5th Edition Scholars

WORLD HEART CONGRESS

14-15 November 2022
TIME Asma Hotel, Dubai, UAE

Hosted By:
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Heart Congress 2022
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ABOUT SCHOLARS CONFERENCES

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We welcome all the interested members to participate at our conferences as Keynote Speakers, Plenary Speakers, Poster Presentations, Delegates, Sponsors and Exhibitors.

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We focus on bringing a much-needed level of efficiency and quality standards in the way we service our clients, thus building lasting partnerships-based quality, innovation, and commitment to abide by our deeply rooted core values.

WHAT WE DO

• Professional Scientific Event Organizing
• Event Management and Planning Services
• Conference Management Services
• Marketing and Promotion of Conferences
• Website Development and Management
• Sponsorship and Exhibit Sales
• Publication Services

OUR VISION

We are a truly professional group of individuals, striving hard to maintain and improve the quality of execution of our services. Our people constituting our team are our key assets.

Our fleet consists of young, dynamic, and quality conscious scientific professionals. A Promising Future In Store For You. Our motive is to create a chain of distinguished scholars, young researchers and industry experts to collaborate and harness the benefit of the scholars networking through our strong chain of academicians and market experts, we always strive to bring advancements to our scientific events.

OUR MISSION

As a Medical and Scientific Conference Organizer, Scholars Conferences oversees every detail of the conference program, from conference title selection, gathering speakers, participants and venue finalization to post-activity assessment and attendance certificates. We believe that a successful conference program requires focus, creativity, clear communication, and attention to detail. Our medical and scientific conferences are designed to meet the various needs of medical practitioners and clinicians, scientific researchers and developers, and industry partners.
### Scientific Program

**Day 1 | November 14, 2022 | Meeting Room: Shaikha 1**

**JOIN ZOOM MEETING**
Day 1: [https://us06web.zoom.us/meeting/register/tZEld-qrrD4oGNVOXmF3Awby1T1Gd3DCFcesf](https://us06web.zoom.us/meeting/register/tZEld-qrrD4oGNVOXmF3Awby1T1Gd3DCFcesf)

**MEETING ID:** 858 0332 5221  
**PASSCODE:** 587194

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<tr>
<th>Time</th>
<th>Activity</th>
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<tr>
<td>09:00-09:30</td>
<td>Registrations</td>
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<tr>
<td>09:30-09:45</td>
<td>Opening Ceremony</td>
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| 09:45-10:20   | Keynote Forum                     | Lipid Nanoparticles: Enabling technology for enhancing bioavailability of drugs  
**Shaukat Ali,** Ascendia Pharmaceuticals, Inc., USA  
Atletico de Madrid elite soccer cardiovascular risk. How to prevent an update  
**Ramon Hernandez-Molina,** Atletico de Madrid Football Club, Spain  
| 10:20-10:55   | Networking and Refreshments Break | 10:55-11:15 @ Foyer                                                   |
| 11:15-11:50   | Group Photo                       |                                                                        |
| 11:50-12:25   | Lunch Break                       | 13:00-13:40 @ Zaytuna Restaurant                                       |
| 13:40-14:10   | Keynote Forum                     | Needles oral delivery of mRNA vaccines  
**Radwan Almofti,** TADA Consulting, Canada  
| 14:10-14:35   | Session Tracks                    | Establishment and Three Years Outcomes of Robotic-assisted Hybrid Coronary Revascularization in the Middle East  
**Salman Bafageeh,** King Saud bin Abdulaziz University for Health Science, KSA  
| 14:35-15:00   | Session Chair                     | Comparison between the traditional way of BLS and online course  
**Mohammad Shaban,** Health Point Hospital, United Arab Emirates  
| 15:00-15:20   | Session Chair                     | Mitochondrial DNA Editing  
**Vasily Sukhorukov,** FSBSI "Petrovsky NRCS", Russia  
| 15:20-15:45   | Session Chair                     | Development and in vitro evaluation of mucoadhesive buccal film of Aceclofenac  
**Rana M F Sammour,** Dubai Pharmacy College for Girls, Dubai, UAE  
|
15:45-16:10
Title: The optimal antithrombotic therapy after transcatheter valve interventions. The less the merrier

Theodora Bampali, University Hospital of Ioannina, Greece

Networking and Refreshments Break: 16:10-16:30 @ Foyer

16:30-16:55
Title: To highlight the role of percutaneous left ventricular assist device (LVAD) decommissioning as a safe procedure after myocardial recovery in patients with advanced heart failure

Mohamad Ibrahem Abdelhamed, Prince Sultan Cardiac Center Hassa, KSA

16:55-17:20
Title: Secondary prevention medication prescribing in medically managed NSTEMI patients: an assessment of discharge letter quality from Royal Liverpool University Hospital, United Kingdom

Waleed Ahmed Khan, Royal Liverpool University Hospital, UK

17:20-17:40
Title: Elucidating the toxicological impact of WS2 quantum dots in biological subjects by probing the biodistribution/ blood kinetics status using Sprague Dawley rats

Anju Surendranath, SCTIMST, India

Poster Presentations @ 17:40-18:00

SICP01
Title: Treating anemia: point of convergence for chronic heart failure and chronic kidney disease?

Oana Nicoleta Buliga-Finis, “Grigore T. Popa” University of Medicine and Pharmacy, Romania

SICP02
Title: Development and Characterization of Repurposed Molecule-Loaded Polycaprolactone Electrospun Nanofibers as a Wound Dressing Biomaterial for Tissue Regeneration

Divya Pamu, JSS College of Pharmacy, India

SICP03
Title: pH Responsive Metallic Nano-theranostics with active receptor target towards CRC reduction

Saloni Sharma, JSS College of Pharmacy, India

SICP04
Title: Nurse-led care post-PVI

Yael Vanharen, Cardiac Catheterization Laboratory, Belgium

Panel Discussions | Closing Ceremony
**Day 2 | November 15, 2022 | Virtual | GMT**

JOIN ZOOM MEETING
https://us06web.zoom.us/meeting/register/tZEvcOGrqzgsGNSfghwOorBxjl5Tsus1Shc
MEETING ID: 852 7835 3620
PASCODE: 271507

### Keynote Forum

**09:30-10:00**

**Title:** First-in-human experience of preload regulation with percutaneous transluminal caval flow regulation in heart failure with reduced ejection fraction patients  
**Jose E Herrera,** ASCARDIO, Venezuela

**10:00-10:30**

**Title:** Statins - Benefits and Limitations Where Do We Go From Here? What is the future?  
**Alnoor Abdulla,** The University of British Columbia, Canada

**10:30-11:00**

**Title:** Pharmacologic treatment of Atrial Fibrillation  
**Samir Rafla,** Alexandria University, Egypt

**Networking and Refreshments Break: 11:00-11:10**

**11:10-11:40**

**Title:** Cardiometry: a new fundamental scientific field in cardiology  
**M Rudenko,** Russian New University, Russia

**11:40-12:10**

**Title:** Plasma total and individual non-esterified fatty acids and risk of heart failure  
**Luc Djousse,** Harvard University, USA

**12:10-12:40**

**Title:** Myocardial Infarction Without Arterial Obstruction in Patient Post COVID 19 Treatment  
**Huang Wei Ling,** Medical Acupuncture and Pain Management Clinic, Brazil

**12:40-13:10**

**Title:** The crisis of ethical values in current medicine  
**Hugo Alfonso Chinchilla Calix,** Interventional Cardiologist, Military Hospital, USA

**Lunch Break: 13:10-13:30**

### Session Tracks

**13:30-13:50**

**Title:** Parsimonious Use of Oral GLP-1 Receptor in Diabetes Management – An Exploratory Study  
**Ashutosh Mishra,** Panacea Institute of Interdisciplinary Research & Education, India

**13:50-14:10**

**Title:** Hypertensive emergencies, nuanced diagnosis and management are needed  
**Mghaieth Fathia,** Rabta Hospital Tunis, Tunisia

**14:10-14:30**

**Title:** TBA  
**Abdelmaksoud Elganady,** Erfan and Bagedo Hospital, KSA

**14:30-14:50**

**Title:** TBA  
**Pallavi Mishra,** Panacea Institute of Interdisciplinary Research and Education, India

**14:50-15:10**

**Title:** Low-Density Lipoprotein Desialylation Processes in Mouse Model  
**Dmitry Kashirskikh,** Institute of General Pathology and Pathophysiology, Russia

**15:10-15:30**

**Title:** Intrauterine Aortic Balloon Valvuloplasty to overcome hypoplastic left heart syndrome - A Review article  
**Qanitha Samar,** Madinah Cardiac Center, Medina, KSA
Title: Therapeutic ketosis and the broad field of applications for the ketogenic diet: Ketone ester applications & clinical updates

Raffaele Pilla, St. John of God Hospital, Italy

Title: Cardiovascular Manifestations in Covid-19 Patients

Jyotsna Maddury, India

Title: Feasibility study in assessment of congenital cardiovascular malformation by recent technique of fetal cardiac MR imaging

Hend Galal Eldeen Mohamed Ali Hassan, Galala University, Egypt

Title: Mimic high lateral myocardial infarction in chest tetany with mirror electrocardiographic change, Movable phenomenon (Yasser’s phenomenon), and coronary spasm; dramatic Oxygen reversal- A case report

Yasser Mohammed Hassanain Elsayed, Egyptian Ministry of Health (MOH), Egypt

Title: CABG on CKD Patients: A Single Center Experience in Bangladesh

MD. Abir Tazim Chowdhury, Evercare Hospital Dhaka, Bangladesh

Title: Extended characteristics of the cells of the subendothelial intima layer in the aorta

Alexander Markin, FSBSI “Petrovsky NRCS”, Russia
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KEYNOTE SPEAKERS
Day 1
Shaukat Ali
Ascendia Pharmaceuticals, Inc., USA

Biography
Shaukat Ali has worked in the pharma industry about 30 years as innovator and formulator in design and development of oncology and small drug molecules. His area of expertise are synthesis, lipids and surfactants, oral, topical and parenteral formulations, liposomes drug delivery of small molecules and biologics. Dr. Ali obtained his PhD in chemistry from the City University of New York and carried out the postdoctoral training in physical biochemistry at the University of Minnesota and Cornell University. He returned to the industry and joined a pharma/biotech after a brief tenure at the US university. He has published over 45 articles in scientific journals and inventor in 14 US patents. Dr. Ali is USP member of expert for the Excipient Test Methods committee and is the recipient of 2020 IPEC Foundation’s Henk de Jong industrial research award.

Lipid Nanoparticles: Enabling technology for enhancing bioavailability of drugs
Lipid nanoparticles (LNPs) are extensively explored as alternative drug delivery systems for encapsulation and specific tissue targeting. With innovative lipid-sand surfactants, finding smarter lipids as nanocarriers, efficient encapsulation and delivery of small and large molecules, vaccines, plasmids DNA and mRNA are all within reach. Thus, LNPs comprised of lipids and/or surfactants, and are used as liposomes, solid lipid nanoparticles (SLNs), and nanostructured lipid carriers (NLCs) for immediate and sustained release formulation of drugs for unmet needs. Ascendia’s proprietary solubilization technologies like Emulsol®, Amorsol®, and Nanosol®, are designed to meet the solubility challenges for immediate oral and long acting injectable suspensions of small molecules and biologics.

This presentation will focus on our formulation technologies and their relevance in development of oral and injectable suspensions of innovative molecules and complex generics.
Ramon Hernandez-Molina
Atletico de Madrid Football Club, Spain

Biography
Ramon Hernandez Molina is a Clinical Cardiologist with over 25 years of experience in Cardiovascular Risk Assessment including prevention of cardiovascular events, as well as the cardiological follow-up of people who practice sports. For more than 5 years, he is the Reference Cardiologist for the continuous evaluation of the players of the first soccer team of Atletico Madrid. Developing activity through an intensive electrocardiographic and echocardiographic clinical evaluation in each and every one of the players, he believes that it is very important to individualize the cardiological prevention needs of the elite player to minimize their possible cardiovascular events.

