inovine
Scientific Meetings

6th International Conference on

Cardiology & Cardiovascular Diseases

06-08 APRIL 2026

Rome, Italy

Venue: Hotel Occidental Aurelia
Via di Torre Rossa 80, Roma, Italia 00165 Roma, Italia

Scientific Program

Day 1

Scientific Program

April 06, 2026 | Rome, Italy

09:00–09:15: Registrations

09:15–09:30: Opening Ceremony

Meeting Hall: URANO

Keynote Presentations

09:30 – 10:10

Title: End-Stage Renal Disease and Metabolic Syndrome: Therapeutic Strategies with Semaglutide
Tatiana Markova
Moscow Clinical Research Center Hospital, Russian Federation

10:10 –10:50

Title: Research Center with Technological Innovation and Integration into the Healthcare System
Javier Zaidman
CIPREC, Argentina

Session Introduction

Session Chair: Javier Zaidman, CIPREC, Argentina

Session Co-Chair: Tatiana Markova, Moscow Clinical Research Center, Russian Federation

Tracks

Current Research on Cardiology - Future Medicine | Interventional Cardiology and Heart Surgery | Heart Failure and Cardiomyopathies | Heart Transplantation and Regenerative Medicine | Molecular Cardiology |Cardiac Imaging and Diagnostics | Cardiology Case Reports | Heart Failure and Cardiomyopathies | Translational Endocrinology | Clinical Endocrinology | Neuropathy & Nephropathy | AI in Diabetes Care | Personalized Diabetes Care | Endocrine Immunology | Endocrine Immunology | Health Equity | Diabetes & Heart Health | Diabetic Retinopathy

Group Photo | Coffee Break 10:50-11:10 @Foyer

11:10–11:50	**Title: Involving midwives in educating primary school students about reproductive health using teaching aids** **Kamila BITALOVA** Jan Evangelista Purkyne University, Czech Republic

Oral Presentations

11:50–12:15	**Title: Tricuspid Valve Endocarditis due to Candida Albicans in an HIV-Positive Child** **Zineb Amine** University Hospital IBN Rochd, Morocco
12:15–12:40	**Title: Effects of testosterone and dihydrotestosterone on atherogenesis in hyperglycemic mice** **Geoff Werstuck** McMaster University, Canada
12:40–13:05	**Title: Distal Radial Access for Coronary Angiography and Percutaneous Coronary Intervention: A state-Of-The-Art Review** **Thierry Corcos** Clinique Alleray-Labrouste, France

Lunch Break 13:05-14:00 @Foyer

14:00–14:25	**Title: The Impact Of Anxiety On The Early Effiacacy And Tolerability Of Semaglutide In Patiens With Obesity In The Context Of Psychiatric Support** **Luiza Subbotina** Moscow Clinical Scientific and Research Center, Russian Federation
14:25–14:50	**Title: Investigating the co-regulation between matrix metalloproteinases and heparanase and the impact on endothelial glycocalyx shedding** **Maman Naeem** University of Bristol, United Kingdom
14:50–15:15	**Title: Metabolic–Endocrine Dysregulation Enhances Neuroinflammation and Pain Vulnerability in Experimental PCOS** **Chengchun Wu** School of Medicine, I-Shou University, Taiwan

Refreshment | Coffee Break 15:15-15:30 @Foyer

Poster Presentation	
15:30–15:50	**Title: Afghan Midwifery Skills Development: A Nationwide Project to Strengthen Supervision and Reduce Isolation** **Matthew Rodieck** Afghan Amputees for Bicycle Rehabilitation And Recreation, Afghanistan
15:50–16:10	**Title: Afghan Midwifery in Remote Areas: A Pilot Project of Asynchronous Telemedicine in Rural Bamyan Province** **Matthew Rodieck** Afghan Amputees for Bicycle Rehabilitation And Recreation, Afghanistan

Panel Discussion & Certificate Falicitation

Day –1 Ends

Day 2

Scientific Program

April 07, 2026 | Virtual

Virtual Mode Zoom Meeting
(GMT+1) Time in Rome, Italy

Oral Presentations

09:00–09:20	**Title: Translational Endocrinology of Integrative Lifestyle Therapy: Modulation of Hepatic and Glycemic Biomarkers in Women with Metabolic Dysfunction–Associated Steatotic Liver Disease-Evidence from a Pilot Randomized Controlled Trial** **Selva Sundari S** Vels Institute of Science, Technology & Advanced Studies, India
09:20–09:40	**Title: Nurses and Healthcare Professionals' Competencies and Readiness for Delivering Digital Diabetes Services in Saudi Arabia: A Systematic Review** **Kawther Alabed** King Fahad Military Medical Complex Hospital, Saudi Arabia
09:40–10:00	**Title: Audit by Dr Rania Alnounou, 2017 (Incretin drugs for diabetes management)** **Rania Alnounou** Tamara poly clinic, UAE
10:00–10:20	**Title: Future Directions in Heart Transplantation: Innovation, Integration, and Possibility** **Jonathan Alvin Wiryaputra** National Cardiovascular Center Harapan Kita Hospital, Indonesia
10:20–10:40	**Title: The Crisp (Crushed In-Situ Stent Plug) Technique: A Novel Strategy To Prevent Distal Embolization Of Coils Following Therapeutic Graft Closure Following Successful Native Vessel Coronary Intervention** **Adam Iqbal** Royal Jubilee Hospital, Canada
10:40–11:00	**Title: Evaluating The Impact of HF (Heart Failure) Therapy in Patients With AF (Atrial Fibrillation)/A.Flutter(Atrial Flutter) and LV Dysfunction, Undergoing ECV (Electrical Cardioversion)** **Mohamed Shkeban** East Suffolk and North Essex NHS Foundation Trust, Cardiology, Colchester, UK
11:00–11:20	**Title: The Intrinsic Coagulation Pathway Drives Smoke-Prticle Mediated Thrombosis** **Anna N. Iqbal** Royal Jubilee Hospital, Canada
11:20–11:40	**Title: Better Health = Better Employees** **Suizan Schacherer** Square Peg Marketing, USA

11:40–12:00	**Title: A Rare Case of An Endocrinology Emergency, Extreme Thyroid: Myxedema Coma** **Catalina Victoria Kenney** Corewell, USA
12:00–12:20	**Title: Beyond the Expected: A Rare Case of Marked Testosterone Elevation of Finasteride** **Hajra Asif** Scarborough General Hopital, United Kingdom
12:20–12:40	**Title: A Dangerous Synergy: Euglycemic DKA with Combined SGLT2 Inhibitor and Tirzepatide Therapy** **Thinn Nwe Soe** York and Scarborough Teaching Hospital NHS Foundation Trust, United Kingdom
12:40–13:00	**Title: Extracorporeal Membrane Oxygenation (ECMO): A Life saving Procedures for Patients with Severe Heart Failure and/or Respiratory Distress Syndrome** **Marco Piciche** San Bortolo Hospital, Italy
13:00–13:20	**Title: Diabetes and COVID-19: A comprehensive review of current evidence** **Alireza Arefzadeh** Tehran Medical Sciences Islamic Azad University, Iran
13:20–13:40	**Title: The Correlation Between Triglyceride-Glucose Index And Mortality In Patients With Acute Decompensated Heart Failure: A Retrospective Cross-Sectional Study** **Allyssa Clariz Pialago Abillar** Silliman University Medical Center, Philippines
13:40–14:00	**Title: Artificial Intelligence (AI) Based Clinical Decision Support System (CDSS) for Acute Emergency Care of STEMI Patients Based on Standardized Management Protocol** **Ben Anania Tweve** Parul University, India
14:00–14:20	**Title: Observations from Clinics, Institutions and Cardio-Oncology Services. Obelisco ii extension** **Natalia Zareba** Working group of the Cardio-Oncology Council of the Argentine Society of Cardiology, Argentina
14:20–14:40	**Title: The Impact of a Community-Based Intervention on The Knowledge, Attitudes, and Practices of The Lebanese Community Towards Cardiovascular Diseases, and Its Risk Factors: A Matched Case-Control Prospective Study** **Mirna N Chahine** University of Balamand - Dekwaneh Campus, Lebanon
14:40–15:00	**Title: Accuracy of Angiography-Derived Fractional Flow Reserve for the Analysis of Complex Coronary Lesions: Head-to-Head Comparison with Pressure-Derived Physiological Assessment** **Romina Teliti** Aurelia Hospital Italy, Albania

Panel Discussion

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DAY 1

KEYNOTE PRESENTATIONS

HYBRID EVENT

Tatiana Markova
Moscow Clinical Research Center Hospital, Russian Federation

End-Stage Renal Disease and Metabolic Syndrome: Therapeutic Strategies with Semaglutide

Background: End-stage renal disease (ESRD) induces metabolic disturbances, including carbohydrate metabolism disorders (CMD). Obesity complicates dialysis and hinders kidney transplantation. This study assesses CMD prevalence in advanced CKD and evaluates semaglutide's (Promomed, Velgiia, Russia) efficacy and safety in obese hemodialysis patients.

