Unfortunately, multiple fungal cultures were negative. Further history revealed that he occasionally consumed raw liver from sheep and drank unpasteurized milk. The patient was diagnosed with gastrointestinal basidiobolomycosis and treated with oral itraconazole 200 mg daily, alternating with IV voriconazole 185 mg twice a day, depending upon his ability to tolerate oral intake. He developed multiple intra-abdominal hospital-acquired infections, which were treated with drainage and courses of antibiotics. Follow-up CT abdomen showed mild resolution of the intra-abdominal mass. He eventually improved nutritionally, tolerating food orally, and was discharged on oral itraconazole 200 mg twice a day, projected to continue for 6–12 months, depending upon the clinical response.

Conclusions: This case raises awareness and highlights the importance of considering gastrointestinal Basidiobolomycosis in patients from regions with warmer climates, presenting with abdominal mass and eosinophilia mimicking various conditions such as inflammatory bowel disease, intestinal tuberculosis, and malignancy and thus, delaying diagnosis with potentially fatal outcomes.

P23-091. Evaluating the Management of Shoulder Dystocia and Neonatal Outcomes Following the Stimulation-Based Multi-professional Obstetric Emergency Training Program in the United Arab Emirates

Zeinab Lami[1], Wala'a Al-Safi[1], Shahad Mahmoud Dalen Bronkhorst[1]
[1]*Mafraq Hospital, Abu Dhabi, United Arab Emirates*

Background: Shoulder dystocia is an unpredictable obstetric emergency complication that affects 0.6 to 1.4% of vaginal births. It needs additional maneuvers to deliver the baby successfully after applying gentle downward traction in all vaginal deliveries. For these maneuvers to be achievable, effective communication and collaboration between health care professionals are essential to improve maternal and neonatal outcomes. This study assesses the effectiveness of implementing the Practical Obstetric Multiprofessional Training (PROMPT) program on the clinical management of shoulder dystocia and its effect on associated risks of neonatal injury. The study was conducted at a single Emirati tertiary hospital with 2,500 births per year.

Methods: A retrospective, observational study highlighting the management and neonatal outcome following vaginal deliveries complicated by shoulder dystocia before and after the initiation of the PROMPT program for two years at Mafraq Hospital, UAE. We studied the intrapartum and postpartum data of singleton term deliveries with cephalic presentation who had a documented record of difficult shoulder delivery over the study periods. Our hospital conducts a monthly 1-day multidisciplinary obstetric emergency that includes a 30-minute lecture followed by a 40-minute practical session on shoulder dystocia management. All health care providers involved in maternity care participate in the mandatory annual training.

Results: Between the pre- and postimplementation of the PROMPT program, the numbers of live births were 3,507 and 2,667, respectively. The Shoulder dystocia rate pretraining was 32 (0.9%) and post-training 36 (1.3%). After the introduction of training, the clinical management improved: McRoberts position, pretraining 26/32 (81.25%) to 35/36 (97%) posttraining; suprapubic pressure 15/32 (46.9%) to 2 5/3 6 (69.4%); internal rotational maneuver 7/32 (21.8%) to 3/36 (8.3%); delivery of posterior arm 4/32 (12.5%) to 7/36 (19.4%); no recognized maneuvers performed 7/32 (21.8%) to 1/36 (2.7%). In pretraining, out of 32 shoulder dystocia incidences, 11 had neonatal injuries (34.4%). These were 10 cases of reduced limb movements and one case of Erb's palsy. In posttraining, out of 36 incidences of shoulder dystocia, 9 had neonatal injuries (25%). These include six cases of reduced limb movements, two fractures, and one Erb's palsy.

Conclusion: Implementation of shoulder dystocia training for all health care providers involved in maternity care has led to a noticeable improvement in the clinical management of vaginal deliveries complicated by shoulder dystocia and a reduction in risks associated with neonatal injury. To our knowledge, the maternal and neonatal outcomes analyzed at our hospital in UAE are consistent with international data that encourages and recommends the compulsory implementation of PROMPT-like training in all hospitals concerned with maternity care.

P23-092. Symptomatic Unilateral Congenital Bipartite Scaphoid: A Case Report

Noura Baniyas[1], Mohamed Alturabi[2], Loay Alsayes[2], Mohammed Nadir Sekkal[2], Sherif Elnikety[1,2]
[1]*Department of Surgery, CMHS, UAEU, Al Ain, United Arab Emirates*
[2]*Department of Orthopaedics, Tawam Hospital, Al Ain, United Arab Emirates*

Background: Bipartite scaphoid is a rare condition. It is generally believed to be caused by a failure of fusion of two or more ossification centers of the scaphoid bone, resulting in a congenital bipartite scaphoid. Typically, the scaphoid bone has a single ossification center that forms the mature bone at maturation.

Case description: A 43-year-old man with no significant medical history presented with a 3-month history of left wrist pain and swelling aggravated by movement. The patient denied any history of trauma, injury, or falls and no associated symptoms of fever, pain, or swelling in other joints. On physical examination, there was a noticeable left wrist swelling with tenderness upon palpation of the anatomical snuff box. The range of motion was almost full but associated with pain on extremes of movement. X-rays of the left wrist revealed the scaphoid bone as two fragments separated at the waist, each with a smooth and rounded surface, with no bone cysts or sclerosis. Moderate osteoarthritic changes were noted at the radiocarpal joint. A comparison X-ray of the right wrist revealed a single scaphoid bone with no fractures or separation. A computed tomography (CT) scan of the left wrist showed a clear separation of the scaphoid with regular, smooth edges. A magnetic resonance imaging (MRI) scan showed a high-intensity signal in the space between the two fragments.

Conclusion: Our case underscores the importance of considering bipartite scaphoid in the differential diagnosis of wrist pain, particularly in the absence of trauma or injury. It also highlights the importance of careful examination and appropriate investigations to avoid misdiagnosis and mistreatment.