Atletico de Madrid elite soccer cardiovascular risk. How to prevent an update

Soccer playing is a universal practice in the whole world. Young and elderly people like very much to play a match everywhere and also follow closely every event related to soccer professional teams. Worldwide, soccer is one of the main important universal sports. And all related to this great business have a deep impact on populations. Five years ago, I introduced a brief approach to the occurrence of adverse cardiovascular events related to the practice, of elite players. The age range of high-competition players in football is between 16 and 35 even up to 40 years. As I noticed, these players undergo pre-entry examinations at different soccer clubs but the development of their physical activity in relation to cardiovascular events, among them sudden death, has shown that this initial evaluation is insufficient for the correct follow-up and prevention of cardiovascular events in the extreme physical activity that this type of athletes. Related COVID issues maybe could affect the normal cardiovascular response. The constant and continued cardiovascular examinations submitted to those players will allow a very significant decrease in the appearance of negative cardiovascular events as well as the prevention of any alterations that may affect their normal physical activity. The persistent and closed examination helps us to contribute to avoiding problems and get the best development of soccer matches and to benefit the training and any cardiovascular activity of this type of elite athlete.
Zeljko Knez
University of Maribor, Slovenia

Biography
Zeljko Knez, born on August 26, 1954 in Maribor, Ph.D. (science), M.Sc., B.Sc. (Eng., Chem.), Professor of Chemical Engineering at the Faculty of Chemistry and Chemical Technology of the University of Maribor.

In 1973, he graduated from the 1st gymnasium (secondary school) in Maribor with highest honours. He continued his studies in chemical technology at the University of Maribor, and graduated with a B.Sc. in 1977. He completed his master’s degree in chemical technology at the Faculty of Natural Sciences and Technology of the University of Ljubljana in 1979. From 1977 to 1981, he was employed in TKI Pinus-Rače, where he performed research in the field of organic synthesis. Based on his research, the synthesis of biologically active substances on an industrial scale was subsequently realized. He received his Doctorate from the University of Maribor in 1984.

In 1981, he was employed at the University of Maribor, Department of Chemistry, as Teaching Assistant; in 1985 he was appointed Assistant Professor in Chemical Engineering, in 1990 as Associate, and in 1995 as Full Professor.

In 1985, he founded the Laboratory for Separation Processes at the Faculty of Chemistry and Chemical Technology, University of Maribor, and was the first Slovenian researcher of supercritical fluids. Later, he helped establish research groups and industrial laboratories (TKI Pinus Race, VitivaMarkovci).

Continuing his postdoctoral studies, he attended the Department of Food Engineering, University of Agriculture, Wageningen (NL), and from 1990-97, worked for several months as a visiting researcher at TechnischeChemie II, at the University of Erlangen - Nuremberg.

High pressure applications for design of pharmaceutical products
High pressure technologies involving sub and supercritical fluids offer the possibility to obtain new products with special characteristics or to design new processes in pharma industry, which are environmentally friendly and sustainable. There are several high pressure processes using sub- and supercritical fluids which are already developed to the commercial scale, like extraction of solids and liquids, particle formation, high pressure sterilization, thin-film deposition for orthopedic implants, separations of value-added products from fermentation broths in biotechnology fields and as the solvent in a broad range of synthesis. All of these applications lead to sustainable manufacturing methods that are not only ecologically preferable but also give the products with very special properties.

For the design of all high pressure processes, data are required on the operating parameters, the type and quantity of the solvent, the recirculation rate and energy consumption. This information can be obtained from phase equilibrium and mass transfer measurements. However, scientific literature offers some of these data, measured at a variety of pressures and temperatures, for several pure compounds.

An overview of the success of micro- and nano-forms fabrication using environmentally friendly supercritical fluid technologies for processing and incorporation of active compounds will be presented. Several new approaches will be described in detail, namely micronization for the production of micro- and nano-sized particles, supercritical drying for the production of aerogels, supercritical foaming and supercritical solvent impregnation, as well as currently available drug delivery data for these formulations. The presentation will also give a limited overview of future perspectives in developments of processes and applications of different sub-and supercritical fluids as green processing media in pharma industry.
Pupalan Iyngkaran
Victoria University, Australia

Biography
Pupalan Iyngkaran having qualified from the University of Adelaide in 1998, Balan commenced basic cardiology training (2003) at Queen Elizabeth Hospital, SA. He undertook further general cardiology training at the National Heart Centre, Singapore, returning to Flinders Medical Centre (SA) in 2006, after completing 18 months sub speciality training in Echocardiography and General Cardiology. Balan completed Cardiology specialist qualification from the Royal Australasian College of Physicians in 2007. In 2008 he commenced 2.5 years research of heart failure and kidney impairment at The Department of Epidemiology and Preventive Medicine, Monash University, Victoria. He worked on basic science and clinical research exploring uremic toxins on heart function and novel kidney biomarkers. In 2011, he took up a position as Staff Cardiologist at the Royal Darwin Hospital and Alice Springs Hospital. In the Northern Territory he started 3 ethics approved projects with the Baker Heart and Diabetes Institute, Alice Springs and Flinders Human Behaviour and Health Research Unit South Australia, exploring Indigenous patients’ health journey, self-management and post marketing research in heart failure. He returned to Melbourne in 2015. In addition to clinical work he continues research as a Senior Lecturer at Flinders University Northern Territory Medical School with local and external collaborators. Despite building a busy clinical practice, he is keen to maintain research interest to help close clinical gaps for heart failure in the fields of self-management, disease management programs, clinical audits and targeted bedside to bench basic research for the Western region. From his research he has received several awards and honors, such as: Australian Postgraduate Award, RACP Fellows Contribution Award, Heart Foundation and Health Professional Scholarship. He is an editor on several cardiac journals, has authored an editorial series, 25 research articles and book chapters. He is a fellow of the RACP and CSANZ.

Developing models of care for self-management in heart Failure
Syed Raza graduated from Aligarh University in India in 1993. After completing his postgraduate degree in Medicine from the same university, he moved to the UK for higher specialist studies. He successfully completed MRCP and CCT and later also awarded Fellow of the Royal College of Physicians of Edinburgh. He was awarded professor John Goodwin prize for outstanding performance in Diploma Cardiology exam at Hammersmith Hospital, University of London in 2001. Dr Raza is Fellow of American College of Cardiology, Fellow of European Society of Cardiology and Fellow of European Society of Cardiovascular Imaging. He is also on the committee of Acute Cardiovascular Care, Heart Failure and Cardiovascular Imaging (European Society of Cardiology). He is Review author for abstracts for European Society of Cardiology for the past three years. Obtained Diploma certificate in Medical Education from University of Cardiff, Wales in 2015.

Consultant Cardiologist and Head of the department of Medicine at Awali Hospital, Bahrain. He is the regional educational coordinator and examiner for MRCP (PACES) exam for the Royal College of Physicians of Edinburgh. Certified Educational and Clinical supervisor, NHS-UK. He has to his credit numerous publications and he has presented his scientific work in different parts of the world. He is peer review author for some well respected international journals.

He is American Board certified in Medical Quality and is involved in patient safety and quality improvement assignments during his current and previous jobs. He participates in key decision making for quality improvement.

His special interests are Cardiovascular Imaging, Heart Failure and Acute Cardiovascular Care.

**Precision Medicine for a Personalized Care in Dyslipidaemia**

Dyslipidaemia comprises of abnormal lipid components and refers mainly to increased levels of LDL, non HDL particles and triglycerides while decreased levels of HDL. Dyslipidaemia is a common and independent modifiable risk factor for cardiovascular disease. Besides quantitative measurement, qualitative assessment of these components is also essential and therefore particles like Lipoprotein (a) and Apo-B should be taken into account.

Unlike in the past where dyslipidaemia was treated mainly based on their quantitative levels, there is a paradigm shift in providing a more personalized care to patients. This is based on assessment of cardiovascular risk of individual patient which allows choosing the right strategy of therapy for them. This would include using the right intensity statin therapy in the correct dose for a category or level of cardiovascular risk. In addition, there is now more emphasis on making use of other lipid lowering drugs like Ezetimibe, PCSK-9 Inhibitor, Fibrates and Omega 3 Fatty Acid. Adoption of these strategies are based on evidence derived from several well designed randomized control trials that have shown to lead to better cardiovascular outcome.

It is therefore vital that clinicians are aware of this concept of precision Medicine so that prescription for managing dyslipidaemia is more cost effective and lifesaving.
Radwan Almofti
TADA Consulting, Canada

**Biography**

Radwan Almofti, PhD Pharm Founder & Senior Consultant – TADA Consulting Solutions After finishing my bachelor’s degree in pharmacy, I worked for a few years as a pharmacist. Next, I pursued my postgraduate studies and got my Master’s and Doctorate degrees in pharmaceutical sciences, then my post-doctorate studies in biopharmaceutics. My postgraduate studies focused on gene delivery systems and energy transfer across cellular and mitochondrial membranes; in addition, I supervised numerous undergrads and postgrad students up to Ph.D. candidates. Next, I worked for the pharmaceutical industries in start-ups, medium and large organizations leading quality & compliance, regulatory, and scientific/R&D affairs teams. Currently, I am the founder of and senior consultant at TADA Consulting Solutions providing compliance, regulatory and scientific/R&D consultation. Over the years, I have acquired a unique combination of in-depth academic, scientific and technical knowledge along with extensive practical and industrial experience in various aspects of the development, production, and analytical procedures and instrumentation of almost all pharmaceutical dosage forms.

**Needless oral delivery of mRNA vaccines**

Vaccination is considered one of the most successful public health interventions of the modern era. Vaccines are mostly administered via intramuscular (IM), subcutaneous (SQ) or oral (PO) route. However, these routes of administration have limitations and side effects such as poor induction of mucosal immunity, less patient compliant, less potent, high cost and cumbersome production process. An alternative route could be buccal/sublingual administration using oral thin film (OTF) dosage form as delivery system. The buccal/sublingual regions can provide an elastic and permeable tissue, thus aiding drug absorption. Because of their large surface area and immunological competence, mucosal tissues are attractive administration and target sites for vaccination. An important characteristic of mucosal vaccination is its ability to elicit local immune responses, which act against infection at the site of pathogen entry. OTF delivery system has several advantages: it can avoid first pass effect, it is easy to administer and prepare, it is able to induce both systemic and mucosal immunity, it is needless, it increases patient compliance, it does not require medical professionals for administration, and is more cost effective. Several studies have shown that embedding thermosusceptible vaccines in OTF stabilizes these vaccines at room temperature for long term, eliminating the need for deep freezers. Vaccines in their original form or encapsulated in nano/microparticulate or viral vectors can be successfully delivered using OTF. OTF can be developed in multilayers to protect the vaccine from degradation by saliva or swallowing. OTF can also be formulated to provide the desired controlled release of vaccine and the optimum muco-adhesiveness of the films. The current presentation highlights 1) the advantages of OTF delivery system for vaccines over non-mucosal delivery systems such as IM and SQ, and over other mucosal delivery systems such as intranasal and inhalers, 2) the improvements needed, and 3) future expectation.
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WORLD HEART CONGRESS

SPEAKERS
Day 1
Establishment and Three Years Outcomes of Robotic-assisted Hybrid Coronary Revascularization in the Middle East

**Background:** Hybrid coronary revascularization (HCR) is a technique that merges coronary artery bypass grafting surgery and percutaneous coronary intervention (PCI) approaches for the treatment of multivessel coronary artery disease. The surgical component of the procedure is minimally invasive and can be done using robotic technology that avoids the need for sternotomy. This paper intends to report an initial series of 78 patients treated with robotic-assisted HCR (RHCR) during establishment phase.

**Methods:** This study is a retrospective chart review conducted at King Faisal Specialist Hospital and Research Centre in Jeddah (KFSRC-J). The study focuses on patients who underwent RHCR between July 2018 to December 2020.