Methods: Enrolled 90 non-diabetic advanced CKD patients (60 dialysis, 30 non-dialysis CKD 3-5). CMD was assessed by HbA1c, fasting (FPG) and postprandial glucose (PPG). A pilot semaglutide intervention (0.25 mg weekly, titrated) was conducted in 8 obese hemodialysis patients, monitoring electrolytes and adverse events monthly.

Results: CMD was detected in 32.2% (n=29): newly diagnosed diabetes (2.2%), impaired fasting glucose (17.8%), impaired glucose tolerance (8.9%). Prevalence was higher in dialysis vs non-dialysis (33.3% vs 30.0%, p=0.025) and in peritoneal dialysis vs hemodialysis (46.7% vs 20%, p=0.028). FPG and PPG diagnosed more CMD than HbA1c alone (31.3% vs 10%, p<0.001). Overweight and obesity affected 45.9%. In the semaglutide pilot, 25% discontinued due to gastrointestinal intolerance; six completers achieved significant weight loss (median 7.67 kg over 3 months) with stable electrolytes. One patient became transplant-eligible after losing 6 kg and underwent successful kidney transplantation.

Conclusion: CMD affects one-third of non-diabetic advanced CKD patients, with highest burden in peritoneal dialysis. FPG and PPG are superior to HbA1c for diagnosis. Semaglutide demonstrated efficacy and safety for weight loss in obese hemodialysis patients, potentially facilitating transplantation access. Larger trials are warranted.

Keywords: Hemodialysis, Obesity, Semaglutide, Kidney Transplantation, GLP-1 receptor agonist.

Biography:

Prof. Tatiana N. Markova, MD, PhD, DSc, is an Endocrinologist of the Highest Qualification Category and holds “Moscow Doctor” status. Graduating from Chuvash State University (1994), she completed her PhD (1996) and DSc (2015). She was Chief Physician of the Republican Endocrinological Dispensary and Chief Endocrinologist of the Chuvash Republic Ministry of Health (2008–2013). Since 2013, she has worked at Hospital 52, Moscow, and is currently Professor at the Endocrinology Department, Moscow State University of Medicine and Dentistry (MSUMD). As Principal Investigator of the Research Center at Hospital 52 for international trials, she has authored over 150 scientific works and holds one patent. She received the Honorary Certificate of the Ministry of Health of the Russian Federation.

Javier Zaidman
CIPREC, Argentina

Research Center with Technological Innovation and Integration into the Healthcare System

Background: Clinical research not only drives therapeutic innovation but can also strengthen healthcare systems and enhance patient experience. This study integrates two key aspects: patient satisfaction in clinical trials and the impact of digitalization on research protocol management.

Objectives:

1. To assess patient satisfaction and perceptions regarding their participation in clinical trials.
2. To analyze the impact of digitalization on efficiency and protocol management in a clinical research center.

Methods: A satisfaction survey was conducted among 2,140 patients (aged 32–83, 2023–2024), comparing experiences in routine clinical care versus trial participation. Five dimensions were evaluated: satisfaction, expectations, motivation, organization, and perceived benefit. Simultaneously, management metrics were compared before and after digitalization (Period A: 2020–2022, paper-based; Period B: 2022–2024, Brainmart MED CT). Variables: monthly visits, data entry time, monthly queries, and response times.

Results: Trial participants reported higher satisfaction (3.8 vs 2.8), better expectations (3.2 vs 2.6), greater motivation (3.2 vs 2.4), and better organization (3.9 vs 1.9) compared to routine care ($p<0.001$).

Digitalization doubled monthly visits (193 $\rightarrow$ 445), reduced data entry time (7 $\rightarrow$ 1 day), decreased queries (93 $\rightarrow$ 39), and shortened response times (7 $\rightarrow$ 2 days).

Conclusions: Clinical trials improve perceived quality of care and provide additional patient benefits. Digital protocol management increases efficiency, optimizes processes, and ensures higher data quality. CIPREC stands as a replicable model of a modern clinical research center, integrating scientific innovation, public health, and patient-centered outcomes.

Biography:

Dr. Cesar Javier Zaidman is a cardiologist, graduated from UBA in 1987. He completed his specialization in cardiology at the Güemes Sanatorium. He worked in the Favaloro Foundation from 1990 to 2011. Since 2002, he has been involved in Clinical Research Protocols and has been the principal investigator in more than 100 clinical trials, covering different phases of research. He founded CIPREC in 2005, where he continues his work as President. In 2008 he obtained the certification of International Clinical Researcher (CPI), granted by the ACRP.

Marco Picichè
San Bortolo Hospital, Italy

Extracorporeal Membrane Oxygenation (ECMO): A Life Saving Procedures for Patients with Severe Heart Failure and/or Respiratory Distress Syndrome

Extracorporeal membrane oxygenation (ECMO) has emerged as a life-saving therapy for patients with severe cardiac and/or respiratory failure refractory to conventional management. By providing temporary circulatory and respiratory support, ECMO allows end-organ recovery and serves as a bridge to definitive therapies, including heart or lung transplantation. Indications for ECMO include severe acute respiratory distress syndrome (ARDS), cardiogenic shock, post-cardiotomy failure, and refractory cardiac arrest. Advances in circuit design, anticoagulation strategies, and patient selection have significantly improved survival rates and reduced complication risks. Veno-venous (VV) ECMO is primarily used for respiratory support, whereas veno-arterial (VA) ECMO provides both cardiac and respiratory support. Optimal timing of initiation, meticulous monitoring, and a multidisciplinary approach are critical for favorable outcomes. However, despite technological improvements, ECMO remains resource-intensive and is associated with complications such as bleeding, thrombosis, and infection. Recent observational studies and registry data demonstrate that early referral to ECMO centers, standardized protocols, and experienced teams are key determinants of success. This abstract summarizes current indications, modalities, challenges, and outcomes of ECMO, highlighting its role as a pivotal tool in the management of critically ill patients and emphasizing the importance of institutional expertise in achieving optimal results.

Biography:

Marco Picichè (MD, Ph.D.) graduated with a degree in medicine from the University of Florence in 1995 and completed his cardiac surgery residency at the Tor Vergata University of Rome in 2000, both summa cum laude. He has worked as an assistant at Saint Luc Hospital, Catholic University of Louvain, Brussels (1999–2001), as a clinic head/hospital assistant at the universities of Clermont-Ferrand (2003–2004) and Montpellier (2004–2007). He held regular teaching appointments at the university of Montpellier school of medicine, obtained certification by the French Board in cardiac surgery (Paris, 2007), earned his research master in surgical science (Paris, 2007). In Canada he authored a research project on "Noncoronary collateral circulation," at Québec Heart & Lung Institute, Laval University. In September 2011 he received a doctor of philosophy (Ph.D.) in therapeutic innovations from Paris-Sud University. He is the Editor-in-Chief of the book *Dawn and Evolution of Cardiac Procedures: Research Avenues in Cardiac Surgery and Interventional Cardiology* (Springer-Verlag), a volume which, to date, has reached 56,000 chapter downloads.

Based at Vicenza Hospital as a consultant cardiac surgeon, he also held a one-year position as a locum consultant in Denmark. He then worked on a three-month humanitarian mission as a cardiac surgeon in Rwanda, and he is currently on mission in Iraq, in collaboration with GSD, in Basra.

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DAY 1

SPEAKER PRESENTATIONS

HYBRID EVENT

Zineb Amine*, M .Bouziane; M. Haboub; S.Arous; G El Bennouna; A Drighil
University Hospital IBN Rochd, Morocco

Tricuspid Valve Endocarditis Due to Candida Albicans in an Hiv Positive Child

Fungal endocarditis is an uncommon but life-threatening condition in pediatric patients, particularly among those with immunodeficiency. We report the case of a 7-year-old girl living with Human Immunodeficiency Virus (HIV) for five years and previously treated for stage II Hodgkin lymphoma. She was admitted with persistent fever up to 40°C, fatigue, and pallor. Her medical history included chronic immunosuppression and chemotherapy stopped three months earlier.

Transthoracic echocardiography revealed a mobile echogenic and vibratory vegetation measuring 7 × 15 mm on the atrial side of the lateral tricuspid leaflet, with preserved biventricular function and no pulmonary hypertension. Blood cultures grew Candida albicans, confirming the diagnosis of fungal endocarditis. Laboratory evaluation showed normocytic anemia and elevated inflammatory markers. She was transfused and treated with intravenous imipenem and vancomycin combined with antifungal therapy, leading to clinical improvement and normalization of inflammatory parameters.

Given the patient's underlying HIV infection, recent lymphoma, and fragile general condition, surgical intervention was discussed in a multidisciplinary Heart Team meeting. Considering the high operative risk, conservative medical management with close clinical and echocardiographic follow-up was chosen.