P23-093. A Rare Entity of Carpal Dislocations: A Case Report

David Alao[1,2], Sara Elhossary[2], Sara Al Shajri[2], Sherif Elnikety[1,2]
[1]*CMHS, USEU, United Arab Emirates*
[2]*Tawam Hospital, Al Ain, United Arab Emirates*

Background: Carpal dislocations are relatively uncommon compared with other joint injuries. The most frequent type of carpal dislocation is perilunate, including peri lunate fracture-dislocation. On the other hand, radiocarpal dislocation and fracture-dislocation are rare entities of carpal injuries, occurring in less than 0.2% of cases. The radial styloid and scaphoid bones are the most commonly associated bony fractures with carpal dislocations. However, a missed diagnosis of carpal fractures and dislocations can be as high as 25%, leading to significant long-term disability and functional limitations.

Case description: A previously healthy man in his late 30s was brought to the emergency department (ED) by the emergency medical service (EMS) following a high-speed motorbike accident. He was wearing a helmet and did not report any loss of consciousness. He arrived in the ED with spinal protection and complained of left wrist pain. A primary survey, including an e-FAST, was negative. However, his left wrist was grossly swollen with a deformity resembling a garden fork. The range of movement in his wrist was limited by pain, and he had a reduced finger extension at the metacarpophalangeal and interphalangeal joints. There was no neurovascular deficit. His lower extremities had a few bruises, but the rest of his secondary survey was normal. He received procedural sedation in the ED with fentanyl and propofol, and we performed a closed reduction of the dislocation. The arm was immobilized in an above-elbow cast. A post reduction radiograph showed a satisfactory reduction. Computed tomography of the wrist showed realignment of the avulsion fracture. The patient was admitted under the orthopedic service for a planned surgery. However, the team decided to manage him conservatively, and he was discharged home for a follow-up in 5 days. Unfortunately, the patient did not attend the follow-up appointment as he was from outside our catchment area.

Conclusion: The patient had a volar radio-carpal dislocation (RCD) with an associated fracture of the volar rim of the distal radial articular surface. This type of dislocation is rare, and results from high-energy transfer mechanisms such as road traffic collisions falls from height, or contact sports. Two types of RCD have been described: volar and dorsal dislocations, also known as Dumontier type 1 and type 2, respectively. Type 1 is less common, with only 23 cases ever reported. Emergency physicians should know about this rare but significant injury to ensure appropriate management and prevent complications.

P23-094. Surgical Consent: Can Simulation Improve Consent Skills?

Sherif Elnikety[1,2], Eman Badr[3], Khaled Alsisy[4], Wael Bekhit[4], Waleed Aziz[4]
[1]*Department of Surgery, CMHS, UAEU*
[2]*Department of Orthopaedics, Tawam Hospital, Al-Ain, Abu Dhabi, United Arab Emirates*
[3]*International Patient Care, Department of Health-Abu Dhabi, Al-Ain, Abu Dhabi, United Arab Emirates*
[4]*Mediclinic Hospitals, Al-Ain, Abu Dhabi, United Arab Emirates*

Background: Obtaining informed surgical consent requires many competencies, including knowledge, communication skills, clinical experience, and professionalism. Despite its importance, consent training and skills are often marginalized, especially in light of the current pressure on surgical services and the lack of a medical workforce. Trainee surgeons are typically expected to learn to obtain informed consent by observing their mentors. However, little emphasis is placed on formal consent training, which has resulted in surgeons facing legal repercussions and criticisms for inappropriate consent in several lawsuits and media coverage. The surgical consent process begins as soon as the patient arrives at the health care facility for treatment. It involves multiple discussions and consultations with health care providers over multiple encounters. However, health care workers tend to focus solely on the written consent form as it carries legal weight. This disregard for the overall process and emphasis on the form needs to pay more attention to the importance of effective communication and patient-centered decision-making in obtaining informed consent.

Methods: We conducted an extensive narrative review of all papers on surgical consent training using the PubMed search engine. We also reviewed current practices and presented the argument for simulation-based consent training as a feasible and effective option to bridge the gap between the current practice and the expected outcome.

Results: Our review of 276 full published articles yielded 37 papers relevant to this study. The published evidence supports the lack of consent training globally. Several solutions were discussed to overcome the deficiency in surgical consenting skills, emphasizing simulation training as a low-cost alternative. However, there needs to be more

simulation training for nontechnical skills, including communication and patient-centered decision-making.

Conclusion: Although simulation training has been well-established in postgraduate medical training, there is a need to incorporate simulation-based consent training for nontechnical skills. Obtaining informed surgical consent is crucial and requires technical and nontechnical skills. As such, more emphasis on consent training must be addressed to improve surgical practice and patient outcomes. Simulation-based consent training can provide a low-cost and effective solution to fill this gap in consent process training.

P23-095. A Rare Case of Posttraumatic Meralgia Paresthetica: Unusual Etiology

Mohamed Alturabi[1], Noura Baniyas[2], Khaled Alsisy[3], Wael Bekhit[3], Waleed Aziz[3], Sherif Elnikety[1,2]
[1]*Department of Orthopaedics, Tawam Hospital*
[2]*Department of Surgery, CMHS, UAEU, and*
[3]*Mediclinic Hospitals, Al Ain-Abu Dhabi, United Arab Emirates*

Background: Meralgia paresthetica is a rare nerve entrapment condition in which the lateral cutaneous nerve of the thigh is affected, resulting in pain and paresthesia in the anterolateral aspect of the thigh. The lateral cutaneous nerve of the thigh is a pure sensory nerve that originates from lumbar nerve roots L1, L2, and L3. Multiple anatomical studies have reported several variations in the course of the nerve. Meralgia paresthetica is more common in males than females, with a higher frequency in diabetics and athletes. It is thought to be related to muscle tension and strenuous exercises. L1 to L3 disc prolapse can result in similar symptoms; however, it is unlikely to be isolated symptoms with no other manifestations of disc prolapse. It is also reported to be related to obesity, pregnancy, and secondary to iatrogenic injury and tight garments. We present a case of posttraumatic meralgia paresthetica in a young, active male who sustained a motorbike handlebar injury. The patient was followed up for eight months post-injury, and his symptoms were mainly paresthesia that improved at least 70% compared with the posttraumatic level. Significant left thigh bruising was associated with moderate pain that recovered within a few weeks.