**Results:** Robotic-assisted HCR was performed on 78 patients (mean age, 56 years [range, 43 to 72 years]; 89.75% males) during the study phase. Left internal mammary artery grafting was used in all patients. There was no hospital mortality, and the mean hospital and ICU stay were 5.8 and 1.4 days, respectively. We found that 93.6% of the patients had no blood transfusion. There were no major adverse cardiac events (MACE) and peri-operative MI recorded. There was a 3.8% rate of postoperative complications. The percentage of surgeries converted to conventional and re-exploration for bleeding were 1.2% and 2.6%, respectively. The average operation time was 164 minutes.

**Conclusion:** This study emphasizes on the safety and effectiveness of RHCR in treating patients with multivessel coronary artery disease. Moreover, Robotic-assisted hybrid coronary revascularization offers an alternative, functionally complete revascularization option to a selected group of patients with minimal surgical trauma, short hospital and ICU length of stay, quick recovery, and little to no blood transfusion requirement.
Mohammad Shaban
Health Point Hospital, United Arab Emirates

Biography

Mohammad Shaban, leading instructor of life support training, currently I am working as Clinical education manager in Health point hospital - Abu Dhabi.

As clinical educator, I believe that healthcare providers must keep updated with knowledge and skills because the evolution in the science and researches, every day is good chance to develop our knowledge and skills by maintaining education for everyone in many ways, from open discussion, direct observations of skills and knowledge test.

I have MSc in Leadership in Health professions Education, and Bachelor in Nursing in 2003. My nursing journey exceeding 17 years in many hospitals in Middle East and different positions (RN, Charge nurse, Nursing supervisor, Life support coordinator and Clinical educator), I notice that nurses are the heart of hospital which keep the hospital active and proactive. Without nurses efforts there will be continuity in medical progress and treatment progress. That required to keep the nurses updated always with the recent knowledge and practice. That lead to enhance the treatment plan and improve multidisciplinary efforts of care giver.

Through my education activity (CME lectures, case presentation, practice demonstration, Conferences, workshops...etc.) I hope that I will be able to have impact in future nursing education, share my clinical expertise and participate in research.

I believe by participating in conferences & virtual education and training, the clinical educator will be able to sharing and delivering care-effective, increase the awareness of the community, answering the attendance queries, and highlighted the common errors and risk factor of the non-medical participant.

Comparison between the traditional way of BLS and online course

Background: Cardio Pulmonary Resuscitation (CPR) it’s the way to save someone life after he suffers from cardiopulmonary arrest, this needs good knowledge from many aspects like Anatomy of the human body, heart electrophysiology, and breathing needs. Also it required physical and critical thinking skills like chest compression, managing the airway, and defibrillator awareness. Basic Life Support (BLS) course becomes essential to get the DOH license and to start work as a nurse in Abu Dhabi regardless of the working area, field, and specialty. Basic Life Support (BLS) is an essential course for all nurses. it contains knowledge and practice to guide the nurses how to deal with cardio-pulmonary resuscitation and managing the victim till advance team arrived. Objective: This study debate the difference between the traditional ways of BLS (Class course) and the update way (Online course).

Methods: I start by interview the nurses and ask about BLS knowledge. Followed up with a schedule training was conducted frequently for nurses who’s employee in hospitals, clinics, education facilities and who attend outside camps and big community events. Monitor the participant during theory part and practice part, then evaluate their knowledge with written test. Following by start to observe their performance in real CPR in their respective unit as primary nurses.

The assessment used is workplace-based assessment (WPBA) because of the advantages and implementation way, which have many benefits for the study to use workplace-based assessment in clinical areas. My tool will be using direct observation in procedural skills (DOPS), research method was qualitative and the questions used in the interview reflect the depth of the nurses concept of BLS knowledge and proficiency.
skills. All tools and assessment guarantee the validity and reliability of research.

**Results:** The result show that online version have more advantages than class course, from perspective of time, efforts, and using in real situation. With emphasis to use the refresher mock drills in between, nurse who receive online training of BLS and followed with practice session was performing good in CPR comparing to the nurses who receive class course every two years without refreshing mock drills. Nurses who receive online training feel more confident and able to deal immediately with life threatening situation. Which can be improve post cardiac arrest neurological outcome and discharge planning. In the same time it’s decrease of mortality and morbidity rate.

**Conclusions:** The research find that BLS online version have various benefits of the quality of life support skills which is mandatory in maintaining and save life of patients.
Vasily Sukhorukov  
FSBSI "Petrovsky NRCS", Russia  

Mitochondrial DNA Editing

Background and Aims: We have previously found an association of some mitochondrial mutations with asymptomatic atherosclerosis in the carotid arteries of patients. The most direct way to elucidate the role of these mutations in atherogenesis is by editing the mitochondrial genome. The aim of this work was to develop an approach to eliminate mitochondrial mutations from mitochondrial DNA (mtDNA).

Methods: The mitoCAS9 vector was used to produce RNA complex, consisting of Cas9 nuclease linked to sgRNA. Mannose liposomes were used to deliver RNA complex in the THP-1 cells. The THP-1 cybrid cells that carried Cytb G15059A mutation. The efficiency of mutation elimination was assessed by T7E1, qPCR, and ddPCR.

Results: The elimination of Cytb G15059A mutation by MitoCas9 RNA complex was successfully confirmed by T7E1, ddPCR, and sequencing. We found that the MitoCas9-RNA complex can cleave up to 92% mtDNA, and the heteroplasy level was reduced up to 3.7% from 68%. Moreover, we found that some double-strand breaks were repaired by the mechanism of microhomology-mediated end joining (MMEJ). The possible matrix for MMEJ was a part of the mitoCas9 vector, that was delivered to mitochondria together with the RNA complex. This mechanism might be used to incorporate mitochondria mutations of interest in “healthy” mitochondria.

Conclusions: The method to eliminate mitochondrial mutations was created. It might be possible to create a novel approach of mtDNA editing via the MMEJ mechanism.

This study was supported by Russian Science Foundation, Grant # 22-15-00064
Theodora Bampali
University Hospital of Ioannina, Greece

Biography

Theodora Bampali is a Cardiologist. The last 3 years I work as a Consultant in Cardiac Surgery Department of Ioannina University Hospital, in NW Greece. In 2021 I passed the European Examination on Core Cardiology. I am Sub-investigator in 6 recent Clinical trials related to thrombosis and heart failure and member of several WG under the aspects of European Society of Cardiology. I have authored/co-authored 9 papers the last 2 years, published in Pubmed. I am invited speaker in more than 20 congresses the last 5 years.

My main field of interest, and also the theme of my Msc is the antithrombotic therapy in valvular disease, both in native valves and in surgical or transcatheter treated, and specifically in complex patients with several comorbidities that interfere with their thrombotic and bleeding phenotype. I treat more than 100 patients per month during hospitalization and in outpatient clinic.

The optimal antithrombotic therapy after transcatheter valve interventions. The less the merrier

Since the late 2000’s, TAVR has led to constant improvement in clinical outcomes with the development of techniques and technological ameliorations along with increased operator experience. Over time the philosophy of non-surgical intervention extended to the other valves i.e., mitral valve and tricuspid valve. This target group of the patients have multiple comorbidities and subsequently high surgical risk. Amongst other, atrial fibrillation, concomitant coronary disease treated with stenting, peripheral artery disease, or stroke augment the innate thrombotic risk of these patients and the need for combined antithrombotic therapy rises. On the other hand, advanced age, frailty, anemia, thrombocytopenia, chronic kidney disease increase the bleeding risk and suspend the combination and duration of the antithrombotic therapy. The current guidelines suggest that the optimum antithrombotic therapy must be personalized. After the Galileo OAC trial OACs are ostracized if there is not atrial fibrillation. Nevertheless, these guidelines carry a LoE B or C, so there are a lot of gaps in the literature and more trials are awaited. The purpose of my speech is to guide through the current bibliography via clinical scenarios, in order to clarify the optimal antithrombotic therapy after transcatheter valve interventions.
Mohamad Ibrahem Abdelhamed
Prince Sultan Cardiac Center Hassa, KSA

Biography
Mohamad Ibrahem Abdelhamed is a cardiac surgeon pledged to provide state of the art, high quality and patient-centred surgical care. Pursuing his aim, he is committed to continuous surgical training and professional development. He was privileged to participate in a collaborative project to initiate an LVAD program in PSCCH for five years. The program has gained both local and international recognition; however, the gratitude and love I see in the patients’ eyes represent the most significant prize. He hope to continue serving the patients till the last moment of my life. Hence, He won’t stop learning unless he stop breathing.

To highlight the role of percutaneous left ventricular assist device (LVAD) decommissioning as a safe procedure after myocardial recovery in patients with advanced heart failure

Objectives: To highlight the role of percutaneous left ventricular assist device (LVAD) decommissioning as a safe procedure after myocardial recovery in patients with advanced heart failure.

Background: The HeartMate3 LVAD (Abbott, Chicago, IL, USA) is designed to provide circulatory support with enhanced hemocompatibility for patients with advanced heart failure. Most VADs are used as a bridge to heart transplantation; however, in certain cases, myocardial function recovers, and VADs can be explanted after the patient is weaned. Although surgical explantation remains the gold standard, minimally invasive percutaneous decommissioning has been described as a successful alternative. In this study, we present our experience, one-year outcomes, and adverse events associated with percutaneous LVAD decommissioning.

Methods: We conducted a retrospective review of data from six consecutive patients who underwent percutaneous LVAD decommissioning.

Results: Six patients were enrolled in the study. For all six patients, HM3 decommissioning was completed at least 6 months ago. No technical complications were documented. No strokes were observed within the study period, and the ejection fraction improved. The mean follow-up duration was 18±8.5 months, and the survival rate was 100%.

Conclusion: Percutaneous HeartMate3 decommissioning appears to be safe. In particular, the survival after the procedure was 100%, and no events, especially thromboembolic ones, occurred.
Waleed Ahmed Khan  
Royal Liverpool University Hospital, United Kingdom

Biography
Waleed Khan is currently working as an Acute Medicine registrar at NHS hospital in United Kingdom. He has completed his Internal Medicine training and aiming to apply for Cardiology specialty training this year. He have keen interests in Advance heart failure management and Heart transplant medicine. He takes up leadership, management and educator roles and currently is Associate College Tutor, from Royal College of Physicians (RCP) at his local hospital. He is involved extensively in medical education, specifically MRCP PACES teaching and helps organise MRCP PACES exams for RCP Edinburgh (UK).

Secondary prevention medication prescribing in medically managed NSTEMI patients: an assessment of discharge letter quality from Royal Liverpool University Hospital, United Kingdom

Background: Clear guidelines exist from NICE for the management of secondary prevention medications following myocardial infarction (MI). Communicating these plans is essential to avoid adverse outcomes. This QIP was performed at Royal Liverpool NHS Hospital, United Kingdom.

Members: Dr. Waleed Khan (IMT 2/3), Dr. Tom Raynor (FY1/2), Dr.Haselton (Cardiology Consultant)

Aim: To assess the quality of discharge letters written for medically managed MI patients, comparing these to the gold-standard guidelines from NICE.

Methods: A protocol was approved by the Trust audit team. Data were collected on patients with a coded diagnosis of non-ST elevation MI (NSTEMI) between February and April 2021 for cycle 1 and December 2021 to March 2022 for cycle 2. Patients were excluded if they had not had a NSTEMI, died or transferred for coronary intervention to tertiary centre. (N= 40 cycle 1, N=81 Cycle 2). Letters were assessed for documentation of secondary prevention medication prescribing, plans to uptitrate beta-blockers and ACE-inhibitors (ACE-i) and duration of antiplatelet therapy.