This case emphasizes the rarity and severity of Candida endocarditis in immunocompromised children. Fungal infection should be suspected in HIV-positive patients presenting with unexplained fever and cardiac vegetations. Early echocardiographic assessment, prompt microbiological diagnosis, and multidisciplinary management are crucial for improving outcomes. Conservative treatment may be justified in high-risk patients when surgery is not feasible.

Keywords: Fungal endocarditis; Candida albicans; HIV; Child; Tricuspid valve.

Biography:

Dr. Zineb Amine is a cardiology resident at the University Hospital of Casablanca, Morocco. Her main research interests include infective endocarditis, heart failure, and cardio-oncology. She has contributed to several clinical studies on rare cardiovascular manifestations in immunocompromised patients. Dr. Amine is particularly focused on the role of multimodality imaging in the early detection and management of complex cardiac infections. She aims to promote evidence-based approaches to improve patient outcomes and strengthen the integration of advanced cardiovascular imaging in daily clinical practice, particularly within resource-limited healthcare settings.

Geoff H Werstuck
McMaster University, Canada

Effects of testosterone and dihydrotestosterone on atherogenesis in hyperglycemic mice

Aim: The effects of testosterone on cardiovascular disease are of interest because of the increased risk of CVD in men. We have previously shown that depletion of testosterone by castration in ApoE-/- mice promotes atherogenesis. Interestingly, we found that testosterone's cardioprotective effect was lost in hyperglycemic (ApoE-/-Ins2+/Akita) mice. In this study we examine the effects of testosterone depletion and supplementation on the development of atherosclerosis in normoglycemic and hyperglycemic mice and investigate the possible underlying mechanisms by which testosterone is modulating pathogenesis. Methods: Standard chow fed male ApoE-/- and ApoE-/-Ins2+/Akita mice were castrated or subject to sham operations at 5 weeks of age. At 8 and 16 weeks of age, subsets of these mice (n=8/experimental group) were subcutaneously implanted with a silastic tube containing 40µL dihydrotestosterone (DHT, 25mg/mL) or sesame oil (vehicle control). All mice were sacrificed at 24 weeks of age and blood, hearts, and aortas were collected for analysis. Metabolic parameters were assessed, and atherosclerotic lesion volumes were determined at the aortic sinus and in en face whole aorta mounts. In a separate experiment, similar groups of mice were fed a high fat diet (21% fat, 0.2% cholesterol, 42% of calories from fat) and survival was monitored for up to 25 weeks of age.

Results: Castration (testosterone depletion) promotes atherosclerosis in normoglycemic mice at the aortic sinus (3.0 fold, Pattenuates atherosclerosis in en face aortas in hyperglycemic mice (1.5 fold, $P<0.5$). Supplementation with exogenous DHT promotes atherosclerosis in hyperglycemic mice and is associated with significant cardiac-related mortality in 21-24 week old high fat diet fed hyperglycemic mice.

Conclusions: While testosterone/DHT may be cardioprotective in conditions of normoglycemia, it appears to have significant detrimental effects, including increased atherosclerosis and myocardial infarction, in hyperglycemic conditions in this mouse model. (299/300 words)

Key Words: Diabetes, Atherosclerosis, Hyperglycemia, Testosterone, Dihydrotestosterone

Biography:

Geoff Werstuck is a Professor in the Department of Medicine (with a cross appointment to Biochemistry and Biomedical Sciences) at the Thrombosis and Atherosclerosis Research Institute, McMaster University, Hamilton, Ontario, Canada. His research is focused upon understanding the molecular and cellular mechanisms by which diabetes promotes the accelerated development and progression of atherosclerosis. His research is funded by the CIHR, the Heart and Stroke Foundation, and Diabetes Canada and he is supported by an HSFC Ontario Mid-Career Investigator Award and the ISTH-McMaster Chair in Thrombosis and Haemostasis Research.

Thierry Corcos
Clinique Alleray-Labrouste, France

Distal Radial Access for Coronary Angiography and Percutaneous Coronary Intervention: A State-Of-The-Art Review

Since its introduction by Lucien Campeau three decades ago, percutaneous radial artery approach at the forearm has been shown to provide advantages over the femoral approach and has become the standard approach for coronary angiography and intervention. Though infrequent, vascular complications still remain, mainly radial artery occlusion. Therefore, a more distal radial approach at the snuffbox or at the dorsum of hand has been suggested, initially by anethesiologists for perioperative patient monitoring, and more recently by Babunashvili et al. for retrograde radial artery recanalization of radial artery occlusion and then for coronary angiography and intervention. This distal radial approach has been advocated to reduce the risk of radial artery occlusion at the forearm (which precludes reintervention through the same access site) and bleeding and vascular access site complications, as well as to improve operator and patient comfort, especially when using left radial approach. This review describes in detail the anatomy of the radial artery at the wrist and the hand, the history of distal radial access, the rationale underlying use of this technique, the results published by experienced operators, the technique, the limitations, and potential role of this approach. This journey from the very proximal to the very distal part of the radial artery was indeed initiated and conceptualized by Lucien Campeau himself.

Luiza Subbotina
Moscow Clinical Scientific and Research Center, Russian Federation

The Impact Of Anxiety On The Early Effiacacy And Tolerability Of Semaglutide In Patiens With Obesity In The Context Of Psychiatric Support

Objective: To conduct a comparative analysis of the early efficacy of semaglutide therapy in reducing body mass index (BMI) and waist circumference (WC) in patients with obesity, depending on the presence of anxiety, within the context of complex treatment involving a psychiatrist.

Materials and Methods: A prospective study was conducted, including 37 patients without carbohydrate metabolism disorders undergoing treatment at an Obesity Treatment Center (11 men – 29.7% and 26 women – 70.3%). The median age was 46 years [35; 53], BMI – 40.1 kg/m² [34.6; 44.8], WC – 122 cm [116; 134]. All patients were initiated on semaglutide therapy with standard dose titration (weekly increase from 0.25 to 1.0 mg) alongside standard recommendations on diet and physical activity. The Hospital Anxiety and Depression Scale (HADS) were used to verify the presence of anxiety. Based on the scale scores, patients were divided into 2 groups: with anxiety (n=19) and without anxiety (n=18). All patients, especially those with identified anxiety, received regular consultations with a psychiatrist as part of complex therapy, aimed at correcting emotional state and improving treatment adherence. The dynamics of anthropometric parameters (BMI, WC) were assessed after 3 months of therapy, and a comparative analysis between the groups was conducted. IBM SPSS Statistics 26.0 was used for statistical data processing.

Results: In the total cohort, a reduction in body weight and BMI was achieved in 35 patients (94.6%). A statistically significant decrease in median BMI from 40.1 kg/m² [34.6;44.7] to 38.2 kg/m² [32.8;41.9] ($p<0.001$) and median WC from 122 cm [116;134] to 116 cm [110;128] ($p<0.001$) was recorded. The median percentage of body weight loss (%BWL) was 5.5% [3.5;8.1]. The patient groups did not differ in baseline age and anthropometric parameters ($p>0.05$).

In the group of patients with anxiety, a significant reduction in BMI from 40.0 [34.85; 43.5] to 38.2 [32.0; 39.6] ($p<0.001$) and WC from 120 [114.5; 129.75] to 116 [109; 122.5] ($p=0.002$) was found. In patients without anxiety, a significant reduction in BMI from 41.54 [34.63; 45.3] to 38.86 [33.65; 42.65] ($p=0.002$) and WC from 129 [117.5; 138.5] to 122 [112; 130] ($p<0.001$) was also recorded.

Comparative analysis between the groups revealed a trend towards a greater percentage of body weight loss in the group with anxiety ($p=0.089$). No statistically significant differences in the frequency of adverse effects between the groups were found ($p>0.05$).

Conclusions: Thus, within the context of complex treatment involving a psychiatrist, three-month semaglutide therapy demonstrated high efficacy and safety in patients with obesity, regardless of the presence of anxiety. Psychiatric support likely contributed to the elimination of differences in therapy tolerability and ensured

high treatment adherence. The identified trend towards greater weight loss in the group of patients with anxiety suggests that a combined approach pharmacotherapy with semaglutide coupled with mental state correction may be a highly effective strategy for this patient category, which requires further investigation in studies with larger samples.

Keywords: Type 2 diabetes mellitus; glucagon-like peptide-1 receptor agonists, semaglutide.

Biography:

I am a dedicated and detail-oriented Endocrinologist with a strong academic background and practical experience in clinical endocrinology. I graduated with honors from the prestigious Pirogov Russian National Research Medical University in 2020, followed by specialized residency training in Endocrinology at the Russian Medical Academy of Continuous Professional Education (RMACPE).