Case description: A 37-year-old fit and healthy gentleman was riding his motorbike below 50 km/h A van coming from the opposite direction and turning right interrupted his path, resulting in him losing control. He flipped over the handlebar and landed over his right shoulder. He attended the emergency department and was discharged later that day with right shoulder pain and multiple superficial abrasions. Within the first 24 hours, he noticed an area of numbness over the anterolateral aspect of his left thigh. An orthopedic surgeon saw him, and a diagnosis of meralgia paresthetica was established. It was concluded that as he flipped over, his left groin was impacted by the handlebar, resulting in injury to the lateral cutaneous nerve of the left thigh.

Conclusion: Meralgia paresthetica is a rare condition unlikely to occur after direct trauma. In this case presentation, we highlight the rarity of the case following this mechanism of injury and the need to consider lumbar disc prolapse as a cause of compression of the lateral cutaneous nerve of the thigh in posttraumatic patients.

P23-096. A New Technique to Remove a Jammed Locking Screw

Waheed Hammad[1], Khaled Alsisy[2], Wael Bekhit[2], Waleed Aziz[2], Sherif Elnikety[2,3,4]
[1]*School of Medicine, University of Jordan, Amman, Jordan*
[2]*Mediclinic Hospitals*
[3]*Department of Surgery, CMHS, UAEU*
[4]*Orthopaedics Department, Tawam Hospital, Al Ain, United Arab Emirates*

Background: Removing metalwork is a standard procedure in orthopedic surgery for fracture management. However, removal of titanium plates can be challenging due to screws becoming jammed. This could result from cold welding, stripped screw head recesses, or cross-threading between the screw hole and the threads in the screw head. Various methods and techniques have been proposed to address this problem, including using a conical extraction screw, cutting the plate, using stainless-steel metal cutting blades, using a high-speed disc to make cuts from the plate edge to the screw hole, and utilizing a screw extractor. This report describes a new, inexpensive technique for dealing with a single jammed locking screw in a locking plate, which utilizes readily available materials.

Methods: We describe a new and simple technique for removing jammed locking screws without destroying the screw head or using metalwork extraction tools. Unlike most other techniques, this technique is easy and avoids metal fragmentation and metallosis.

Results: We have used this technique on five patients and found it effective, simple, and less time-consuming than other techniques. However, care should be taken to avoid transferring bending forces to the bone to reduce the risk of re-fracture.

Conclusion: In this report, we have described a technique that allows the removal of metalwork without potentially damaging it while reducing the risk of metallosis, wound problems, and local reaction around the bone compared with other techniques that may involve leaving screws in situ. Some of these techniques generate metal debris and interfere with bone vascularity, leading to soft tissue damage and a sizable hollow bone defect that increases the risk of refracture. Moreover, some techniques require special instruments that are only sometimes available, making them cost-effective. Our technique is cost-effective, easily applicable, and avoids the potential risks associated with other techniques. Although it only applies to one jammed screw, it is a simple and safe technique that can be used on superficial plates.

P23-097. The Adequacy of Undergraduate Musculoskeletal Education in the United Arab Emirates University

Roadha Almarri[1], Abdulla Al-Katheeri[1], Sherif Elnikety[1,2]
[1]*Department of Surgery, CMHS, UAEU, and*
[2]*Orthopaedics Department, Tawam Hospital, Al Ain, United Arab Emirates*

Background: Undergraduate musculoskeletal (MSK) education has evolved alongside undergraduate medical education (UME) changes. While didactic education was traditionally at the core of UME, problem-based learning (PBL) has become the mainstream educational method in recent years. At our institution, we teach MSK through a hybrid approach that incorporates both didactic lectures and PBL. This study aimed to assess the adequacy of MSK education among final-year medical students and postgraduate interns in our institution and compare our findings to those of previously published studies from other institutions.

Methods: We administered a paper-based survey to medical students and interns that included the Freedman and Bernstein questionnaire, a validated essential competency assessment tool, and questions on demographic data, attitudes, perceptions of exposure to orthopedics, and confidence in MSK clinical performance.

Results: We received completed surveys from 76 participants. None achieved the raw passing score, and only four participants achieved the weighted pass score. Almost two-thirds of the participants (64%) felt that the undergraduate MSK exposure was inadequate, and about one-fifth (21%) reported low or no confidence in their MSK clinical examination skills.

Conclusion: Our study demonstrates that despite adopting PBL, our students need more MSK knowledge. Therefore, curriculum development and improvements to teaching strategies are imperative to produce safer and better-educated physicians.

P23-098. Virtual Postgraduate Medical Training Post-COVID-19 from Educational Theory Prospectives

Sherif Elnikety[1,2], Eman Badr[3], Khaled Alsisy[4], Wael Bekhit[4], Waleed Aziz[4]

[1]Department of Surgery, CMHS, UAEU, Al Ain, United Arab Emirates
[2]Orthopaedics Department, Tawam Hospital, Al Ain, United Arab Emirates
[3]International Patient Care, Department of Health, Abu Dhabi, United Arab Emirates

Background: Postgraduate medical training has evolved over centuries due to changes in the community, medical advances, technological innovations, and the theoretical basis of training and education. The recent pandemic has had a significant effect on postgraduate training. Training has been provided virtually, negatively affecting the relationship between trainers and trainees. While virtual training has solved geographical barriers, it did not provide a similar training experience to face-to-face interactions. Technical skills, in particular, took much work to teach virtually. Although the COVID-19 pandemic is over and daily life is returning to normality, virtual training is expected to play a significant role in undergraduate and postgraduate medical and surgical education.