Results: Cycle 1:
A majority were prescribed the correct medications (mean compliance 78%). 57.5% of letters failed to detail the duration of antiplatelet therapy. Most (75%) patients not receiving antiplatelet therapy had suitable reasons given in the letter. Plans to uptitrate medication were mentioned in 7.5% and 15% of letters for ACE-I and beta-blockers, respectively. No clinically justifiable reason was given for omitting ACE-I and beta-blockers in 87.5% and 95% of letters, respectively.

We demonstrate a marked paucity of essential information in letters on the prescribing and ongoing management of secondary prevention medications for NSTEMI in our department. This precludes optimal transition of care to the general practitioner and could compromise patient outcomes. Urgent intervention is required to improve the quality of our discharge letters.

Cycle 2:
Improvement from 12.5% to 32.4% for prescription of Apirin with duration, from 22.5% to 32.4% for prescription of second antiplatelet with duration, prescription of ACE-i with uptitration from 7.5% to 18.9% and for betablockers with uptitration from 15% to 18.9% was demonstrated in cycle 2 of this QIP.

Less numbers of discharge letters lacked prescription of Aspirin and second antiplatelet (from 30% to 8.1% and from 20% to 10.8%, respectively) or where not indicated, clear reasons were provided. Similar improvements were shown with prescription of ACE-i and Betablockers (from 20% to 18.9% and from 17.5% to 8.1%), and marker reduction in lacking reasons for nor prescribing ACE-i and Betablockers (from 87.5% to 8.1% and from 95% to 2.7%, respectively).
We demonstrated that highlighting paucity of essential information in letters to GP, in handovers and by showing posters in department, resulted in marked improvement of quality of letters. It is evident more letters contained important and relevant information in letters to GP in line with NICE guidelines. We understand further work is required to improve quality of discharge letters for patients admitted and treated for NSTEMI, from RLUH Cardiology department at first and whole hospital later on. For this we advocate changes in JAC which will automatically pull relevant information from system to the letters.

Compliance is still far behind the targeted 100% as per the NICE guidelines.

**Conclusion:**

Prescribing of post-MI medications was in general satisfactory, but communication of uptitration of ACE-I and beta-blockers, as well as details regarding duration of antiplatelet therapy requires improvement. We aim to assess whether further doctor education and introduction of new prescribing protocols can improve compliance.
Anju Surendranath
SCTIMST, India

Biography

Anju Surendranath, currently doing PhD in Toxicology, under the guidance of Dr P V Mohanan, Toxicology Division, SreeChitraTirunal Institute for Medical Sciences and Technology, Trivandrum, India. Our institute is an organization of national importance currently focusing on biomedical researches under the aegis of department of Science and technology, Govt of India. I am a UGC Senior Research Fellow. I have published around 12 research publications and 2 book chapters in reputed journals of high impact factor.

Elucidating the toxicological impact of WS2 quantum dots in biological subjects by probing the biodistribution/ blood kinetics status using Sprague Dawley rats

As one of the typical TMDCs, WS₂ has attracted recent scientific attention due to its unique properties such as anisotropic nature, high strength moduli, good shock absorbing capacity, high stability, large surface area as well as optical, electronic and electro catalytic properties. In the QD dimensionality with ≤10 nm size, WS₂ exhibits unique optical properties when compared to its nanosheets or bulk material counterpart, which makes it a suitable candidate for biomedical applications, especially in imaging guided therapies. Such QDs could provide abundant active edges and large specific surface areas, as well as stable quantum confinement effect. Based on these facts, an idea is made to synthesize, characterize and explore the toxicological impact of this emerging material along with an in depth QD-bio interaction analysis in-vivo.

In the present study, WS₂ QDs of ~4nm size and uniform size distribution were synthesized by solvothermal exfoliation method. XRD, XPS and FTIR confirmed the chemical and material composition of the QDs. In vitro QD uptake and cellular interaction studies were evaluated using LN-229 cells. Further in vivo toxicological evaluation was done in Sprague Dawley rats after 10mg/kg body weight administration of WS₂ QDs in physiological saline. Serum biochemistry, hematology and histopathological studies showed no evident signs of clinical changes, morbidity/ mortality after 3, 7 and 14 days of administration. Biodistribution and blood kinetics was evaluated using ICP-MS analysis, which showed the maximum retention of the compound in major organs on the 7th day but did not evoke a toxic impact in the animal physiological system. Antioxidant assays were performed in liver/brain tissue homogenates, which again confirmed the non-toxic nature of the QDs. Hence the study clearly confirms that WS₂ QD is a promising material for future biomedical applications.
5th Edition Scholars
WORLD HEART CONGRESS

POSTERS
Day 1
Treating anemia: Point of convergence for chronic heart failure and chronic kidney disease?

Cardio-renal-anemia syndrome represents the pathological triad in which the vicious relationship between chronic heart failure (HF), chronic kidney disease (CKD) and anemia is associated with increased morbidity and mortality and decreased quality of life.

Anemia is a common condition in patients with advanced HF and CKD with a prevalence in CRS from 5% to 55%.

Anemia often leads to progressive renal and cardiac dysfunction and exacerbates both cardiovascular disease and chronic kidney disease. The decrease in erythropoietin production, oxygen transport leads to tissue hypoxia, peripheral vasodilation, stimulating neurohormonal activity and maintain cardiorenal syndrome pathological cycle.

Intravenous iron therapy has an important role in the management of anemia being beneficial for patients with both heart failure and chronic kidney disease. It improves symptoms, quality of life and reduce hospitalization for heart failure.

Erythropoiesis-stimulating agents combined with intravenous iron increase hemoglobin levels and stabilize creatinine level in patients with cardiorenal syndrome. Recent studies suggest that only 10% of patients with cardio-renal-anemia syndrome are eligible to this therapy due to the increased risk of mortality for patients with heart failure. Generation of endogenous erythropoietin and lowering the fibroblast growth factor 23, hypoxia inducible factor prolyl hydroxylase (HIF-PH) inhibitors are promising agents for cardio-renal anemia syndrome. Also, hepcidin antagonists and their effects on renal and cardiac function could become a new potential therapy for this complex syndrome, studies suggest.

Anemia therapeutic strategies diminishes the loss of kidney and heart function of patients with cardio-renal-anemia syndrome and improves the prognosis and clinical outcomes.
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Divya Pamu
JSS College of Pharmacy, India

Development and Characterization of Repurposed Molecule-Loaded Polycaprolactone Electrospun-Nanofibers as a Wound Dressing Biomaterial for Tissue Regeneration

The present study aimed to develop and characterize repurposed molecule-loaded polycaprolactone electrospun nanofibers as a wound dressing biomaterial for tissue regeneration. The electrospun nanofibers were prepared using the electrospinning technique by loading different repurposed drug molecules (atorvastatin, fluvastatin, pravastatin, and rosuvastatin) in polycaprolactone of 80,000 grade at the concentration of 30%. The instrument was set at 0.15-0.5 (μL/min) at 15kV of voltage, and the distance between the needle and the collector mandrel was 15 cm. They characterized SEM, compatibility, thermal analysis, drug release, and in vitro MTT assay and migration wound assay in NHDF cells. The polycaprolactone-loaded nanofibers have demonstrated excellent morphology of aligned fibers distribution without any interactions and the nanofibers were found to be compatible and have thermal stability. Among the nanofibers, fluvastatin and pravastatin have shown better release in a controlled manner for 360hrs when compared with atorvastatin and rosuvastatin. In the MTT assay and migration assay, the HDF cells have shown cell proliferation and migration. The fluvastatin and pravastatin have exhibited improved fibroblast cell proliferation and migration in skin tissue regeneration in non-healing wounds. Hence, we concluded that the repurposing of fluvastatin and pravastatin molecules could accelerate the wound healing process by fulfilling the fibroblast deficiency in the tissue and enhancing the further collagen deposition and ECM secretion in the wound region. Further in vivo studies are needed to provide a structured background for commercialization and future clinical purposes.
Saloni Sharma  
JSS College of Pharmacy, India

**pH Responsive Metallic Nano-theranostics with active receptor target towards CRC reduction**

Colorectal cancer is one of the leading causes of death worldwide that has shown 24% increase statistically by the WHO. It has been a tedious outlook towards this research on the outcome for the reduction of CRC. As a result, it has paved way for advancements towards nano-technology for the treatment and management of CRC. One such branch is the application of theranostics that imparts as a dual role of diagnostic and a therapeutic moiety functioning simultaneously. In this study, we will illustrate the effect of metallic theranostics using the photodynamic therapy towards the diagnosis of CRC. The formulation strategy implemented consists of an effective polymer with the combination of desired choice of surfactant that is the critical formulation parameter for effective formulation development, followed by the synthesis of metallic nano-particles infused with the anti-cancer agent coated with receptor for active cancer target. The receptor layer on the outer coating of metallic nano-particle acts as an active tumor target. This novel approach is opted due to its reduction in toxicity, controlled release, pH-maintained environment and reduction in particle size. As a result, we will prove a novel theranostic approach towards CRC treatment.
Yael Vanharen
Cardiac Catheterization Laboratory, Belgium

Biography
Yael Vanharen is a full-time nurse specialized in electrophysiology. In addition to her full-time job, she will complete her master’s degree at the University of Antwerp in September 2022 and become an advanced practitioner nurse. Yaël has always been interested in research and is currently contributing to several studies in the field of cardiovascular advanced nursing for the hospital network of Antwerp (ZAS).

Nurse-led care post-PVI
Pulmonary vein isolation (PVI) is a well-known treatment in patients with atrial fibrillation (AF). In addition to medication and PVI, the importance of cardiovascular risk factors and their modification in the prevention of AF has been clearly demonstrated. Some of these risk factors such as obesity, alcohol intake, smoking behaviour and physical activity are reversible lifestyle factors. The aim of this RCT was to investigate the influence of educational post-PVI consultations by an advanced practitioner nurse (APN) specialised in AF on recurrence, knowledge about AF, lifestyle and patient satisfaction. Sixty-five patients were included and randomised to control or intervention group, respectively. In addition to the standard follow-up, the intervention consisted of an educational session, three consultations spread over six months, and continuous telephone access coordinated by the APN. The control group received a standard follow-up by the treating cardiologist. Prior to each consultation, a questionnaire about lifestyle and clinical measurements were taken. A patient satisfaction survey was completed afterwards. Statistical analyses were performed on the demographic data using Chi-square test and Student t-test. The difference in relapse of AF was measured with a Kaplan-Meier analysis. The difference for lifestyle and patient satisfaction between groups was measured with a student t-test and the difference within one group across months was measured with a paired t-test. Finally, a univariate and multivariate regression analysis was done to see the influencing factors on recurrence. Kaplan-Meier analysis showed more freedom of AF in the intervention group (87.5% vs 60.6% in the control group, p=0.014). Knowledge of AF was significantly higher in the intervention group (8.28 vs 7.55 out of ten in the control group, p<0.001). Within the intervention group, alcohol intake decreased significantly (p=0.031) from 4 to 2.89 units per week, physical activity increased from 222 to 290 minutes per week (p=0.048), patient satisfaction increased from 9 to 9.6 out of ten (p<0.001). Mean BMI and number of smokers remained unchanged. Regression analyses showed that the intervention itself was the only significant predictive factor for recurrence. This study shows that the APN offers added value in terms of recurrence and lifestyle in the follow-up of patients with AF post-ablation.
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KEYNOTE SPEAKERS

Day 2
First-in-human experience of preload regulation with percutaneous transluminal caval flow regulation in heart failure with reduced ejection fraction patients

Background: Preload reduction in heart failure has been achieved with high potency diuretics. However, no study has been conducted in humans to assess the effect of inferior vena cava intermittent occlusion for preload reduction.

Objectives. This study aims to investigate the acute haemodynamic effects of percutaneous transluminal flow regulation (PTCR®) with an inferior vena cava regulator balloon in heart failure patients.

Methods. Six patients were included in the study: four men (55 ± 6 years old) and two women (63 ± 4 years old). Baseline evaluations included Doppler echocardiogram, coronary angiogram, and right heart catheterization. Caval balloon was kept inflated for 30 min, and right catheterization and control echocardiogram were performed while the balloon was still inflated. The balloon was then deflated and removed. Right haemodynamic variables were evaluated before balloon insertion and with the inflated balloon.