Currently, I work as an Endocrinologist in the Endocrinology Department of the Moscow Clinical Scientific Center (MCSC) at City Clinical Hospital No. 52. In this role, I manage inpatient and outpatient care for a wide range of endocrine disorders. Additionally, I actively participate in the hospital's Obesity Center and am responsible for conducting the patient education school for individuals with Diabetes Mellitus.

Maman Naeem
University of Bristol, United Kingdom

Investigating the co-regulation between matrix metalloproteinases and heparanase and the impact on endothelial glycocalyx shedding

Background: The endothelial glycocalyx (eGLX) is a gel-like coating on vascular endothelial cells, composed of proteoglycans, such as syndecans, with glycosaminoglycan side chains such as heparan sulphate. eGLX regulates microvascular permeability, preventing protein loss from the circulation. The GLX of glomerular endothelial cells (GEnCs) forms the first layer of the glomerular filtration barrier. In diabetes, eGLX degradation leads to proteinuria, a hallmark of nephropathy. Matrix metalloproteinases (MMPs) and heparanase (HPSE) contribute to this by cleaving syndecans and heparan sulphate respectively. We hypothesise that HPSE and MMP are co-regulated in GEnCs under normal and diabetic conditions, and that their interaction contributes to eGLX loss, offering potential therapeutic targets.

Methods: Human GEnCs were treated for 8 hours with HPSE or control media. MMP-2, -9, and -14 mRNA expression levels were measured by qPCR and total MMP-2, active MMP-9, and SDC-4 protein levels were measured by ELISA. HPSE knockdown (KD) and scramble (Scr) control GEnCs were treated with control or diabetic media, and the same parameters were assessed. Separately, MMP-2, -9 and -14 KD and Scr GEnCs were treated with HPSE or control media, and HPSE and MMP mRNA and SDC-4 protein levels were quantified.

Results: HPSE treatment increased MMP-14 mRNA (1.2-fold, $p<0.01$) and active MMP-9 protein levels (2.5 fold, $p<0.05$), while HPSE-KD reduced MMP-2 mRNA and protein levels in both control and diabetic conditions (all $p<0.01$). HPSE treatment increased SDC-4 shedding by 2-fold ($p<0.001$), and this proportional effect persisted despite MMP-2,-9 or -14 KD, suggesting partial MMP independence. HPSE mRNA levels increased with MMP-2 KD (1.4-fold, $p<0.0001$) and MMP-14 KD (1.2 fold, $p<0.05$), indicating reciprocal regulation.

Conclusion: HPSE modulates MMP expression and promotes SDC-4 shedding in GEnCs, contributing to eGLX degradation. These findings reveal a complex regulatory network and targeting this may protect the eGLX and preserve glomerular function in diabetes.

Biography:

Maman Naeem is a fourth-year medical student at the University of Bristol who just completed her intercalation in MRes Health Sciences, where she did an 8-month lab-based research project with the Bristol Renal endothelial group, investigating the pathophysiology of diabetic kidney disease through focusing on the mechanisms of glycocalyx damage. Having family members affected by this chronic condition, Maman is determined to continue research in diabetes in the hopes of improving our understanding of this disease and to develop strategies to improve patient outcomes.

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DAY 1

POSTER PRESENTATIONS

HYBRID EVENT

Chengchun Wu
School of Medicne, I-Shou University, Taiwan

Metabolic-Endocrine Dysregulation Enhances Neuroinflammation and Pain Vulnerability in Experimental PCOS

Polycystic ovary syndrome (PCOS) is the most common endocrine disorder in reproductive-aged women and is characterized by hyperandrogenism, metabolic dysregulation, and chronic low-grade inflammation. Beyond reproductive dysfunction, women with PCOS frequently report heightened pain sensitivity and increased prevalence of mood disturbances, yet the mechanistic link between endocrine imbalance and altered nociception remains unclear.

In this study, we examined whether endocrine–metabolic disruption in PCOS enhances susceptibility to neuropathic pain and depressive-like behaviors. A letrozole-induced rat model was used to recapitulate hyperandrogenic features of PCOS, followed by spinal nerve ligation (SNL) to induce chronic neuropathic pain. Behavioral analyses demonstrated that PCOS rats exhibited exacerbated mechanical allodynia, increased immobility in forced swimming and tail suspension tests, and reduced exploratory activity in the open-field test compared with controls.

Systemic inflammatory profiling revealed significantly elevated circulating TNF-α and IL-6 levels in PCOS animals. Immunofluorescence further showed increased macrophage infiltration in adipose tissue and enhanced polarization toward a pro-inflammatory M1 phenotype, indicating endocrine-driven immune activation.

These findings suggest that endocrine dysregulation in PCOS amplifies systemic inflammation and promotes neuroimmune sensitization, thereby increasing vulnerability to neuropathic pain and depressive-like phenotypes. Our results highlight endocrine–immune crosstalk as a critical mechanistic axis linking reproductive endocrine imbalance to chronic pain and affective disturbances.

Biography:

Dr. Cheng-Chun Wu is a faculty member in the School of Medicine at I-Shou University, Taiwan. His research focuses on molecular neuroscience, translational medicine, and multi-omics approaches to neurological and metabolic disorders. Dr. Wu has extensive experience in RNA sequencing, cell-free DNA analysis, and experimental model development. He is actively involved in interdisciplinary collaborations bridging basic science and clinical research, with a strong interest in neuroinflammation, endocrine–immune interactions, and precision medicine strategies.

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DAY 2

VIRTUAL KEYNOTE PRESENTATIONS

Zoom Meeting (GMT+1) Rome, Italy

Selva Sundari S
VISTAS University, Department of Yoga, SAIS & FA, Chennai, Tamil Nadu, India

Translational Endocrinology of Integrative Lifestyle Therapy: Modulation of Hepatic and Glycemic Biomarkers in Women with Metabolic Dysfunction–Associated Steatotic Liver Disease-Evidence from a Pilot Randomized Controlled Trial

Metabolic dysfunction–associated steatotic liver disease (MASLD) is increasingly recognized as a hepatic manifestation of systemic endocrine–metabolic dysregulation characterized by insulin resistance, dyslipidaemia, and hepatocellular injury. Elevated alanine aminotransferase (ALT), triglycerides (TG), and fasting blood glucose (FBG) serve as clinically relevant biomarkers of hepatic lipid metabolism and endocrine dysfunction. Within a translational endocrinology framework, this pilot randomized controlled trial evaluated the independent and combined effects of structured yoga and dietary modification on metabolic biomarkers in women with MAFLD. Twenty-one middle-aged women (46.5 ± 3.5 years) with mild-to-moderate MAFLD were randomized into Yoga (n=7), Diet (n=7), and Yoga + Diet (n=7) groups for 8 weeks. The yoga protocol included therapeutic postures (asanas), breathing exercises (pranayama), relaxation, and guided concentration (meditation) (6 days/week), while the dietary arm followed an individualized calorie-deficit plan consistent with MAFLD guidelines. Adjusted post-intervention outcomes were analysed using ANCOVA ($p<0.05$). Significant group effects were observed for ALT ($F=15.15$, $p<0.05$) and FBG ($F=6.64$, $p<0.05$), with the combined Yoga + Diet group demonstrating the greatest reductions in ALT (−1.43 U/L) and FBG (−37.06 mg/dL), indicating improved hepatocellular integrity and glycaemic regulation. Although triglycerides decreased across groups, the intergroup difference was not statistically significant. These findings suggest that integrative lifestyle therapy may modulate endocrine metabolic pathways underlying hepatic Steatosis and insulin resistance. The study supports yoga-based intervention as a scalable translational endocrinology strategy for preventive management of metabolic liver disease.

Biography:

Ms. Selva Sundari S. is a UGC-NET qualified doctoral researcher in Yoga Therapy at Vels Institute of Science, Technology & Advanced Studies, TN, India. She holds M.Sc. degrees in Yoga for Human Excellence and Psychology and is a Government-recognized Yoga Therapist under the Ministry of AYUSH, India. Her research focuses on translational endocrinology and integrative lifestyle interventions for metabolic disorders, particularly Metabolic Dysfunction Associated Steatotic Liver Disease. As Principal Author of peer-reviewed publications, she has demonstrated measurable improvements in hepatic and glycemic biomarkers through structured yoga and dietary protocols. Her work bridges endocrine physiology with evidence-based lifestyle medicine, contributing to preventive strategies for metabolic and cardio metabolic diseases.