Methods and Results: This paper aims to provide a better understanding of the principles of educational theories with a focus on communities of practice and how it applies to postgraduate and virtual training. The paper also offers the opportunity to reflect on current practice and consider ways of improvement. A review of medical and surgical training during the COVID-19 pandemic was conducted; it included both virtual and face-to-face sessions. This was analyzed given published studies discussing the theoretical aspects of postgraduate medical and surgical training and its application to virtual postgraduate training sessions.

Conclusion: Postgraduate medical training has adapted quickly to the pandemic, with various platforms used to provide virtual training for doctors worldwide. This represents a successful implementation of the virtual community of practice concept, where surgeons from the same community interact remotely to achieve a shared goal. This model is anticipated to be integrated into the training process and continues to be used. This model is cost-efficient and likely to grow further with improvements in communication technology.

P23-099. Surgical Treatment of a Sporadic Pediatric Bone Tumor with Successful Limb Reconstruction: A Case Report

Saeed Aljabri[1], Amal Alshemeili[2], Mohamed Nadir Sekkal[1], Raed Al Saruri[1], Sherif Elnikety[1,2]

[1]Department of Orthopaedics, Tawam Hospital, and
[2]Department of Surgery, CMHS, UAEU, United Arab Emirates

Background: Angiomatoid Fibrous Histiocytoma (AFH) is a rare soft tissue tumor that typically occurs in the extremities of young adults. AFH of bone is even rarer, accounting for less than 1% of primary bone tumors. We present a case of Angiomatoid Fibrous Histiocytoma of the distal ulna in a pediatric patient treated successfully with excision and delayed bony reconstruction to prevent progressive deformity of the growing limb.

Case description: A 3-year-old boy was incidentally found to have a cystic lesion in his right distal ulna following a wrist fracture. The fracture was treated conservatively in a cast for a few weeks. After a year, the patient was referred to Tawam Hospital due to a fever of unknown origin, and a subsequent imaging study revealed an increase in the size of the cystic lesion. The patient underwent open bone biopsy and intralesional curettage, which revealed histiocytoid mononuclear cell proliferation with no evidence of malignancy. The diagnosis of AFH of bone was later confirmed by histopathological analysis at Jon Hopkins Hospital. The patient underwent wide resection with clear margins. Due to the bony defect, it was found that the limb is growing with progressive deformity. Therefore, corrective osteotomy of the right radius was performed with titanium elastic nail fixation and fibular graft of the defect in the right ulna to restore normal function and correct the deformity. The patient is under routine follow-up until maturity to detect recurrence or persistent limb deformity early.

Conclusion: We report a case of AFH of the distal ulna in a pediatric patient successfully managed with wide resection and corrective osteotomy. The rarity of this tumor highlights the importance of proper diagnosis and management to achieve optimal outcomes.

P23-101. Estimating a Baseline Value for the Gap between Chest Wall and Heart from Free Breathing CT to Optimally Reduce Heart Mean Dose for Left-Sided Breast Cancer Patients

T.R. Vivek[1], Khalid Saeed Balaraj[1], Abdulrahman Sulaiman Bin Sumaida[1], Syed Mansoor Hasnain[1], Omran Ali El-Koha[1], Amjad Hussain[1], Rajaneesh Kumar[1], Noor Huda Jaffer[1]

[1]Department of Radiotherapy, Tawam Hospital, Al Ain, United Arab Emirates

Background: Radiation therapy (RT) for breast cancer patients reduces the risk of local recurrence and helps improve overall survival. RT to the left breast and chest wall results in a considerable dose to the heart and coronary arteries. Several extensive studies have demonstrated increased cardiac mortality associated with RT in left-sided breast cancer. The use of cardiotoxic chemotherapy may further increase this risk. Deep inspiration breath-hold (DIBH) can reduce heart dose compared with free-breathing (FB) by increasing the heart-to-chest wall distance (HCWD), especially in left-sided breast cancer patients. However, the DIBH technique is relatively time-consuming and needs lots of patient education. This study aims to determine the baseline value for the gap between the chest wall and the heart and assist in determining whether DIBH is suitable for that particular patient.

Methods: Free breathing CT images of twenty-five patients with left-sided breast and chest wall cancer were

selected in this study. CTV, PTV, and typical structures were drawn as per standard guidelines. The entire patient's heart was close to the chest wall. A static IMRT plan was created as per the guidelines. The heart mean dose was close to 5Gy or even more in some cases. Using the "Margin to the structure" tool in Eclipse, inner margins of 2 mm and 4mm to the heart were created only in the Anterior and Left lateral directions. These new structures were saved as "Heart—2 mm" and "Heart—4 mm." The mean dose to these new structures was calculated from the same IMRT plans.

Results: Actual heart mean dose for all 25 patients ranged from 4.5 to 7 Gy. Reduction in the mean dose to the heart for the structure "Heart—2 mm" ranged from 12 to 14%, and for the structure "Heart—4 mm" ranged from 24 to 28%. Published studies show that the rate of major coronary events increased by 7.4% for each 1 Gy increase in the mean dose delivered to the heart. Reduction in the mean dose to the heart—2 mm is 0.5 to 0.8 Gy, and to the heart—4 mm structure is from 1.2 to 1.6 Gy. Since there is a significant reduction in the heart mean dose when the gap between CW and Heart is 4 mm.

Conclusion: From the results of this study, it is suggested that patients can be selected for the DIBH technique if the gap between CW and Heart is 4mm or more. The gap was created between CW and Heart using the inner margin algorithm, a geometrical reduction. In the actual scenario, the gap could be even more than this geometrical reduction, which could further reduce the mean heart dose.