Results: The mean right atrial pressure decreased by 42.59% (P = 0.005); systolic right ventricular pressure decreased by 30.19% (P < 0.003); mean pulmonary arterial pressure decreased by 25.33% (P < 0.043); mean pulmonary capillary wedge pressure decreased by 31.37% (P > 0.016); and cardiac output increased by 9.92% (P < 0.175).

Conclusion: The haemodynamic and echocardiographic changes obtained in our study using PTCR® suggest that this innovative approach can play a beneficial role in the heart failure treatment.
STATINS - BENEFITS AND LIMITATIONS

WHERE DO WE GO FROM HERE? What is the future?

Higher levels of LDL cholesterol have been linked to increased Cardiovascular morbidity and mortality. Lowering LDL levels has reduced this morbidity and mortality.

STATINS are not only highly efficacious and safe in reducing LDL levels but also significantly reduce myocardial infarctions, strokes, cardiac death and total mortality.

However Statins have limitations. Although common side effects are minor and major adverse events are extremely rare, our patients remain fearful. Secondly, Statin pharmacodynamics are not ideal. Thirdly, adherence of taking Statin medications on a daily basis is poor and this attenuates the benefits. Fourthly, Statins are not always able to get LDL to really low levels required to improve outcomes in high risk patients.

These limitations have led to the search for other medications to be used in combination or instead of maximally tolerated doses of Statins. Some already in clinical use have positive outcome data. Others are effective in lowering LDL but outcome data are pending. The future is with these innovative therapies that have the potential to effectively lower LDL, decrease side effects, improve adherence and outcomes. This presentation will focus on these.
Samir Rafla
Alexandria University, Egypt

Biography
Samir Rafla born 1947 and now he is a Emeritus Professor of Alexandria University, Egypt. He received his doctoral degree from Alexandria University in 1983 and severed as an Professor & HOD for cardiology up to August 2007, and his authorship includes Principles of Cardiology, Differential diagnosis in clinical Medicine, part I, and part II, Recent advances in diagnosis and Management of Cardiac Arrhythmia and Alexandria book of cardiology and severed as an Vice president Member of ECRA and he is a member of FACC, FESC, FHRS and also a member of EHRA,

Pharmacologic treatment of Atrial Fibrillation
Luc Djousse
Harvard University, USA

Biography
Luc Djousse, MD, ScD, MPH is a cardiovascular epidemiologist. He is Associate Professor of Medicine at Harvard Medical School and Associate Professor of Nutrition at Harvard T. H. Chan School of Public Health. He also serves as Director of Research in the Division of Aging, Department of Medicine, at Brigham and Women’s Hospital, Boston, and Chief Epidemiologist and Director of Science at MAVERIC, Boston Veterans Affairs. His research focuses on the role of diet and other modifiable lifestyle factors on the risk of heart failure and other cardiovascular diseases.

Plasma total and individual non-esterified fatty acids and risk of heart failure

Background: Although high plasma concentration of non-esterified fatty acids (NEFAs) have been associated with lipotoxicity, glucose dysregulation, and incidence of type 2 diabetes, little is known about the role of total as well as individual NEFAs on the incidence of heart failure (HF).

Hypotheses: We tested the hypotheses that (1) plasma concentration of total NEFAs is positively associated with incidence of HF and (2) only few individual NEFAs confer elevated risk of HF.

Methods: We prospectively analyzed data from the Cardiovascular Health Study. Total NEFAs (n=4,248) were measured by the Wako enzymatic method and individual NEFAs were measured by gas chromatography (n=2,140). HF events were adjudicated by the Events Committee.

Results: The mean age at baseline (1992–93) was 75 years. During a median follow up of 11 years, 1,286 (30%) participants developed HF. In a multivariable adjusted Cox regression, each standard deviation higher plasma NEFAs was associated with 13% (95% CI: 6% to 19%) higher risk of HF (p <0.001). Analysis of 35 individual NEFAs showed inverse associations [HR (95% CI) per standard deviation] of non-esterified pentadecanoic [0.73 (0.57-0.94)], γ-linolenic acid (GLA) [0.87 (0.75-1.00)], and docosahexaenoic acid (DHA) [0.73 (0.61-0.88)] acids with HF, and positive associations of non-esterified stearic [1.30 (1.04-1.63)] and nervonic [1.17 (1.06-1.29)] acids with HF.

Conclusion: Among older adults, we observed a positive association of plasma total NEFAs with HF that is driven by non-esterified stearic acid and nervonic acid while inverse associations were seen with plasma pentadecanoic, GLA, and DHA.
M. Rudenko
Russian New University, Russia

Biography
Mikhail Y. Rudenko currently working as Senior Researcher, Laboratory of Human Cardiovascular System, Russian New University, Russia. He is a Editorial Board Member for Cardiometry Open Access Journal.

Cardiometry: a new fundamental scientific field in cardiology
Listeners will learn about a fundamental discovery of a new blood flow mode with low friction due to structuring the flow in each cardiac cycle in the form of alternating rings of blood cells and plasma, which is accurately described mathematically by the authors. This radically changed the paradigm of knowledge about the cardiovascular system. New opportunities for highly efficient non-invasive cardiac diagnostics appeared. It became possible to measure the blood volume and heart muscle metabolism and qualitatively assess the relationship between heart and central nervous system only with the help of an electrocardiogram in each cardiac cycle.

Discovery allowed creating a new theory of cardiac cycle phase analysis and, for the first time after V. Einthoven, introducing a new symbol on the ECG point L, that is the beginning of rapid ejection phase. That is just the phase structure of the cardiac cycle that creates and supports hemodynamics.

The results of the fundamental research allowed the authors to create a new field of science, cardiometry, science of accurate measurements in cardiology. It is based on revealed laws and created axiomatics for proving the studied phenomena compliance with the truth and broad practical use of serial electrocardiograms based on information technologies. This allowed to attribute cardiometry to the natural science field for the first time.

The report will acquaint listeners with the real commercially manufactured unique devices non-invasive diagnostics and therapy, in which the cardiometry theory is implemented.

Practicing cardiologists will learn about the cardiometry opportunities to significantly improve the quality of their work. It reveals the possibility of new topics for doing research.
Huang Wei Ling
Medical Acupuncture and Pain Management Clinic, Brazil

Biography
Huang Wei Ling, born in Taiwan, raised and graduated in medicine in Brazil, specialist in infectious and parasitic diseases, a General Practitioner and Parenteral and Enteral Medical Nutrition Therapist. Once in charge of the Hospital Infection Control Service of the City of Franca’s General Hospital, she was responsible for the control of all prescribed antimicrobial medication and received an award for the best paper presented at the Brazilian Hospital Infection Control Congress in 1998. Since 1997, she works with the approach and treatment of all chronic diseases in a holistic way, with treatment guided through the teachings of Traditional Chinese Medicine and Hippocrates. Researcher in the University of São Paulo, in the Ophthalmology department from 2012 to 2013. Author of the theory Constitutional Homeopathy of the Five Elements Based on Traditional Chinese Medicine. Author of more than 100 publications about treatment of variety of diseases rebalancing the internal energy using Hippocrates thoughts.

Myocardial Infarction Without Arterial Obstruction in Patient Post COVID 19 Treatment

Introduction: Some risk factors associated with COVID 19 infections were established such as coronary artery disease in patients with SARS-CoV-2 infections. The use of highly concentrated medications according to Ardnt Shultz Law can induce a reduction in the vital energy, leading to stagnation of Blood and propensity to have myocardial infarction even without arterial obstruction.

Purpose: to demonstrate that patients with COVID 19 infection that received highly concentrated medications to treat this infection have more propensity to develop myocardial infarction some days after the treatment is instituted.

Methods: through one case report of 42 years-old patient with a history of acquired COVID 19 on January 2nd, 2021, he was admitted to the hospital due to dyspnea symptoms, myalgia, and needs oxygenation. He received the medications, ivermectin, hydroxychloroquine, and corticosteroids. After 18 days of the initial manifestations, the patient felt pain in the chest and went to the hospital and they found that his troponin was increasing gradually after two hours it increased many times and the physician decided to admit him again to the hospital to make more exams. The patient was submitted to catheterization and the result of this procedure was that all his coronary were in a perfect state of health without any obstruction and they treated him as if he had a myocardial infarction. After three months, the patient went to the author’s clinic to evaluate his condition and she did chakras’ energy centers measurement.

Results: the results of this condition revealed that all his chakras’ were in the lowest level of energy with exception of the seventh which was normal. The author began his treatment with the use of homeopathic medications according to the theory Constitutional Homeopathy of the Five Elements based on Traditional Chinese Medicine.

Conclusion: the conclusion of this study is that patients when treated with highly concentrated medications to treat SARS-CoV-2 infection can develop myocardial infarction without arterial obstruction due to an energy deficiency state that is aggravated many times due to the use of highly concentrated medications used to treat this kind of infection nowadays.
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SPAKERS
Day 2
Ashutosh Mishra
Panacea Institute of Interdisciplinary Research & Education, India

Biography
Ashutosh Mishra is a renowned Endocrinologist and Diabetologist from Varanasi. He has done his MBBS and MD from the prestigious Institute of Medical Sciences, BHU, and a Fellowship in Diabetes from CMC Vellore. He is the Founder and Director of Panacea Hospital and Diabetes Care Organization, where he also serves as head of Endocrinology, Diabetes & Metabolism. He has also served as an endocrinologist at prestigious hospitals like SGPGI, Lucknow, and FOR-TIS Hospital, New Delhi. He is also the National Coordinator for the Cardio-Diabetes Self-Management Education (CDSME) Program and Dean of the Panacea Institute of Interdisciplinary Research and Education. He is also the national secretary of CARDIABON -A Society of Cardio Diabetes and Renal Disease.

Parsimonious Use of Oral GLP-1 Receptor in Diabetes Management – An Exploratory Study
GLP-1 receptors are gaining acceptance as a first-line drug in diabetes management. It is a non-insulin treatment for type 2 diabetes mellitus (T2DM). An adjunct to diet and exercise, its use is linked with improved glycemic control in adults living with T2DM. Presently the guidelines suggest using 7 mg or 14 mg tablets once a day. The major concern with the drug is the cost of the therapy which eventually results in non-adherence to the treatment regime. This prospective study investigates the efficacy of oral GLP-1 receptors once a week. The study was planned in a hospital setting involving patients having the intention to use the therapy. The GLP-1 receptors were used in addition to existing therapy and the results were analyzed. The enrolled patients were evaluated on follow-ups for outcomes using anthropometric and non-anthropometric biomarkers such as HbA1c, Body Max Index (BMI), and Waist Circumference (WC). The sampling method used for the study is non-probabilistic purposive sampling. The sample size for the study was taken 98 using Cochran’s Formula. Before and after analysis of the effect was done using paired t-tests using SPSS 26. The three hypotheses were tested (1) the proposed intervention reduces HbA1c by more than 1% (2) the proposed intervention reduces BMI by more than 2 units, and (3) the proposed intervention reduces WC by more than 2 units. The study gets favorable results for the first two hypotheses while the results for the third hypothesis were negative. The results of the exploratory study suggest that parsimonious use of GLP-1 receptors should be promoted for economically weaker patients. The findings of the study are useful for clinicians, researchers, and policymakers.
Mghaieth Fathia
Rabta Hospital Tunis, Tunisia

Biography

Fathia Mghaieth Zghal is the coordinator of Cardio-reanimation service Echo Lab, Rabta Teaching hospital of Tunis, Tunisia her focus interests are myocardial strain, echo in the ICU, echo in Cath lab, She id also Coordinator of the Acute cardiovascular working group in the Tunisian Society of Cardiology and cardiovascular surgery concerning academic roles, she is head of department of medicine in the faculty of medicine of Tunis, Tunisia, and the coordinator of acute cardiovascular medicine master in the faculty. Member ot ethics committee in Rabta hospital and coordinator of ethic working group of the publications help committee, in the faculty of medicine of Tunis, Tunisia Member of the tunisian laboratory research "medical biochemistry and genetic of atherosclerosis".