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Nurses and Healthcare Professionals Competencies and Readiness for Delivering Digital Diabetes Services in Saudi Arabia: A Systematic Review

Digital health interventions are increasingly integrated into diabetes care globally, enhancing accessibility, patient engagement, and quality of care. In Saudi Arabia, where diabetes prevalence is among the highest worldwide, understanding healthcare professionals' competencies and readiness to deliver digital diabetes services is essential. This systematic review aimed to synthesize evidence on the knowledge, skills, and readiness of healthcare professionals—including nurses, physicians, pharmacists, radiologists, and social workers—in adopting digital tools for diabetes management. A comprehensive literature search was conducted using PubMed, Scopus, Web of Science, and Google Scholar from 2010 to 2024. Studies included quantitative, qualitative, and mixed-method designs addressing healthcare professionals' digital health competencies, adoption, and training needs specific to diabetes care. The review was conducted following PRISMA 2020 guidelines, and the Mixed Methods Appraisal Tool (MMAT) was applied for quality assessment. Results from 52 studies indicate that nurses and physicians generally demonstrate moderate digital literacy but face barriers related to insufficient training, high workload, and limited institutional support. Pharmacists and social workers show emerging competence, particularly in teleconsultation and patient education, while radiology staff exhibit readiness in teleimaging and digital diagnostics but require structured training programs. Key facilitators include organizational support, digital infrastructure, and

continuous professional development initiatives. Barriers include resistance to change, lack of standardized competencies, and unclear policies. The findings highlight a critical need for tailored training frameworks to strengthen digital health competencies among all healthcare professionals involved in diabetes care. This review underscores the importance of interdisciplinary collaboration and structured competency development to ensure effective adoption and implementation of digital diabetes services in Saudi Arabia. The study provides actionable insights for policymakers, educators, and healthcare institutions aiming to integrate digital health into routine diabetes care and optimize patient outcomes.

Biography:

Kawther Abdullah Alabed affiliated from King Fahad military medical complex, Saudi Arabia Recently graduated with a Master of Nursing from Ursuline College, USA, specializing as an Acute Care Nurse Practitioner with a minor in Education. Currently working as a Nurse Practitioner at the Cardiac Center, King Fahad Military Medical Complex, SA, managing patients in the Heart Failure, Lipid, and Post-ACS Virtual Clinics, with a focus on cardiovascular risk reduction and evidence-based cardiac care.

Rania Alnounou
Tamara poly clinic, UAE

Audit by Dr Rania Alnounou, 2017 (Incretin drugs for diabetes management)

Aim of the study (objectives)

To critically evaluate healthcare practice based on a literature background, and to suggest real practice improvement.

Background: The prevalence of type 2 diabetes is increasing at an alarming rate, with only half of patients achieving the recommended HbA1c target. This study tends to focus on incretin based treatment for type 2 diabetes, and their utility in clinical practice specifically in private clinical practice in Abu Dhabi,

Incretion drug group, stimulates insulin secretion and inhibit glucagon production, they also improve beta-cell health, slow gastric emptying, promote early satiety and reduce food intake (Nyenwe EA 2011)

This study is a clinical audit supported by literature review that shows new drugs for diabetes management and despite being expensive; still do not reach the target of diabetes control. A lot of gaps in our clinical practice, especially primary care level need to be modified to achieve holistic management.

Participants: I consided around 150 patients with type 2 DM who are taking Incretin drugs with

or without other diabetic medication. The drugs which be followed are: GLP-1RA:

- Liraglutide (victoza)
- Dulaglutide (trulicity)
- Exenatide (byetta, bydureon) DPP-4 Inhibitors
- Sitagliptin (Januvia, janumet)
- Linagliptin (tradjenta,jentadueto)
- Vildagliptin (Galvus,Galvusmet)

Variables: I followed five parameters, HBA1c, BG, BP, BW, and eGFR.

Settings: The audit conducted in the UAE, Abu Dhabi, Al Noor hospital, Al Bateen and musaffah

branches, for 3-6 months between September and December 2016.

Suggestions are summarized below:

- Development of a system which would enable easier identification of uncontrolled DM.
- Development of a system which would facilitate communication between all related team particularly regarding cardiology, ophthalmology, podiatric, and dietitian, coordinated team of health professionals is required.
- Development of structured education program with education classes for patients with diabetes.
- Identification criteria for routine case examination of health visits using check-list (which examines a number of aspects of patients, including structured education, eye test, lab
- test, foot test, cardiology consultation, echocardiogram, biomarkers (ie, NT-proBNP) etc).
- Establish diabetic clinic with multidisciplinary team. Meanwhile there was a suggestion about making diabetic day every week to follow all patients with diabetes.
- Development of telecare intervention via web-based system or mobile devices, to be in continuous contact with HCPs.
- Establish a new medication program, in our local pharmacy to give extra help and advice about any new medication prescribed for the first time to treat long term condition like diabetes.

Jonathan Alvin Wiryaputra
National Cardiovascular Center Harapan Kita Hospital, Indonesia

Future Directions in Heart Transplantation: Innovation, Integration, and Possibility

Heart transplantation remains the most effective treatment for end-stage heart failure, yet its broader application is limited by donor organ scarcity, immune rejection, and long-term graft dysfunction. As global demand continues to rise, transformative approaches are emerging to redefine the landscape of cardiac replacement therapy.

Recent progress in xenotransplantation—particularly the use of genetically modified porcine hearts—has shown early clinical feasibility in overcoming acute rejection, offering a potential solution to donor shortages. Simultaneously, breakthroughs in regenerative medicine, including 3D bioprinting and tissue engineering, are accelerating the development of patient-specific, immunocompatible cardiac grafts.

Advances in immunomodulatory strategies—such as tolerance-inducing therapies and gene-editing techniques—are being explored to minimize dependence on lifelong immunosuppression. Additionally, artificial intelligence and machine learning are enhancing donor-recipient matching and early detection of graft failure, improving clinical precision and long-term outcomes.

Despite these promising developments, substantial ethical, regulatory, and logistical barriers remain. Rigorous translational research and global collaboration will be essential to bring these innovations from laboratory to bedside.

In conclusion, the future of heart transplantation is being shaped by a convergence of biotechnology, engineering, and data science. These advancements hold the promise of transitioning from a model of scarcity and immune compromise to one of accessibility, personalization, and long-term viability—marking a new era in the management of end-stage heart disease.

Keywords: Heart Transplantation, Xenotransplantation, Regenerative Medicine, Immunomodulation, Artificial Intelligence.

Biography:

Dr. Jonathan Alvin Wiryaputra is a globally oriented medical doctor with a strong academic foundation and clinical experience across multidisciplinary settings. Passionate about cardiothoracic surgery, he is committed to advancing heart failure management through innovative, research-driven solutions. With a focus on global collaboration and surgical excellence, Dr. Wiryaputra actively engages in academic exchange, observerships, and international conferences. He aspires to contribute meaningfully to the future of cardiovascular care through both clinical mastery and translational research.

Mohamed Shkeban, Humaiyun Sabih
East Suffolk and North Essex NHS Foundation Trust, Cardiology, Colchester, UK

Evaluating The Impact of HF (Heart Failure) Therapy in Patients With AF (Atrial Fibrillation)/A.Flutter(Atrial Flutter) and LV Dysfunction, Undergoing ECV (Electrical Cardioversion)

Introduction: Maintenance of SR (sinus rhythm) after ECV (electrical cardioversion) for AF remains challenging. Studies have shown that patients with impaired left ventricular (LV) function have poorer chances of SR maintenance post ECV. Better understanding of the role certain HF therapies play in patients with impaired LV function undergoing ECV is vital to enable better allocation of resources and provision of a more integrated community cardiology service, from which these patients can gain from.

Methods: A single centre retrospective study was conducted at a district hospital to assess outcomes of patients with persistent AF/A.Flutter undergoing elective ECV, with varying degrees of LV dysfunction. LV dysfunction was categorised based on the EF (Ejection fraction %) from the most recent pre-procedural TTE (trans-thoracic echocardiogram) and clinical records.

Patients aged ≥18years, with persistent AF/A.flutter, with recent pre- procedural TTE, who underwent an ECV (January 2019-January 2024) and were followed up 6-8 weeks post ECV (with an ECG to assess whether SR was maintained) were included.

Results: Of 176 patients who underwent an ECV during the study period, 50 had EF<40% and 38 had an EF ≥40%-<50%. The proportion who were under HF nurse follow up was 58% and 18.4% respectively. The association between regular community HF nurse follow-up and maintenance of SR post ECV was not significant in each heart failure cohort {EF<40%:Fisher's exact test p=0.139,χ^2 p=0.79} {EF ≥40% <50%: Fisher's exact test p= 0.203, χ^2 p= 0.099}. However, this association was significant in the cohort of patients with prior diagnosis of 'CCF' on clinical records {n= 24, Binary logistic regression p=0.009, Fishers exact test p=0.011,χ^2 p= 0.005}.

Additionally, in patients with EF<40% and EF<50%, there was a significant association between them being on HF prognostic medications and chances of SR maintenance post ECV { χ^2p<0.001 and 0.038}. Regarding specific HF prognostic medications, MRA (mineralocorticoid receptor antagonist) use was significantly associated with increased chances of SR maintenance in both cohorts {Binary logistic regression p=0.005 and 0.026}, whereas use of Beta blockers, ACE-I (Angiotensin-converting enzyme inhibitors), Sodium-glucose co-transporter-2 (SGLT2) inhibitors, Sacubitril/valsartan in either cohort of patients was not.