P23-102. Trends in Pediatric Emergency Department Visits at Tawam Hospital During the COVID-19 Pandemic

Mahra Fattan[1], Maitha Al Ghfeli[1], Najla Al Kuwaiti[2], Eiman Al Kaabi[2], Huda Al Dhanhani[2], Mohameed Issa[3], Hassib Narchi[4]
[1]*Academic Affairs*
[2]*Department of Pediatrics*
[3]*Department of Emergency Medicine, Tawam Hospital, and*
[4]*Department of Pediatrics, CMHS, UAEU, Al Ain, United Arab Emirates*

Background: The COVID-19 pandemic has indeed affected the health care systems worldwide. The lockdown was among other different strategies developed to contain the virus spread. Subsequently, the possible impact of these measures on health care system utilization needs to be recognized and more frequently studied. At the onset of the COVID-19 pandemic, emergency departments globally experienced a significant decrease in patients seeking emergency care. This study aims to assess the impact of the COVID-19 pandemic and population lockdown on pediatric ED visits in Tawam Hospital, comparing retrospective data from the trimester's March–May 2019 and March–May 2020.

Methods: A retrospective study compared emergency department visits in a tertiary hospital in UAE between (March–May 2020) lockdown period and the prepandemic year (March–May 2019). The data were recruited from the medical records system. They were further analyzed using "SPSS " to explore the impact of COVID-19 on pediatric emergency (ED) health services utilization concerning patient attendance, age, hospitalization rates, PICU admissions, and trauma cases before and during the COVID-19 pandemic.

Results: Pediatric ED visits decreased dramatically in line with the local impact of the COVID-19 pandemic and after a statewide stay-at-home order. The prominence of trauma cases is notable as a potential preventable harm experienced by children during the COVID-19 pandemic and identifies an important area of public health education and intervention. The hospitalization rate among children was significantly higher during the pandemic, thus indicating more severe clinical conditions. These assumptions align with a recent pediatric case series underscoring that the risk of delayed access for some emergency conditions can be much higher than that of contracting COVID-19.

Conclusion: Our observations might be related to public fear and anxiety resulting in delayed presentation. These findings support the importance of public awareness and education on medical care resources available and providing alternative medical services like telemedicine and helplines for children.

P23-103. The Cellular Trafficking and Targeting of Angiotensin-Converting Enzyme 2 (ACE2): Implications for COVID-19 Disease Severity and Therapy

Nesreen Alkhofash[1], Bassam Ali[1], Feda Mohamed[1], Sally Badawi[1]
[1]*Department of Genetics and Genomics, CMHS, UAEU, Al Ain, United Arab Emirates*

Background: COVID-19, caused by SARS-CoV-2, has been declared a pandemic in March 2020. The viral entry into human cells is mediated through angiotensin-converting enzyme-2 (ACE2). Predictions of variations' effect on the current pandemic are essential. The reduced cell-surface availability of ACE2 might reduce the infection rate; thus, manipulating the cell-surface expression of this receptor could present a potent target for COVID-19 treatment. Throughout this study, we aim to (1) elucidate the cellular-trafficking pathways for the wild-type ACE2 and selected human ACE2 missense-variants and assess the time needed by newly synthesized ACE2 to reach its cellular destination and (2) explore the potency of molecular modulators of proteins trafficking as COVID-19 therapeutics through their ability to block or slow-down surface expression of ACE2.

Methods: To accomplish the stated aims, ACE2 turnover, trafficking, and localization are characterized by immunofluorescence assay and western blotting. De-glycosylation assays performed on ACE2 variants and WT assess if ACE2 is retained in the ER or translocated normally. Next, we are assaying the effect of different molecular modulators and drugs with the potential to slow down the ACE2 maturation rate, which could display potent therapeutics targeting reduced ACE2 availability on the plasma membrane and consequently tackling viral entry and progression. Then we want to look at drugs as molecular modulators of protein trafficking effect on ACE2 and B0AT1 functions, knowing that ACE2 is essential for normal B0AT1 physiology, and B0AT1 deficiency causes pellagra-like dermatosis "Hartnup disorder." In addition to investigating the B0AT1 variant's effect on ACE2 trafficking in the correct research models and vice versa.

Results: Our results show that wild-type ACE2 is destined to the plasma membrane approximately 10 hours post-expression. Using cycloheximide chase assay, we show that ACE2 requires approximately 12 hours to be replaced. Naturally occurring missense variants (including three variants predicted to be deleterious R768W, G575V, and G173S) prevalent in different populations were generated by SDM, and all 28 distributed across the ACE2 receptor domains showed no significant effect on ACE2 intracellular trafficking and subcellular targeting to the plasma membrane. Drug screening for ACE2 inhibitory effects is in progress. Today, we found two compounds that significantly decreased ACE2 maturation rate: Casin (5 µuM) and Panbinostat (10 µuM) when compared against the control group treated with the solvent alone, DMSO.

Conclusion: Drugs acting like molecular modulators of transportation might be helpful in ACE2 manipulation to lower the plasma membrane availably for viral entry. However, a cross-talk with B0AT1 takes place in the intestine,

which requires the researcher's attention. In addition, although the selected missense variants display no significant change in ACE2 trafficking and subcellular localization, this does not rule out their effect on viral susceptibility and severity. Further studies are required to investigate the effect of ACE2 variants on its expression, binding, and internalization, which might explain the variable clinical manifestations associated with the infection.

P23-104. Retention of Urine and Pyelovenous Backflow Complicating Post Angio Embolization of Grade 4 Renal Trauma

Haya Fansa[1], Hammadi A.[1], Afana H.[2], Askhaita K.[2], Deyab A.[2], Bhatti A.[2], Awadhi O.[2], Muwafaq S.[2], Khan M.H.[2]
[1]*Department of General Surgery, Tawam Hospital, Al Ain, United Arab Emirates*
[2]*Department of Urology, Tawam Hospital, Al Ain, United Arab Emirates*

Background: Kidney trauma accounts for up to 5% of all trauma patients. Most trauma centers opt for conservative approaches for most cases; nonoperative treatment gave rise to minimally invasive procedures such as angioembolization and endo-urological stenting. Herein, we discuss a case of a traumatic kidney injury of grade 4 with active arterial bleeding that was initially managed by angio- embolization, with a complicated hospital stay due to urinary retention with back pressure on the kidney causing rebleeding.