Hypertensive emergencies, nuanced diagnosis and management are needed

Hypertensive emergencies have a large spectrum of clinical manifestations, they involve high acute elevation of blood pressure above 180/110 MmHg and acute one or several visceral damages. Different therapeutic strategies in different environments are needed to control blood pressure, monitor vital parameters, and deliver specific therapies when needed.

First, they must be distinguished from hypertensive crisis. If confirmed a medical transport to an intensive care unit is needed but the transport has to be oriented in case of aortic dissection, coronary acute syndrome or stroke to respectively cardiovascular surgical, catheter laboratory or stroke departments, as specific treatments are not to be delayed by non-specific blood pressure lowering measures. The medicines as well as the intensity and rapidity of lowering blood pressure itself differ from rapid intense intervention to less than 120/70 MmHg in the first hour in case or aortic dissection to a very careful and progressive lowering to preserve cerebral perfusion in case of stroke. Oral therapies specially angiotensin conversion enzyme inhibitors had encouraging results in recent trials on malignant hypertension. The urgent management is not completed only by detecting and correcting acute elevation of blood pressure and its acute visceral damages. There is a need to detect and treat the aetiology of this serious complication, and to reconnect the patient to a regular management and close following by a specialist in order to prevent relapse of this vital situation.

Finally, registers are needed to detect these complication, epidemiologic data are not well established in this field.
Background and why is there a need for such a guideline?

- The annual volume of major surgery worldwide is estimated to be >300 million patients (about 5% of the world population).
- Nearly half of adults aged ≥45 years undergoing major non-cardiac surgery (NCS) present with:
  - At least two cardiovascular risk factors
  - 18% have coronary artery disease
  - 4.7% have a history of stroke
  - 7.7% had a modified Revised Cardiac Risk Index (RCRI) score ≥3
  - The rates of NCS after PCI were 11% and 24%, 1 and 3 years after PCI respectively.
  - The cut-off ages at which NCS was more likely to occur within 1 and 3 years of PCI were 62 and 73 years respectively

Importantly our population is rapidly ageing. As a result, the number of patients in need of non-cardiac surgery (NCS) continues to increase.

- Up to 8% of these patients require critical care admission with a mean in-hospital mortality of 4% resulting in >4 million post-operative deaths every year.
- The risk of cardiovascular morbidity and mortality in patients undergoing NCS is the result of an interplay between patients-related risk and the intrinsic risk of surgery dependent on the circumstances under which it takes place (immediate, urgent, time-sensitive and elective) and its type (low, intermediate, and high risk).

This is a summary of new recommendations and expanded topics within the 2022 European Society of Cardiology (ESC) guidelines on cardiovascular (CV) assessment and management of patients undergoing non-cardiac surgery (NCS). The following are key points to remember:

Perioperative CV complications dramatically impact overall postoperative prognosis of patients undergoing NCS. Risk is influenced by a) presence and optimization of patient-specific comorbidities, b) complexity of the planned surgical procedure, and c) the clinical urgency of surgery.

1. Patient-specific risk factors should be identified and optimized during preoperative evaluation as time permits.
2. Stratification of surgical risk as low, intermediate, or high along with patient-specific CV risk factors collectively inform the approach to CV testing.
3. When high-risk surgery is planned in patients with high CV risk, less invasive surgical techniques should be considered.
Dmitry Kashirskikh
Institute of General Pathology and Pathophysiology, Russia

Biography
Dmitry Kashirskikh is a junior researcher at the Laboratory of Cellular and Molecular Pathology of Cardiovascular System, Avtsyn Research Institute of Human Morphology of Federal state budgetary scientific institution “Petrovsky National Research Centre of Surgery” (Moscow, Russian Federation). He received a grant from the Russian Science Foundation (22-25-00391) for the study of atherosclerosis. Also, he is a member of European Atherosclerosis Society (EAS). His areas of interest include atherogenic LDL modifications, deglycosylation in atherosclerosis and mitochondrial DNA mutations in atherosclerosis.

Low-Density Lipoprotein Desialylation Processes in Mouse Model

Objectives: It has been considered that the initial link in atherogenesis is a modification of LDL. One of the types of atherogenic modification is the LDL desialylation. The aim of this study was to model the LDL desialylation in vivo. Administration of a fixed concentration of neuraminidase immobilized on IgG would allow us to model the desialylation of LDL revealed in humans.

Materials and Methods: The control group of C57BL6 mice (n=48) was treated by a single injection of saline, while the experimental group (n=48) received Vibrio Cholerae neuraminidase conjugated with mouse IgG. Mice were terminated at fixed periods: before and after a single injection (1-7 days). LDL was isolated from serum by ultracentrifugation. The content of sialic acid was determined according to Warren's method. Lipids of serum were measured by commercial kits.

Results: A significant decrease in LDL sialic acid by 30% was detected up to 5 days after the neuraminidase injection. Also, serum levels of triglycerides, total cholesterol and HDL-cholesterol in experimental mice did not differ compared with wild-type control mice.

Conclusions: LDL desialylation has been successfully modeled in vivo. In addition, LDL desialylation did not affect blood lipid levels in mice. It is needed to do further research on the effect of LDL desialylation using a high fat diet and transgenic mice (ApoE-/- or Ldlr-/-). This work was supported by the Russian Science Foundation (Grant # 22-65-00005).
Qanitha Samar
Madinah Cardiac Center, KSA

Biography
Qanitha Samar, a senior cardiac sonographer with ten years of professional experience and acquired knowledge in echocardiography, enthuses about the research into new technologies and applied cardiac interventions and their impact on remodelling the heart. Her current project is about to evaluate the success of evolving intrauterine aortic balloon valvuloplasty in hypoplastic left heart syndrome over early surgical intervention in infants by improving the biventricular function. To make her work more reliable for the readers she prefers to be mentored by few best research cardiologists associated with the Saudi heart association. Because of her volunteerism, she has a passion for health awareness among Madinah residents.

Intrauterine Aortic Balloon Valvuloplasty to overcome hypoplastic left heart syndrome - A Review article

Critical aortic stenosis in fetuses is associated with retrograde or bidirectional systolic transverse arch flow, which later leads to an anomaly called hypoplastic left heart syndrome (HLHS) at birth in which the left heart is underdeveloped, reducing the systemic blood flow. Hence, the intervention is indeed necessary for survival. With evolving intrauterine aortic balloon valvuloplasty (IUBV) or fetal balloon aortic Valvuloplasty (FAV) as a treatment option in mid-trimester helps to decrease HLHS with better outcomes of ventricular function after birth with improved prognosis. In the near future, it can be a treatment of choice over early surgical interventions in infants if the risk of FAV fetal demise is lower. A review study was performed based on the electronic search; data obtained from the literature review and research articles from 2011 to 2022 considering the factors like FAV candidate’s criteria, associated lesions, complications associated with the procedure, mother and fetus safety, measurements considered pre and post procedures, and recorded measurements of prenatal and postnatal were compared. LV length ratios to LV pressure estimation have favored improved ventricular function progressively at the age of one year. The results of FAV with success birth rates of 75-85% and death rates of 10-20%, respectively, and a moderate increase in biventricular circulation necessitate the procedure’s expansion to be widely practiced. At present working on accumulating the data regarding acceptable associated risk, the rate of fetal demise around the globe and the progress of the patient’s health after the age of 5 years.
Raffaele Pilla
St. John of God Hospital, Italy

Biography
Raffaele Pilla, Pharm.D., Ph.D., Doctor Europaeus, received his Master’s degree in Pharmacy at G. d’Annunzio University in Chieti-Pescara, Italy in 2005, where he also served internships at the Cell Physiology Laboratory and Molecular Biology Laboratory. Prior, he was an Erasmus Student at Faculté de Pharmacie de Reims in Reims, France. He received his Doctor Europaeus in 2010 from Pitié-Salpêtrière Institute in Paris, France. Also in 2010, he received his Ph.D. in Biochemistry, Physiology, and Pathology of Muscle at G. d’Annunzio University in Chieti-Pescara, Italy. He was hired as a Postdoctoral Scholar in the Department of Pharmacology and Physiology at the University of South Florida in Tampa, on two research grants funded by the Office of Naval Research (US Navy) and Divers’ Alert Network. He has written and lectured widely worldwide. He has been involved in ongoing research at the University of South Florida with the use of ketone esters.

Therapeutic ketosis and the broad field of applications for the ketogenic diet: Ketone ester applications & clinical updates
It has been recently shown that nutritional ketosis is effective against seizure disorders and various acute/chronic neurological disorders. Physiologically, glucose is the primary metabolic fuel for cells. However, many neurodegenerative disorders have been associated with impaired glucose transport/metabolism and with mitochondrial dysfunction, such as Alzheimer’s/Parkinson’s disease, general seizure disorders, and traumatic brain injury. Ketone bodies and tricarboxylic acid cycle intermediates represent alternative fuels for the brain and can bypass the rate-limiting steps associated with impaired neuronal glucose metabolism. Therefore, therapeutic ketosis can be considered as a metabolic therapy by providing alternative energy substrates. It has been estimated that the brain derives over 60% of its total energy from ketones when glucose availability is limited. In fact, after prolonged periods of fasting or ketogenic diet (KD), the body utilizes energy obtained from free fatty acids (FFAs) released from adipose tissue. Because the brain is unable to derive significant energy from FFAs, hepatic ketogenesis converts FFAs into ketone bodies—hydroxybutyrate (BHB) and acetoacetate (AcAc)—while a percentage of AcAc spontaneously decarboxylates to acetone. Large quantities of ketone bodies accumulate in the blood through this mechanism. This represents a state of normal physiological ketosis and can be therapeutic. Ketone bodies are transported across the blood-brain barrier by monocarboxylic acid transporters to fuel brain function. Starvation or nutritional ketosis is an essential survival mechanism that ensures metabolic flexibility during prolonged fasting or lack of carbohydrate ingestion. Therapeutic ketosis leads to metabolic adaptations that may improve brain metabolism, restore mitochondrial ATP production, decrease reactive oxygen species production, reduce inflammation, and increase neurotrophic factors’ function. It has been shown that KD mimics the effects of fasting and the lack of glucose/insulin signaling, promoting a metabolic shift towards fatty acid utilization. In this work, the author reports a number of successful case reports treated through metabolic ketosis.
Figure 1: Ketone Ester significantly increased resistance against Central Nervous System Oxygen Toxicity seizures (D’Agostino D.P. et al., 2013 Am J PhysiolRegulIntegr Comp Physiol. 304(10):R829-36).
Jyotsna Maddury
Nizam’s Institute Of Medical Sciences, India

Biography
Maddury Jyotsna is a Professor & HOU-IV of cardiology, Nizam’s Institute of medical sciences. She has fellowship in Interventional cardiology from Rabin Medical center, Tel Aviv. She undergone NOGA training for electromechanical mapping for stem cell therapy from Rabin Medical center. She is Trained for coronary pressure study from Mayo Clinic, Rochester. She is having fellowship and memberships in following: FESC- Fellow of European society of cardiology- awarded for unique research work. FICC- Fellow of Indian College Cardiology. Member of American society of cardiology. Member of American society of hypertension 2005 - Reg no 30010. Life Member of Cardiological Society of India – Regn. No. L-2703 Life Member of Indian Academy of Echocardiography – IAE Life Membership No. L-803 Fellow of American college of cardiology (FACC) 2010 – 860181 FF SQC course – Statistical quality course – 2013. Green belt in Six Sigma – 2013.She is doing basic research work on stem cell therapy and cardiovascular disease in females als publishes more than 60 papers on coronary artery disease especially on interventions are presented in international conferences and published in prereviewed international journals.