Conclusion: Despite a relatively modest sample size, our findings suggest patients with appropriately managed HF have improved chances of SR maintenance than patients with poorly managed HF. Further similar studies with a larger cohort are recommended to reaffirm our findings.

Our results can be applied in the community to ensure these patients are provided more regular community HF nurse follow up, allowing optimisation of their HF prognostic medication and augment their HF status. This has the potential to reduce the burden of repeat ECV procedures, and tertiary care referrals for AF ablation.

Biography:

Mohamed Shkeban, a medical graduate from Tanta University in Egypt in 2011. I had moved to the UK in 2021 and completed the core medical training in 2025. I had worked for 10 months in cardiology and has interest in EPS and cardiac rhythm management. I have gained a full membership of the Royal College of Physicians (London) in 2025. I have published a paper in HeartUK BMJ journal and the British Cardiovascular Society conference in Manchester in 2025 and currently pursuing a training job in cardiology in the UK.

Anna N. Iqbal, Smaranda Popescu BSc, M. Bilal Iqbal MD PhD*
Royal Jubilee Hospital, Victoria, BC, Canada

The Intrinsic Coagulation Pathway Drives Smoke-Particle Mediated Thrombosis

Background: Smoke exposure is associated with increased risk of cardiovascular events. Inhaled smoke particles (SP) increase thrombosis by activating the extrinsic coagulation pathway, due to increased inflammation causing tissue factor production. However, this may not explain the acute effects of SP on thrombosis. As the intrinsic coagulation pathway doesn't rely on tissue factor production, it may play a greater role in acute thrombosis. SP have negatively charged surfaces that can activate Factor XII the key activating factor in the intrinsic pathway, making this an attractive hypothesis. Whether or not the intrinsic pathway plays a role in SP-mediated thrombosis is unknown (figure 1).

Objectives: To study the effect of SPs in activating clotting through the intrinsic coagulation pathway.

Methods: Clotting was assessed using an in vitro clotting assay. SP were derived from burning wood and different concentrations (total volume 50µL/well) were added to citrated human plasma (500µL/well). To initiate clotting 15µL of 1M CaCl2 was added clotting time was measured (3 replicates per concentration). Clotting time was expressed as mean±standard deviation and assessed using Spearman's correlation coefficient (r2).

Results: Increasing SP concentration resulted in a reduction in clotting time. The clotting time at 0, 75, 150, 225, 300 and 375 mg/mL SP concentration was 23±0.9, 17.5±0.8, 16.5±0.4, 16±0.4, 16±1.1 and 9.75±0.9 min respectively (figure 2). There was a progressive decrease in clotting time with increasing smoke particulate concentration, demonstrating a strong linear relationship (r2=0.854).

Conclusions: This is the first study to examine the role of intrinsic coagulation pathway in SP-mediated thrombosis. Increasing SP concentration resulted in increased clot formation via the intrinsic coagulation pathway. These data provide novel insights into SP-mediated thrombosis and suggest that targeting the intrinsic coagulation pathway may have therapeutic potential for treating and preventing thrombotic events following smoke inhalation.

Figure 1:

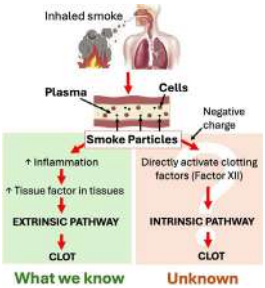
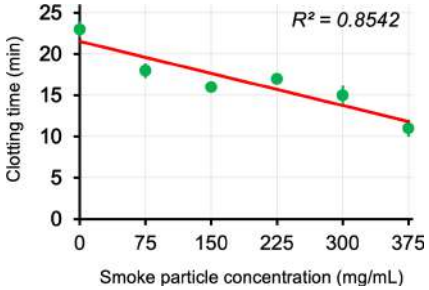


Figure 2:



Keywords: Smoke particles; Thrombosis; Intrinsic coagulation pathway.

Biography:

Dr. M. Bilal Iqbal is an Interventional Cardiologist at the Royal Jubilee Hospital, Victoria, BC. He holds an academic appointment as Professor of Medical Sciences at the University of Victoria, Canada. He is a high-volume complex PCI operator and is a recognized expert in this field with both national and international recognition, serving as faculty in many international meetings. His research interests include the molecular mechanisms of thrombosis, developing novel PCI/CTO techniques, complex collateral pathways in retrograde CTO procedures, therapeutic graft closure following CTO intervention, rotational atherectomy and the utility of transcoronary pacing in complex PCI.

Suizan Schacherer
Square Peg Marketing, USA

Better Health = Better Employees

More than half of U.S. workers are overweight or obese, costing businesses billions each year in health care, absenteeism, and lost productivity. The truth is, the weight of these challenges isn't just physical—it's organizational. A healthier workforce means sharper focus, more energy, fewer sick days, and stronger overall performance. But lasting change doesn't come from quick fixes or guilt-driven programs; it comes from building a culture where sustainable wellness is possible, even in the busiest workplace.

In this session, I'll share lessons from my own journey of losing 100 pounds and keeping it off for over 20 years. Attendees will discover how small, consistent habits and honest self-awareness create powerful momentum for lasting health. Most importantly, they'll see how extending grace—to themselves and to one another—can turn wellness into a shared path of growth. These practical strategies not only help employees feel and perform better, but they also strengthen the business itself, creating healthier people and more productive cultures in the workplace.

Learning Objectives

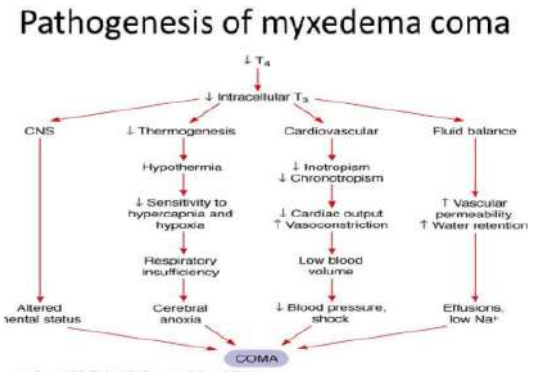
1. Harness the power of small, consistent changes to create lasting results.
2. Identify your strengths and weaknesses to build a strategy more effective than willpower.
3. Transform guilt into purposeful action and find peace with your personal story.
4. Embrace your health journey as a sustainable lifestyle, not a temporary diet.

This is a raw, real, and inspiring talk for anyone who's ever felt like lasting change was impossible. I'm living proof it's not.

Catalina Victoria Kenney
Corewell, USA

A Rare Case of An Endocrinology Emergency, Extreme Thyroid: Myxedema Coma

Myxedema Coma is a rare fatal condition from long lasting hypothyroidism with an incidence of .22 cases per million per year. The mortality rate in myxedema coma is markedly high with reports ranging as high as 60%. Early recognition is important in the treatment of myxedema coma. Around .22/1,000,000 people in the western world have myxedema coma. Active hormones of T3 and T4 come from the thyroid. This case highlights a rare complication of myxedema coma in a 61 year old male who had a history of autism, lymphedema, hypertension, Hashimoto thyroiditis, and Castleman's disease. Patient had initially presented to the ED for hypotension and was found to have an active infection with sepsis criteria met. TSH on admission was .08, free T4 was .4 and free T3 was less than 1.5 respectively. Patient was also hypoglycemic with a glucose at 40, hypothermic at 35.5, patient was also bradycardic during this hospital admission with a heart rate as low as 59. Despite history being limited due to patient's clinical condition, patient was admitted to ICU for further evaluation and care. Myxedema score was calculated during admission and was measured to be above 70. TPO was ordered returned at 49.0 with a TSH of 9.58 indicating Hashimoto thyroiditis. Cortisol was 10.3 indicating no adrenal insufficiency. Patient also had an acute kidney injury with an elevated creatinine of 2.04 from 1.01 baseline. AST/ALT elevated 200/228 respectively indicating transaminitis. Patient was treated with levothyroxine and Cytomel with thyroid levels measured daily. Patient had T3 and T4 levels measured daily. Despite thyroid replacement therapy, patient had eventually become hypotensive and stress dose of hydrocortisone. However, despite aggressive ICU treatments, patient continued to be hypotensive requiring multiple pressors. After several family discussions, it was decided patient was to not have any further escalations of care and the patient passed away. This case highlights the discovery of a rare complication thyroiditis in an older adult beyond the original diagnosis of sepsis. Despite proper medical therapy, patient did not survive this complication. Although the mortality rate is high, early recognition can help a provider properly treat patients with myxedema coma and therefore provide an improved chance at survival.