Case description: A 63-year-old male sustained a high-impact injury by a speeding vehicle and was brought to the trauma bay. he was stable initially until his blood pressure started to drop; after he was resuscitated and Foleys was inserted, a gush of frank hematuria was evident. His CT revealed multiple injuries and numerous kidney lacerations extending to the renal pelvis with active arterial bleeding from an inferior segmental branch of the right renal artery. The patient underwent angioembolization of bleeding renal artery branches, which was successful. After 48 hours, the Foley was removed, and the patient suffered from urinary retention and an Initial rise in blood pressure. Foleys was reinserted, revealing frank hematuria again. He underwent an urgent CT angio denoting extravasation of contrast at the right upper pole of the right kidney, along with active bleeding. The patient underwent repeat angioembolization of two small pseudoaneurysms that were successfully embolized. Because of contrast extravasation, a right-sided double J stent was inserted.

Conclusion: When encountering a high-grade renal injury, it is best to manage conservatively, if possible, with early utilization of angioembolization. Repeat imaging should be considered after 48 hours or earlier if clinically indicated. Urinary outlet obstruction should be avoided in patients suffering from high-grade renal injury as an episode of retention of urine in risk patients with Benign Prostatic hypertrophy may trigger myelogenous backflow, which may lead to secondary bleeding from vasospastic vasculature from primary injury or from newly developed AV aneurysms. This can be a sinister event, although not commonly documented in literature.

P23-106. Assessment of Health-Related Quality of Life in Children with Epilepsy Using the PedsQL Questionnaire in Tawam Hospital

Dalia Said[1], Shoroogh Marei[1], Jehan Suleiman[1], Qudsia Shaukat[1]
[1]*Tawam Hospital, Al Ain, United Arab Emirates*

Background: Pediatric Epilepsy has been increasingly recognized as a health-related burden on patients' quality of life. The management of epilepsy is not merely controlling seizures but recognizing and preventing its impact on all other aspects of life. Epilepsy can significantly affect the quality of life, not only because of its chronicity, need for regular medications, and their side effects, but also due to its emotional impact and social stigma. To our knowledge, no research has been conducted on epilepsy-related quality of life, particularly in the pediatric age group in the UAE.

Methods: Children with epilepsy aged 7 to 16 years, attending age-appropriate classes following up in our institution's pediatric neurology clinic, were evaluated. Ethical approval from the local ethics committee and verbal Informed consent from parents was taken. Parents of children diagnosed with epilepsy for at least six months and on antiepileptic medications were interviewed by phone. Further data such as type of epilepsy, number and name of antiepileptic medication, hospital emergency visits, and admissions were retrieved from the patient's medical records. Statistical analysis was done using SPSS v.22.

Results: A Total of 70 pediatric patients, 45 males and 25 females, were included. Around 77% were nationals, and 22% were nonnationals. Our patients were found to have generalized idiopathic epilepsy (39%), absence epilepsy (17%), rolandic epilepsy (12%), focal epilepsy (30%), and other subtypes (2%). Almost 80% were well controlled on 1 Antiepileptic Drug (AED), with the remaining needing 2 AED for better control. A great majority reported compliance with taking AED. Unfortunately, 65% of parents reported side effects with AED, mostly Mood changes, anger, and occasional aggressive behavior, but limited biochemical side effects. There was an evident lack of availability and education regarding rescue medications, with 45% of parents reporting not having buccal midazolam or rectal diazepam available and not being sufficiently educated about how and when to use it. The quality of life (QoL) was assessed using the PedsQL questionnaire with five main domains: Impact on life, Cognitive functioning, Sleep, executive functioning, mood, and behavior. The mean overall QoL score was 79 ± 19, which reflects an overall sound quality of life. No significant difference in QoL score was observed with various epilepsy types, antiepileptic medications, side effect profiles, and maternal or paternal educational level ($p > 0.05$).

Conclusion: Our Pediatric population has well-controlled epilepsy with almost negligible breakthrough seizures and a minimum number of antiepileptic medications needed. Moreover, the overall quality of life was well preserved. However, a lack of education regarding rescue medications and breakthrough seizure management was noted. We suggest adopting the PedQL questionnaire as a standardized tool for assessing patients' quality of life at least annually. We also encourage implementing a well-structured epilepsy action plan for our patients.

P23-108. Gastrointestinal Basidiobolomycosis: Misdiagnosed and Often Missed, Rare Fungal Infection in Immunocompetent Hosts

Abla K. A. Alagha[1], Aqeel Saleem[1], Asad Khan[1], Noura Al-Nuaimi[1], Naama Al-Maazami[1], Emmanuel Nsutebu[2]
[1]*Tawam Hospital, Al Ain, and*
[2]*Sheikh Shakhbout Medical City, Abu Dhabi, United Arab Emirates*

Background: Basidiobolus ranarum is a widespread saprophyte fungus with pathogenic potential. It affects mainly the subcutaneous tissues of the trunk and limbs. Relatively recently, occasional reports of gastrointestinal basidiobolomycosis appeared in the literature. Due to the rarity of the

condition and the nonspecific presenting features, the correct diagnosis is usually hard to reach.