She is Editorial Board member for 5 journals and Reviewer for 21 journals.

Cardiovascular Manifestations in Covid-19 Patients
Most important medical challenge during past two years is the COVID 19 pandemic due SARS-CoV-2 virus. COVID 19 morbidity is increased in the presence of CAD risk factors. Effect of CAD risk factors and COVID 19 infection are bidirectional. Pre-existing conditions, like cardiovascular disease (CVD), hypertension, diabetes, and obesity, are increases the severity as well mortality rate of COVID. COVID 19 disease induces multiple cardiovascular manifestations, such as myocarditis, acute myocardial injury, acute myocardial infarction (MI), stress-induced cardiomyopathy, cardiogenic shock, arrhythmias and, subsequently, heart failure (HF) and cardiac arrest. Increase of Troponin suggests a hyper inflammatory state or may be due to acute myocarditis. Elevated troponin without other laboratory markers elevation suggests aggressive COVID-19 disease than myocardial injury. Stress, or takotsubo cardiomyopathy occurred primarily in women with covid 19 and these women have more severe heart failure. The patients with COVID-19 positive, more frequently have multi-vessel thrombosis, stent thrombosis, and a higher thrombus when compared to COVID-19-negative STEMIs. Because of higher thrombus burden more usage of GP IIb/IIIa inhibitors and thrombus aspiration and higher heparin doses to achieve therapeutic activated clotting times were also noted. Patients with pulmonary embolism had significantly higher hs- cTnT and NT pro-BNP levels than those without pulmonary embolism. In COVID-19, arrhythmias noticed are atrioventricular/ventricular block, sinus tachycardia, sinus bradycardia, atrial arrhythmias and ventricular arrhythmias. Consideration for potential drug interactions should be take while treating cardiovascular disease patients with covid 19.
Hend Galal Eldeen Mohamed Ali Hassan
Galala University, Egypt

Feasibility study in assessment of congenital cardiovascular malformation by recent technique of fetal cardiac MR imaging

Background: Abnormalities of the cardiovascular system are the most common congenital diseases in the fetus and the first cause of infant mortality. Echocardiography is still the method of choice to visualize the fetal cardiac cardiovascular abnormalities. Fetal cardiac MR imaging is a novel MRI technique which can provide valuable information that could add to the prenatal diagnosis and evaluation of cardiac and most of extra-cardiac anomalies, it is relatively unaffected by maternal and fetal conditions which particularly impair sonographic visualization of the fetal heart. In this work, we aimed to highlight the advantage of FCMRI over fetal echocardiography in assessment of fetal congenital cardiac anomalies.

Results: Fifty-Two fetuses with suspected or diagnosed congenital cardiac anomalies. All cases underwent detailed history taking, fetal echocardiography followed by fetal cardiac MR. Findings of fetal echocardiography were compared with that of cardiac MRI and correlated with standard postnatal echocardiography. Prenatal Echo and fetal cardiac MRI showed significant moderate agreement between the two modalities, Kappa test: 0.500; p value 0.021. Fetal MRI had a significant role in detection of extra cardiac anomalies in most cases. Comparing to gold standard postnatal echo. Accuracy of fetal CMRI is 95.5% and of fetal Echo is 86.4% regarding overall cardiac anomalies:

Conclusion: Fetal cardiac MR imaging as an adjunct to fetal echocardiography may provide valuable information that could add to the prenatal diagnosis and evaluation of cardiac and most of extra cardiac anomalies.
**Yasser Mohammed Hassanain Elsayed**  
Egyptian Ministry of Health (MOH), Egypt

**Biography**
Yasser Mohammed Hassanain Elsayed is a Critical care physician, cardiologist, and researcher (Egyptian Ministry of Health). He obtained MBBch (Al-Azher University) and a PGDip Cardiology (Middlesex University). The researcher has (109) articles and (4) medical books. He has (9) innovative issues; (3) innovative “Signs”, (4) “Phenomena”, (1) “Modification”, and (1) “Maneuver”. He has peer-reviewed (142). He was a Speaker at (14) International Conferences. He is an instructor; (6) lectures. He is an editorial member (about 40 medical journals). He was honored for research by several institutes. Research Interest: Critical Care, Emergency, Cardiology, Internal Medicine, Pharmacology, and Toxicology.

**Mimic high lateral myocardial infarction in chest tetany with mirror electrocardiographic change, Movable phenomenon (Yasser's phenomenon), and coronary spasm; dramatic Oxygen reversal—a case Report**

**Rationale:** Tetany is a common, serious, well-established endocrinial and metabolic hypocalcemic disorder. Chest tetany is a novel metabolic term in hypocalcemia characterized by acute severe twisting chest pain. Movable phenomenon (Yasser’s phenomenon) is a new phenomenon that is usually associated with hypocalcemia. Oxygenation may have a role in the management of coronary artery spasm.

**Patient concerns:** A middle-aged farmer smoker male patient presented to the physician outpatient clinic with tetany, mimic high lateral myocardial infarction, mirror electrocardiographic change, Movable phenomenon (Yasser’s phenomenon), and coronary artery spasm.

**Diagnosis:** Mimic high lateral myocardial infarction in chest tetany with mirror electrocardiographic change, Movable phenomenon (Yasser’s phenomenon), and coronary artery spasm.

**Interventions:** Electrocardiography, oxygenation, IV-calcium injection, and echocardiography.

**Outcomes:** Acute dramatic clinical and electrocardiographic improvement had happened.

**Lessons:** The reversal of mirror electrocardiographic change, reversal of ST-segment depression coronary artery spasm, and normalization of Movable phenomenon (Yasser’s phenomenon) after oxygenation. It signifies the role of oxygen in both coronary artery spasm and tetany. Mirror local electrocardiographic change is a novel described expression that may reflect the myocardial polarity in this chest tetany. Keywords: Mimic high lateral myocardial infarction, Chest tetany, mirror electrocardiographic change, Movable phenomenon (Yasser’s phenomenon), Coronary spasm, Oxygen reversal.
5th Edition Scholars

WORLD HEART CONGRESS

Md. Abir Tazim Chowdhury
Evercare Hospital Dhaka, Bangladesh

Biography

Chowdhury completed his MBBS (Hon's in Medicine) from Sylhet University of Science and Technology in 2011. Later, in 2020, he completed a Master of Surgery (MS) in Cardiovascular and Thoracic Surgery from Bangabandhu Sheikh Mujib Medical University, Dhaka. Dr. Chowdhury trained in different aspects of surgery and had vast working experience at government and private specialized institutes. Currently, he works as a Cardiovascular and Thoracic Surgeon Department of Cardiothoracic and Vascular Surgery at Evercare Hospital Dhaka, Bangladesh. He attended 1500+ general surgeries & 1500+ cardiac, vascular, and thoracic surgery in his little surgical carrier. He believes “A surgeon should respect every tissue of the patient’s body during the cut and fix” and “A good surgeon must know how to fix complications of surgeries.” Dr. Chowdhury presents scientific papers at several national and international conferences and publishes articles in various national and international reputed journals.

CABG on CKD Patients: A Single Center Experience in Bangladesh

Chronic kidney disease (CKD) is an independent risk factor for cardiovascular events, and pre-dialysis patients of CKD appear to be more likely to die of cardiac disease than kidney disease. CKD accelerates atherosclerosis by several mechanisms, notably hypertension and dyslipidemia, known risk factors for coronary artery disease (CAD). Moreover, calcium and phosphorus homeostasis is also altered in CKD. It may lead to hypercalcemia and vascular calcification in the coronary arteries. Regarding the revascularization technique for CAD, CABG is a favorable option compared to PCI. The choice of CABG is because it has lessened repeat revascularization, more significant relief of angina, and lengthened long-term survival. However, perioperative care is challenging to reduce operative risks.

A retrospective observational study was performed on CKD patients who underwent CABG in the cardiothoracic and vascular surgery departments in Evercare Hospital Dhaka, Bangladesh, between January 2020 to July 2022. The study’s objective was to determine morbidity and early mortality after CABG. Of 425 patients who underwent isolated CABG, 65 patients who coexisted with CKD stage 2 and above were enrolled in the study. Enrolled patients were divided into the dialysis-dependent group (n=18) and the non-dialysis-dependent (n=47) CKD groups. The study analyzed the following variables—demographic characteristics, prolonged chest drainage, reopening, number of blood transfusions, prolonged hospital stay, mediastinitis, arrhythmias, respiratory tract infection, hypoalbuminemia, cardiovascular event, early readmission, and early mortality. Results of the study revealed that prolonged chest drainage, hospital stay, and arrhythmias were more significant in the dialysis-dependent group (p <=0.05). Moreover, one case of mortality and one of mediastinitis were found in the dialysis-dependent group. Dialysis-dependent CKD patients are burdened with comorbidities and biochemical changes, so they are vulnerable to postoperative adverse events. This retrospective study represents our experience to deals with CKD patients.
Prevalence of Hypertension and DM in 8000 patients of Coronary Angiography

Background and Aims: Systemic hypertension and DM are two major coronary risk factors associated with an increased risk of morbidity and mortality of coronary artery disease (CAD) in several populations. According to the available data, the general population of Nepal has 26% prevalence of hypertension and 4% prevalence of DM. This paper reports the prevalence of these two risk factors in Nepalese patients who underwent coronary angioplasty at Norvic International hospital.

Methods: We did a retrospective analysis of a total of 8000 patients who underwent Coronary Angiography between year 2000 and year 2015 for assessment of prevalence of systemic hypertension and DM.

Results: Among the total cases, 21.8% had normal coronaries, 25% had non critical lesions (<70% lumen stenosis) and 51.2% had critical disease (≥70% lumen stenosis). Among the normal cases, 65% had hypertension and 4% had Diabetes. Eighty percent of the non critical cases had hypertension and 45% had Diabetes whereas 35% had both. Likewise, 81% of the critical cases were hypertensive and 50% were diabetic whereas 40% had both.

Conclusions: Hypertension and diabetes are two major coronary risk factors in Nepalese population. Both risk factors are significantly common in angiographically proven coronary artery disease patients as compared to those with normal coronaries. An aggressive preventive approach directed towards these two risk factors may help in decreasing the risk of coronary artery disease burden in our country.

Association between Preoperative Retrograde Hepatic Vein Flow and Acute Kidney Injury after Cardiac Surgery

Introduction: Hepatic venous flow patterns reflect pressure changes in the right ventricle and are also markers of systemic venous congestion. Pulsatility of the inferior caval vein was used to predict the risk of acute kidney injury (AKI) after cardiac surgery. Aims: Our objective was to evaluate the association between preoperative hepatic venous flow patterns and the risk of AKI in patients after cardiac surgery.

Methods: This prospective, observational study included 98 patients without preexisting liver disease who underwent cardiac surgery between 1 January 2018, and 31 March 2020, at a tertiary heart center. In addition to a routine echocardiographic examination, we recorded the maximal velocity and velocity time integral (VTI) of the standard four waves in the common hepatic vein with Doppler ultrasound. Our primary outcome measure was postoperative AKI, defined as the percentage change of the highest postoperative serum creatinine from the baseline preoperative concentration (%ΔCr). The secondary outcome was AKI, defined by KDIGO (Kidney Disease Improving Global Outcomes) criteria.

Results: The median age of the patients was 69.8 years (interquartile range [IQR 25–75] 13 years). Seventeen patients (17.3%) developed postoperative AKI based on the KDIGO. The VTI of the retrograde A waves in the hepatic veins showed a strong correlation (B: 0.714; p = 0.0001) with an increase in creatinine levels after cardiac surgery. The velocity time integral (VTI) of the A wave (B = 0.038, 95% CI = 0.025–0.051, p < 0.001) and the ratio of VTI of the retrograde and anterograde waves (B = 0.233, 95% CI = 0.112–0.356, p < 0.001) were independently associated with an increase in creatinine levels.