Biography:

Catalina Kenney is a Wayne State School of Medicine Graduate and Internal Medicine Resident at Corewell Health. Her expertise involves investigating rare cases of endocrinology and providing efficient management in bettering outcomes in rare diseases.

Hajra Asif
Scarborough General Hopital, United Kingdom

Beyond the Expected: A Rare Case of Marked Testosterone Elevation of Finasteride

Finasteride, a selective 5 α reductase inhibitor, reduces the conversion of testosterone to the more potent androgen dihydrotestosterone (DHT) and is usually associated with a modest compensatory rise in testosterone of approximately 10–15% (1,2). This report describes an unusually marked elevation in serum testosterone occurring during finasteride therapy.

A 73 year old man receiving finasteride for prostate cancer was referred for evaluation of persistently raised testosterone levels. His medical history included erectile dysfunction, recurrent orchitis, hypertension and prostate cancer treated with radiotherapy. Regular medications were finasteride, propranolol, tamsulosin, losartan, atorvastatin, vitamin D and sildenafil. There was no use of prescribed or non prescribed androgens.

Following initiation of finasteride, serum testosterone remained markedly elevated, ranging from 30 to 51 nmol/L (reference range 6.68–25.7), representing increases of up to 99% above age adjusted norms. Other androgenic markers, including dehydroepiandrosterone sulphate, androstenedione and 17 hydroxyprogesterone, were within normal limits. Haemoglobin and haematocrit were normal. Positron emission tomography–computed tomography demonstrated no abnormal adrenal or testicular metabolic activity, making an androgen secreting tumour unlikely. Secondary causes of hyperandrogenism were excluded.

Finasteride was discontinued, resulting in complete normalisation of testosterone levels within 2–3 weeks, confirming a causal relationship and suggesting a rare exaggerated pharmacological response. This case demonstrates that although finasteride is generally associated with only mild increases in testosterone, substantial and persistent elevations may occur. Recognition of this phenomenon is important to avoid unnecessary investigation for endocrine or malignant causes. Clinicians should remain aware of atypical hormonal responses to commonly prescribed medications and ensure appropriate biochemical monitoring when unexpected abnormalities arise.

Thinn Nwe Soe, Muhammad Tahir Chohan, Kay Khine Kyaw
York and Scarborough Teaching Hospital NHS Foundation Trust, UK

A Dangerous Synergy: Euglycemic DKA with Combined SGLT2 Inhibitor and Tirzepatide Therapy

Tirzepatide, a dual glucose-dependent insulinotropic polypeptide (GIP) and glucagon-like peptide-1 (GLP-1) receptor agonist, is increasingly used for type 2 diabetes and obesity. Sodium–glucose cotransporter-2 inhibitors (SGLT2i) are also widely prescribed due to their cardiovascular and renal benefits. Euglycemic diabetic ketoacidosis (eu-DKA) is a recognised complication of SGLT2i, but we describe a case of severe eu-DKA associated with combined SGLT2i and tirzepatide, highlighting a potential synergistic risk. A 43-year-old man with type 2 diabetes and panhypopituitarism presented with two days of malaise and vomiting. His diabetes was managed with metformin, dapagliflozin, and tirzepatide which was escalated from 2.5 mg to 10 mg within 8 weeks. On admission, investigations showed severe metabolic acidosis (pH 7.05, bicarbonate 8.6mmol/L), marked ketosis (ketones 7mmol/L), and relatively normal glucose (12.3mmol/L), consistent with eu-DKA. Despite standard DKA management, acidosis and ketosis persisted, requiring two days of intensive care admission. Blood glucose remained near-normal throughout. Dapagliflozin was permanently discontinued pre-discharge. SGLT2i can precipitate eu-DKA by promoting glycosuria, lowering plasma glucose, and reducing endogenous insulin secretion. This insulin deficiency removes inhibition of lipolysis and hepatic ketogenesis. SGLT2i also increases glucagon secretion and enhances renal ketone reabsorption, creating a low insulin-to-glucagon ratio that promotes fatty acid oxidation and ketone production. Tirzepatide may amplify eu-DKA risk when combined with SGLT2i. Its appetite-suppressing effects, delayed gastric emptying, and reduced caloric intake create a relative fasting state that favours lipolysis and ketogenesis. Despite improving insulin sensitivity, lower carbohydrate intake renders absolute insulin insufficient to suppress ketogenesis. Its dual incretin activity can incompletely suppress glucagon, further enhancing ketogenesis. Together, these mechanisms synergistically increase eu-DKA risk. Combined SGLT2i and tirzepatide may synergistically trigger severe eu-DKA especially if tirzepatide dosage is rapidly increased. Clinicians should maintain vigilance, educate patients, consider ketone monitoring or temporary SGLT2i interruption during tirzepatide initiation or escalation.

Biography:

Thinn Nwe Soe has completed MBBS degree from University of Medicine 1, Yangon, Myanmar. She is registered with GMC (General Medical Council) and currently working as a doctor at Scarborough Hospital under York and Scarborough teaching hospital NHS Foundation Trust, United Kingdom.

Alireza Arefzadeh
Tehran Medical Sciences Islamic Azad University,Iran

Diabetes and COVID-19: A comprehensive review of current evidence

Diabetes and COVID-19 are closely linked, with diabetes representing the third most common comorbidity after hypertension and cardiovascular diseases. SARS-CoV-2 has the potential to induce new-onset diabetes in individuals without a familial history or other known risk factors. Diabetes-associated hyperglycemia increases susceptibility to infection and impairs multiple immunological pathways, thereby facilitating pathogen invasion. These alterations result in defects in humoral and adaptive immunity, dysregulation of cytokine production, and compromised type I interferon synthesis. Additionally, hyperglycemia leads to an imbalance in nitric oxide bioavailability and activation of oxidative stress pathways, promoting inflammatory responses and disruption of the coagulation cascade.

SARS-CoV-2 can also damage endothelial cells, triggering inflammation and an exaggerated cytokine response. The virus may directly injure pancreatic tissue and initiate type 1 diabetes mellitus (T1DM) through downregulation of the ACE2 receptor and viral replication within host cells. Indirectly, SARS-CoV-2 induces an intense immune response characterized by cytokine imbalance, immune cell dysfunction, and lymphocyte infiltration of vascular tissues. The potential increase in the overall prevalence of diabetes as a consequence of the COVID-19 pandemic remains a subject of ongoing debate.

Keywords: diabetes mellitus, COVID-19, cytokines, inflammation, immune response, SARS-CoV-2

Allyssa Clariz Pialago Abillar*, MD | Brian Joseph M. Calinawagan, MD, FPCP, FPC | Leah Nita T. Verdillo, MD, FPCP

Silliman University Medical Center, Philippines

The Correlation between Triglyceride-Glucose Index and Mortality in Patients with Acute Decompensated Heart Failure: A Retrospective Cross-Sectional Study

Background: Heart failure is the final common pathway for various cardiovascular diseases (CVDs) and remains a growing global health issue due to its increasing prevalence and limited treatment options. Acute decompensated heart failure, characterized by a sudden worsening of heart failure symptoms, poses significant challenges due to its complex pathophysiology, high morbidity, and mortality rates. The triglyceride-glucose (TyG) index, a novel surrogate marker of insulin resistance derived from fasting triglyceride and glucose levels, has been associated with adverse cardiovascular outcomes such as atherosclerosis, coronary artery disease, and stroke. However, few studies have examined its impact on heart failure.

Purpose: This study aims to determine the relationship between the triglyceride-glucose (TyG) index and mortality in patients with Acute Decompensated Heart Failure (ADHF).

Methods: This retrospective cross-sectional study included 258 patients with ADHF admitted from January 2022 and October 2024. Clinical characteristics, comorbidities, laboratory data, and echocardiographic findings were analyzed. Binomial logistic regression was used to assess the association between the TyG index and mortality.

Results: The mean age of the cohort was 67.07 years (±14.13), with a slight male predominance (53.5%). Comorbidities included hypertensive cardiovascular disease (82.2%), diabetes mellitus (36.8%), atrial fibrillation (29.8%), and chronic kidney disease (27.9%). Laboratory findings revealed significant metabolic dysfunction, including elevated fasting blood sugar (107.05 mg/dL), dyslipidemia (mean LDL 97.44 mg/dL, HDL 39.46 mg/dL, triglycerides 133.86 mg/dL), and elevated proBNP levels (mean 5306.85 pg/mL). Mortality occurred in 12.8% of cases. However, no significant association was found between the TyG index and mortality (P=0.9969).

Conclusion: This study found no statistically significant correlation between the triglyceride-glucose index and mortality in patients with acute decompensated heart failure. Further large-scale, longitudinal studies are needed to explore the TyG index's predictive significance across diverse populations and its integration with other novel biomarkers.