Case description: A 25-year-old male camel farmer, previously healthy, presented with two months of abdominal pain, distention, weight loss of 30% TBW, with fever, N&V, he drinks unpasteurized milk and eats raw cattle meat. History of incidental bleach ingestion two months prior to this illness. Laboratory workup revealed blood Leukocytosis with Neutrophilia, eosinophilia along with moderate microcytic hypochromic anemia, thrombocytosis, inflammatory markers—elevated CRP & ESR >100, elevated serum IgE, CT scan of the abdomen showed large infiltrative mass lesion involving the lower gastric, pylorus and upper duodenal portion causing gastric outlet obstruction with diffuse peritoneal infiltrates & mesenteric lymphadenopathy, pelvic free fluid, pancreas, and colon edema. He underwent EGD, which showed duodenum abnormality, followed by a laparoscopic biopsy of the peritoneal mass. Histopathology report showed noncaseating granulomatous inflammation with eosinophils pointed toward invasive parasitic infection\granulomatous immune or neoplastic disease, extensive autoimmune disease, and malignancy workup was negative. However, further biopsies of the liver showed granular eosinophilic material surrounding some empty rounded or elongated spaces, imparting Splendore–Hoeppli phenomenon, positive PAS and GMS stains with wide, swollen and highly irregular structures appearing sparsely septate that resemble fungal organisms. This clinical picture suggests a rare emerging fungal infection reported mainly in warm climate regions known as basidiobolomycosis caused by *Basidiobolus ranarum*. GI basidiobolomycosis is mainly reported in immunocompetent children with male predominance. It affects the stomach, small intestine, colon, and liver, causing masses with poor quality of life if left untreated. Patients can be misdiagnosed as Crohn's disease, tuberculosis, or cancer. Diagnosis can be established by characteristic Splendore–Hoeppli bodies and eosinophil granular material surrounding fungal elements. Unfortunately, the organism was not isolated through special fungal cultures. Other work for TB, parasites, HIV, malignancies, and other risk factors for immunocompromised status were negative. The patient was managed as a case of GI basidiobolomycosis (GIB) and started on Itraconazole, then changed to IV Voriconazole as the parenteral route for surgical complications, intestinal obstructions with Adhesions with the need for laparotomy, adhesiolysis, and jejunostomy tube insertion necessitating TPN followed by Enteral feed, After 12weeks parenteral therapy & prolonged hospital stay complicated by multiple nosocomial infections managed with courses of antibiotics, he was successfully discharged on Itraconazole 200 mg PO q24hr with marked clinical improvement of symptoms and weight. Itraconazole therapy will continue until the radiologic/serologic tests demonstrate complete eradication of the infection.

Conclusion: This paper describes the clinical course of an otherwise healthy male who presented with a complicated course of gastrointestinal basidiobolomycosis.

P23-109. Rare Fungal Infection in a Patient with Dual Malignancy

Naama Al Maazmi[1], Asad Khan[1], Aqeel Saleem[1]
[1]Department of Infectious Disease, Tawam Hospital, SEHA, Abu Dhabi, United Arab Emirates

Case Presentation: We present a 79-year-old male known to have CLL and prostatic cancer with a background of treated CNS Aspergillosis back in his home country for 6 months. He presented to our hospital with fever, cough, shortness of breath, and chest imaging showing pulmonary nodules. He underwent further investigations for suspected metastatic nodules versus opportunistic infections in an immunocompromised individual. Wedge resection and biopsy for a peripheral nodule revealed foci of nodular necrotic granulomatous inflammation with fragmented fungal hyphae. The fungal organisms showed septation with acute angle branching, suggestive of Aspergillosis. It was later identified as *Aspergillus thermomutatus*, previously *Neosartorya pseudofischeri.* The patient received prolonged courses of different antifungals during the hospital stay, starting with Liposomal Amphotericin intravenous injection daily with close observation of renal function and electrolytes. Repeat CT chest after five weeks of shown progression in the pulmonary nodules and cavity in the left upper lobe. Because of the worsening radiological features and further discussion with our clinical microbiology team, antifungal therapy was changed to Caspofungin and Isavuconazole. Despite the change in medications, a repeat CT chest one month later showed a stationary course of the disease. At that stage, Isavuconazole was continued, Ambisome was restarted, and Caspofungin was stopped. As the patient was improving clinically, The case was re-discussed with the radiology team, comparing the latest CT chest with a PET CT done earlier, and the conclusion was that in comparison to the PET CT, the size and number of nodules had regressed compared with the last CT Chest. Ambisome was discontinued, and the patient was continued on Isavuconazole as an outpatient. Cr 62 micromol/L; WBC: 8.6×10^9/L; Hb: 105 g/L; platelets: 333×10^9/L; C-reactive protein: 143.8 mg/L; bronchoalveolar lavage wash: fluid is colorless, RBC: 4 cells/mm^3, WBC: 322; Asp Galactomannan Ag is positive; AFB smear and culture from BAL: Mycobacterium tuberculosis was not isolated; Sputum culture: *Haemophilus parainfluenzae.*; bronchoalveolar lavage culture: *Klebsiella oxytoca;* Aspergillus sp. for ID.: *Aspergillus thermomutatus* (*Neosartorya pseudofischeri*) 99.9% Identified by Vitek-MS. The patient improved clinically during hospital admission and was discharged to continue oral antifungal therapy with follow-up in the Infectious disease clinic.

Conclusion: Not many cases of *N. pseudofischeri* have been reported as a cause of invasive fungal infections; however, it has been recovered from sputum samples of patients with underlying cystic fibrosis. Overall, the organism is complex to identify and resistant to multiple antifungal agents, making it hard to treat.

P23-111. Immunotherapy Transforming Outcomes for Renal Cell Carcinoma: Real-World Treatment Patterns and Survival Outcomes in the United Arab Emirates

Mawada Hussein[1], Jawaher Ansari[1], Selvaraj Giridharan[1], Sidrah Shafi[1], Safia Ali Alnaqbi[1], Pawan Kumar[1], Huzaifa Ibrahim[1], Muhammad Asghar[1], Aftab Bhatti[1], Lina Wahba[1], Syed Mansoor Hasnain[1], Emad Dawoud[1], Diaeddine Trad[1], Nouri Bennini, Khalid Balaraj[1]
[1]Tawam Hospital, Al Ain, United Arab Emirates

Background: Renal cell carcinoma (RCC) comprises approximately 2% of all malignancies, and a notable proportion of patients (20–30%) present with metastatic disease at diagnosis. Current clinical guidelines strongly recommend immunotherapy-based combination therapies as first-line treatment for advanced RCC based on survival improvement demonstrated in multiple phase III clinical trials. This study aims to assess the treatment patterns and survival outcomes for metastatic renal cell carcinoma patients, providing valuable insights into the real-world effectiveness of these combination therapies in the UAE.