Keywords: TyG Index, Heart Failure, Mortality

Ben Anania Tweve
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Artificial Intelligence (AI) Based Clinical Decision Support System (CDSS) for Acute Emergency Care of STEMI Patients Based on Standardized Management Protocol

ST-segment elevation myocardial infarction (STEMI) remains a leading cause of cardiac mortality worldwide, requiring rapid diagnosis and timely intervention. This study presents an Artificial Intelligence (AI)-based Clinical Decision Support System (CDSS) designed to enhance acute emergency care (AEC) for STEMI patients through standardized clinical management protocols. The system integrates clinical data including patient demographics, ECG findings, cardiac biomarkers, and presenting symptoms extracted from electronic health records. A Random Forest machine learning algorithm was trained using more than 20 clinical variables to support real-time diagnostic predictions and risk stratification. Implementation included an interactive clinical dashboard to facilitate rapid decision-making across pre-hospital, emergency department, treatment, and post-reperfusion phases. The AI-CDSS demonstrated strong predictive performance with an accuracy of 92%, sensitivity of 90%, specificity of 88%, and an AUC-ROC of 0.94. Feature importance analysis identified age, troponin levels, ECG characteristics, and smoking history as key predictors. The system enhanced protocol adherence, reduced treatment delays, and improved clinical workflow efficiency. The results suggest that AI-driven CDSS platforms can significantly optimize emergency cardiac care and offer scalable solutions for improving STEMI outcomes, particularly in resource-limited healthcare settings.

Biography:

Ben Anania Tweve is an Assistant Professor in the Department of Cardiac Sciences at Parul Institute of Allied Healthcare Sciences, Parul University, India. His academic and research interests focus on artificial intelligence in cardiovascular medicine, emergency cardiac care systems, and clinical decision support technologies. He is actively involved in academic teaching, clinical training, and research initiatives aimed at improving emergency cardiovascular outcomes through technology-driven solutions and standardized clinical protocols.

NC. Zareba*, MJ. Gambarte, S. Makhoul, J. Lax, R. Tepper, MP. Renes, K. Palacios, F. Currao, F. Petrucci, F. Perazzo, P. Servienti, MA. Fradegrada, LA. Pinon, G. Calabrese, F. Delfino

Working group of the Cardio-Oncology Council of the Argentine Society of Cardiology, Argentina

Observations from Clinics, Institutions and Cardio-Oncology Services. Obelisco ii Extension

Purpose: To evaluate the use of the ESC risk assessment tool, compare cardiovascular risk factors control with that reported in OBELISCO, the first national cardio-oncology registry in a South American country that provides information about the status of cardio-oncology in our country, determine follow-up of survivors, associated conditions, referrals from centers without cardio-oncology services and importance of a multidisciplinary approach.

Methods: 51 public and private general hospitals were surveyed. The poll included 17 structured questions responded by either a cardiologist, oncologist or hematologist. Data were collected and managed using REDCap.

Results: Management of cancer patients in 49% of the centers without cardioncology services is shown in Figure 1. 42.1% of oncologists/hematologists always refer their patients to cardio-oncologists.

Most cardiologists (61%) consider that they do not evaluate all the patients requiring assessment and 53.6% of them believe that the main reason is lack of referral; 96% of cardiologists would like to know about current services and 92% find online consultations useful when referring the patient is not possible; 92% know how to assess cardiovascular risk but only 59% actually do so (Figure 2) versus 27% in the previous OBELISCO registry (Figure 3). All the respondents agree with the importance of controlling risk factors: 89.8% recommend smoking cessation, 95.8% encourage physical activity and 97.9% encourage weight loss in overweight or obese patients.

Only 18.4% refer to a nutritionist while 67.3% suggest psychological support. The most common cancers in our country are breast, prostate, lung and colon cancer for 60% of the respondents and 46% report that the most prevalent associations are ventricular dysfunction with breast cancer (58%) and prostate cancer with hypertension and dyslipidemia (46%). Most respondents (75.5%) follow up survivors, and 93.4% believe that a multidisciplinary approach is the best strategy for decision- making in oncological patients with coronary artery disease.

Mirna N Chahine
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The Impact of a Community-Based Intervention on the Knowledge, Attitudes, and Practices of the Lebanese Community towards Type 2 Diabetes Mellitus and Its Risk Factors: A Multi-Centric Prospective Study

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Type 2 Diabetes Mellitus (T2DM) represents a rapidly growing global public health concern and is particularly prevalent in low- and middle-income countries. In Lebanon, with a reported prevalence of 8.5%, T2DM and its associated risk factors continue to impose a significant burden. Awareness interventions are therefore essential to address existing gaps in knowledge, attitudes, and practices (KAP) toward T2DM. This study aimed to evaluate the impact of a community-based intervention on the KAP of the Lebanese population regarding T2DM.

We conducted a prospective multi-centric pre- and post-intervention study on 194 participants (97 T2DM patients and 97 non-T2DM individuals) residing across the five major Lebanese governorates. Awareness workshops, lasting two hours, were delivered either in person or online and were based on internationally validated models adapted to the Lebanese context. A pre-validated KAP questionnaire was administered before (pre-test) and after (post-test) the session. The KAP scores and their post-intervention improvements were analyzed in relation to sociodemographic and behavioral variables. A p-value <0.05 was considered statistically significant.

A total of 194 participants, with comparable baseline characteristics, completed both pre- and post-tests. Before the intervention, most participants demonstrated limited levels of knowledge (68.5%), attitude (77.9%), and practice (56.7%) toward T2DM. Post-intervention, these proportions decreased substantially to 28.8%, 72.7%, and 35%, respectively, while the proportion achieving good and excellent levels increased markedly across all domains. Younger age, marital status, higher education, family history of T2DM, absence of comorbidities, and non-smoking status were significant predictors of improved post-intervention KAP levels (all p<0.05).

Community-based awareness programs significantly improve KAP regarding T2DM in Lebanon. Tailored national strategies targeting vulnerable subgroups are crucial for enhancing diabetes prevention and management and for reducing its long-term public health burden.

Keywords: Type 2 Diabetes Mellitus; Knowledge; Attitude; Practice; Community-based intervention

Biography:

Mirna N. Chahine, PhD, is a Professor of Cardiovascular Pathophysiology at the University of Balamand, Faculty of Arts & Sciences, Department of Biology, Lebanon. Her research bridges basic and applied biomedical sciences, focusing on cardiovascular disease, congenital abnormalities, metabolic disorders, and public health interventions. She has led and co-authored multiple national and international projects, particularly in maternal-fetal health and community-based awareness programs. Professor Chahine has published extensively in peer-reviewed journals, mentors undergraduate and graduate students, and contributes to research capacity building in Lebanon.

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Accuracy of Angiography-Derived Fractional Flow Reserve for the Analysis of Complex Coronary Lesions: Head-to-Head Comparison with Pressure-Derived Physiological Assessment

Fractional Flow Reserve (FFR) is the gold standard for assessing the functional significance of coronary stenoses, but its use is limited by procedural complexity and the need for invasive pressure-wire assessment. Angiography-derived FFR offers a wire-free alternative, though its reliability in complex lesions is underexplored. We conducted a prospective, single-center, blinded study of 28 patients with 34 angiographically complex lesions. Each lesion underwent invasive FFR and angiography-derived FFR analysis independently by two operators with repeated measurements. Diagnostic accuracy, intra- and inter-operator agreement, and predictors of mismatch were evaluated. Lesion complexity was quantified, and principal component analysis with K-means clustering identified angiographic complexity patterns. Mean invasive and angiography-derived FFR values were comparable (0.83 ± 0.07 vs 0.83 ± 0.09), with both classifying 41% of lesions as functionally significant (≤0.80 cutoff). Angiography-derived FFR correlated moderately with invasive FFR (Spearman ρ = 0.405–0.501; $p < 0.05$), highest in one operator's initial assessment (ρ = 0.501). Intra-operator reliability was excellent (ICC > 0.82; CV< 5%), and inter-operator agreement substantial (ICC = 0.82; κ = 0.693). Overall diagnostic accuracy was moderate (AUC 0.696), sensitivity 64.3%, specificity 75.0%. Cluster analysis identified vessel and lesion tortuosity as predictors of mismatch ($p < 0.01$). In conclusion, angiography-derived FFR demonstrates high reproducibility and clinical utility in complex coronary lesions, although agreement with invasive FFR is moderate, especially in anatomically challenging cases. Evaluating anatomical complexity can guide the need for invasive FFR, optimizing clinical decision-making and patient management.

Keywords: Complex Coronary Lesion, Pressure-Derived FFR, Angiography-Derived FFR

Biography:

Romina Teliti, MD, is a young cardiologist with experience in interventional cardiology, echocardiography, and perioperative cardiac care. She has participated in international fellowships and hands-on training in Germany, Italy, and Austria, and works closely with multidisciplinary cardiac teams. She has contributed to clinical research and published several articles and abstracts on complex coronary interventions, cardiac anesthesia, and heart failure management. Romina actively engages in medical education, conferences, and community health initiatives.

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