Methods: In this retrospective study, we analyzed data obtained from electronic medical records for all patients diagnosed with RCC at Tawam Hospital between 2018 and 2023. Descriptive analyses were performed for treatment patterns, patient characteristics, International Metastatic Database Consortium (IMDC) risk factors, objective response rate, and treatment-related adverse events. Progression-free survival (PFS) and overall survival (OS) were determined using Kaplan–Meier survival analysis.

Results: This study included 274 patients with renal cell carcinoma (RCC), a male-to-female ratio of 2:1, with 193 male and 81 female patients. Clear cell carcinoma was the most prevalent histological subtype, accounting for 74% of cases ($n = 181$), followed by other carcinoma variants such as chromophobe (10%), papillary (8%), and others. Nephrectomy was performed in 82% of the patients ($n = 225$). At the time of diagnosis, 35% were diagnosed with de novo metastatic disease ($n = 96$). In terms of first-line treatment, a total of 31 metastatic RCC patients received immunotherapy-based combination therapies. Based on the IMDC risk criteria, there were no favorable risk patients. 52% and 45% were classified as IMDC intermediate and poor-risk, respectively. For patients with metastatic RCC treated with immunotherapy-based combination therapies, the 12-month PFS was 64%, and the 12-month OS was 80%.

Conclusion: This is the first study in the UAE to assess the outcomes of metastatic RCC patients, particularly assessing the role of immunotherapy-based combinations. Patient characteristics and treatment patterns appear to follow international clinical guidelines. Despite some variations in risk factors and treatment sequencing, our study's 12-month PFS and OS seem comparable to outcomes from phase III clinical trials and other published international real-world studies. Further subgroup analysis is underway to identify disease characteristics linked to outcomes.

P23-112. Flu Tracking: Determination of Circulating Influenza Viruses through the Sentinel Surveillance System in the United Arab Emirates: 2017–2022

Tarteel Hassan[1], Fatima Mubarak[1], Maitha Al Mansoori[1], Balqees Al Hayyas[1], Mohammed Noshi[1], Amira Mohammed[1], Kristine Laurente[1], Sajeed Abdul Majeed[1], Ameera Al Shehhi[1], Khulood Alblooshi[1], Sahar Al Marzooqi[1], Ayesha Al Ketbi[1], Francis Amirtharaj[1]

[1]*Reference Laboratory of Infectious Disease, Abu Dhabi, United Arab Emirates*

Background: The United Arab Emirates (UAE) has a vital health care and surveillance system. An influenza surveillance program is another example. Reference Laboratory of Infectious Disease, Abu Dhabi (RLID-AD), part of the Abu Dhabi Public Health Center (ADPHC), serves as the National Influenza Center (NIC), which was established in 2017 by the Ministries of Health and Prevention (MOHAP) and WHO to monitor the influenza illness in the community through Influenza sentinel surveillance system. Influenza Sentinel Surveillance is a backbone for the Global Influenza Surveillance and Response System (GISRS) coordinated by the WHO Global Influenza Program (GIP). NIC collects virus specimens, performs preliminary analysis, and shares representative clinical samples with WHO collaborating centers (CC) for advanced antigenic and genetic analysis.

Methods: Through a sentinel surveillance system, respiratory samples (nasopharyngeal or nasal or throat swabs) are collected from designated sentinel sites across UAE throughout the year for patients meeting the case definition of Influenza illness (ILI), acute respiratory infection (ARI) and severe acute respiratory infection (SARI). Influenza viruses were detected using Real-time PCR, further differentiated between influenza A and B, and subtyped, followed by genotypic determination and lineage identification by sequencing all positive Influenza samples. Moreover, besides Influenza detection, all ILI/ARI samples are tested for SARS-CoV-2 and Respiratory syncytial virus (RSV), and all SARI samples tested for Middle East respiratory syndrome virus (MERS-Cov) and other respiratory pathogens in addition to the above mentioned.

Results: Influenza season commences in October, continues through March in UAE, and can affect all age groups. 504, 3,648, 4,140, 1,834, 1,727, and 7,245 respiratory samples were tested for influenza viruses during 2017, 2018, 2019, 2020, 2021, and 2022, respectively. COVID-19 impacted influenza surveillance globally, and fewer samples were received and tested for 2020 and 2021. Influenza A during 2022 was detected in (15%) of cases and (4%) for influenza B. Typing of influenza viruses revealed that H3N2 was predominantly circulating, followed by H1N1—all Influenza B positive samples belonging to Victoria type with a complete absence of Yamagata type.

Conclusion: Surveillance and controlling influenza viruses remain a global public health challenge; the NIC UAE Influenza sentinel surveillance system reflects the epidemiological status of seasonal influenza viruses circulating in the UAE. Detection of influenza viruses throughout the year significantly impacts responding to the novel influenza types if they emerge.

Acknowledgments:

The Guest Editors are very grateful to members of the evaluation and awards committee: Dr. Abdulla Hamad Al Kuwaiti, Dr. Ahmad Mohammed Chaaban, Dr. Asma Mohammed Al Neyadi, Dr. Aydah Mohammed Alawadhi, Dr. Fatima Rashid Al Kendi, Dr. Fayez Ebrahim Al Shamsi, Dr. Khaled Mohammed Al Dahmani, Dr. Raya Abdulla Al Mazrouei, Mr. Khaled Qawasmeh, Mr. Salman Ahmed, and Ms. Shamsa Saif Al Ghafli.

Authors Contributions

The Guest Editors all participated in screening, reviewing and accepting these abstracts and preparing them for publications.

Conflict of Interest

None of the authors (Guest Editors) declared any conflict of interest.

Funding

None received specifically for this report.

Compliance to Ethical Principles

The abstracts that involves human subjects were considered on the understanding that all necessary ethical approvals were secured for the research work and that informed consents when necessary were obtained.