Conclusions: The severity of hepatic venous regurgitation can be a sign of venous congestion and seems to be related to the development of AKI.
Samah Salah Alasrawi  
AJalila Children’s Hospital, UAE

**Tetralogy Of Fallot Managements**

Tetralogy of Fallot (TOF) is a combination of four congenital heart defects. The four defects are a ventricular septal defect (VSD), pulmonary stenosis, a misplaced aorta and a thickened right ventricular wall (right ventricular hypertrophy).

**There are many types of Tetralogy of Fallot**
- Pink TOF + normal SO2
- TOF with moderate sub valvular stenosis + mild desaturation
- TOF with sever sub valvular pulmonary stenosis + moderate to sever desaturation
- TOF with pulmonary atresia
- Will present many TOF cases according to the type and how to manage

**Conclusion**

There are different types of management for TOF in neonatal period according the heart anatomy and clinical presentation

**Keywords:** Cardiology – hemodynamic – assessment – measurement

Saud A. Bahaidarah  
King Abdulaziz University, KSA

**Cardiac Catheterization During Extracorporeal Membrane Oxygenation After Congenital Cardiac Surgery: A Multi-Center Retrospective Study**

Cardiac catheterization can affect clinical outcomes in patients on extracorporeal membrane oxygenation (ECMO) after congenital heart surgery; however, its effect in this group of patients remains unclear. This study aimed to evaluate the safety and outcome of cardiac catheterization in patients undergoing ECMO after congenital cardiac surgery and determine predictors that influence successful weaning. This retrospective cohort study included pediatric patients who underwent cardiac catheterization while on ECMO after congenital heart surgery in two cardiac centers between November 2012 and February 2020. Predictors of successful weaning from ECMO were studied using univariate and multivariate logistic regression analyses.

Of 123 patients on ECMO support after congenital cardiac surgery, 60 patients underwent 60 cardiac catheterizations (31 diagnostic and 29 interventional). Thirty-four (56.7%) and 22 patients (36.7%) underwent successful decannulation from ECMO support and survived after hospital discharge, respectively. Patients who underwent earlier catheterization (within 24 h of ECMO initiation) had more successful weaning from ECMO and survival compared to others. Patients who underwent intervention procedure (interventional catheterization or redo cardiac surgery after cardiac catheterization) had better survival than those who underwent only diagnostic catheterization (P = 0.038). Shorter duration of ECMO was the most important predictor of successful weaning from ECMO. Early cardiac catheterization greatly impacts successful weaning from ECMO and survival. Patients with correctable lesions amenable either by catheterization or redo surgery are more likely to survive. Shorter durations of ECMO could have a significant influence on successful weaning from ECMO and survival.
**Development and Validation of a Novel Risk Stratification Model for Slow-Flow (SF)/ No-reflow (NR) during Primary Percutaneous Coronary Intervention: The RK-SF/NR Score**

**Study Objective:** In this study we developed and validated a novel risk stratification model for prediction of slow-flow/no-reflow (SF/NR) during primary percutaneous coronary intervention (PCI) namely RK-SF/NR Score.

**Design:** Analytical cross-sectional.

**Setting:** National Institute of Cardiovascular Diseases, Karachi, Pakistan.

**Participants:** Consecutive patients underwent primary PCI.

**Intervention:** A total of 1711 consecutive primary PCI patients were randomly split into two groups in 80%:20% ratio of development set and validation set. A novel risk stratification model was developed in development dataset and tested in validation dataset.

**Main Outcome Measure(s):** Development and validation of a RK-SF/NR score.

**Results:** The overall incidence rate of SF/NR during procedure was 28.8% (493/1711). The final solution consisted of 9 variable namely female gender (points=2), total ischemic time ≥8 hours (points=1), cardiac arrest at presentation (points=2), left ventricular end-diastolic pressure ≥24 mmHg (points=3), left ventricular ejection fraction ≤ 30% (points=2), culprit proximal left anterior descending artery (points=3), thrombus grade ≥4 (points=6), pre-procedure thrombolysis in myocardial infarction 0 flow (points=2), and lesion length ≥35 cm (points=3). In the validation set, area under the curve the RK-SF/NR score was 0.775 [0.722-0.829] and score ≥10 has sensitivity of 77.9% [68.2%-85.8%], negative predictive value (NPV) of 87.3% [82.3%-91.0%], specificity of 62.6% [56.0%-68.9%], and positive predictive value of 46.3% [41.4%-51.2%].

**Conclusions:** RK-SF/NR score had shown good discriminating power for the prediction of SF/NR during primary PCI with good sensitivity and NPV. Hence, proposed model can have good clinical utility for the screening of patients at high risk of developing SF/NR during primary PCI.
Samwel Rweyemamu  
Jakaya Kikwete Cardiac Institute, Tanzania

**Early sonographic detection of coronary artery atherosclerosis in patients with a diagnosis of hypertension: A cross section study in a tertiary Hospital Tanzania**

**Introduction:** Hypertension is the leading risk factor for morbidity and mortality worldwide. It is the main risk factor for Ischemic stroke and carotid artery disease due to atherosclerosis. Stroke is the leading cause of morbidity, mortality, and disabilities worldwide. Extracranial ultrasonography is recommended for an initial evaluation of carotid artery disease.

This study aims to evaluate sonographic findings of carotid artery stenosis in adult with a diagnosis of hypertensive at JakayaKikwete Cardiac Institute (JKCI).

**Methods and materials:** A cross-sectional hospital-based study, conducted at JKCI for the period of 7 months. Consented adult patients with hypertension were consecutively included for sonographic assessment of extracranial carotid arteries. Demographic information and history of associated factors were recorded in a structured questionnaire. Clinical and imaging information was recorded in the data recording sheet.

Statistical SPSS version 20 was used for data analysis. Descriptive analysis was used to present and describe sonographic findings of carotid artery disease and associated factors Pearson Chi-square and Fisher’s exact tests were used to compare proportions between independent variables. Statistical significance was taken into consideration when a P value of < 0.05.

**Results:** One hundred and four (104) patients with hypertension were studied with the mean age 62 (sd- 9) years. Most of patients had 51- 60 and above years 40(38.46%), and females were 77(74.04%). Main risk factors were overweight (50.96%) and diabetes (26.92%). Carotid Doppler USS revealed Intima media thickness (53.85%) and plaque (30.77%). These changes were significantly associated with age (p value= <0.05), hypertension and dyslipidemia (p value= <0.05).

**Conclusion:** Sonographic findings of extracranial internal carotid artery disease in patients with hypertension were intima-media plaque and stenosis. Atherosclerosis changes were associated with high BMI, dyslipidemias, advanced age and female gender.

**Recommendations:** Ultrasound evaluation of carotid vessels to be included in the evaluation of patients with primary hypertension.
Sherif Amer
Al Zahra Hospital, UAE

Robotic-Assisted PCI of out of the hospital cardiac arrest of non ST elevation myocardial infarction: The Future of Coronary Intervention?

Background: Robotic percutaneous coronary intervention (R-PCI) is a novel approach to performing percutaneous coronary intervention (PCI) whereby the operator can utilize remotely controlled technology to manipulate guide wires and catheter devices. This enables the procedure to be undertaken from within a radiation-shielded cockpit. Success in early trials has led to the release of commercially available robotic platforms which have now received regulatory approval and are available for use in clinical practice 1,6. There is limited evidence regarding the effectiveness of approach in the percutaneous treatment of complex de novo coronary lesions in acute coronary syndrome. This case primarily explored the feasibility and safety of this innovative approach for lesions in the left circumflex artery (LCX) and ramus branch.

Case presentation: Here we report the case of a 56-year-old man who suffered from Non ST segment elevation myocardial infarction complicated by out of the hospital cardiac arrest, without history of diabetes or hypertension. The coronary angiography was done after 48 hours after complete neurological recovery showed subtotal occlusion of both ramus and left circumflex artery (LCX). During percutaneous coronary intervention, both vessels were treated using drug eluting stent by Robotic percutaneous coronary intervention (R-PCI). The patient’s paroxysmal chest pain was relieved after the procedure.

Conclusion: R-PCI represents an exciting development in the field of interventional cardiology. It provides a clear benefit to the operator in terms of reducing both radiation exposure and the risk of orthopaedic injuries. The use of the R-PCI approach is an innovative and optional strategy in the treatment of de novo coronary lesions.

Romina Mourino
Hospital Universitario Austral, Argentina

Evolution of subclinical atheromatosis in primary prevention of oncologic population. A cohort study.

Introduction: Coronary heart disease and cancer share multiple pathophysiological mechanisms. Studies have shown, many oncologic patients will develop cardiovascular events. However, there is little evidence regarding endothelial dysfunction of patients with oncologic history in primary cardiovascular prevention, and the impact it may have on the development of subclinical atheromatosis.

Purpose: This study aims to evaluate the prevalence of oncologic history in primary cardiovascular prevention, analyze the proportion of typical cardiovascular risk factors and evaluate cancer as a biological modulator of subclinical atheromatosis.

Methods: A cross-sectional study was conducted using patient records from primary cardiovascular prevention consults that included screening for subclinical atheromatosis in the carotid and ilio-femoral territory, from September 2020 to April 2022. Population characteristics were established using univariate and bivariate analysis.

Results: The study included 5209 patients, divided into Group 1 (non-oncologic patients) 5071 and Group 2 (oncologic patients) 138 (97.2 vs 2.8%). Group 2 patients were predominantly older, with a higher percentage of women and hypertension history. Adjusted linear regression analysis was performed regarding the total plaque area in relation to the oncological history. Evidence showed cancer history increases total plaque area by an average of 8 mm (95% CI of 0.2 mm to 16 mm).

Conclusion: Patients with oncologic history had a greater number and increased total area of plaques, indicating cancer is a positive modulator for the increase in total plaque area size adjusted for typical risk factors. These findings highlight the need for better cardiovascular control in oncologic patients. Further research is needed to corroborate these results and determine the underlying pathophysiological mechanisms.
**Rozana Sadraldin**  
Prince Sultan Cardiac Center-Riyadh, KSA

**Viral vector vaccine related constrictive pericarditis, A Case Report.**

**Background:** Coronavirus disease19 has emerged in the last 3 years and different types of vaccines are massively administered globally where exhibit systemic and cardiac side effects mostly myocarditis and pericarditis. We present a case of a completely healthy male, non-smoker with negative FHX of cardiac diseases.

**Case:** a 29-year-old, who developed acute pericarditis after the first dose of the “viral-vector” vaccine but evolved rapidly into constrictive pericarditis in 3 weeks duration. The patient started to complain of dyspnea III-IV and central chest pain relieved by bending forward day 3 post-vaccine, labeled at EMD with acute pericarditis based on the clinical picture, ECG, and TTE, NSAID and colchicine were started & by 3rd-week outpatient follow up, we found him to have persistent Dyspnea NYHA II with evidence of constrictive pericarditis on echocardiography (figure 2), cCT (figure1) and cMRI (figure3) done after one month. We are unable to confirm a direct association between myocarditis/pericarditis and the vaccine lacking the cardiac biopsy (gold standard).

**Results:** post vaccine constrictive pericarditis is not uncommon, early detection and appropriate management is the mainstay to avoid unwanted consequenc-es.

**Conclusion:** Although there are many reports and registries of post-vaccine myo/pericarditis, the exact association is still unclear and requires further investigation.

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**Khaldoon Alhumood**  
Chest Disease Hospital, Kuwait

**Heart Failure, where are we today?**

Heart failure is a syndrome of high mortality, morbidity and both social and financial burden. In recent years the management of heart failure has taken great leaps towards improving survival and quality of life for patients suffering from this disease. Despite the growing evidence and clear guidelines, there is still a gap of management among healthcare providers, leading to under appreciation, underdiagnosis and undertreatment. In this lecture I will give an overview on heart failure, the latest guidelines in medical managements and options for advanced therapy in end stage cases.
### Upcoming Conferences

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<td>March 27-28, 2023</td>
<td>London, UK</td>
<td><a href="https://scholarsconferences.com/nanoscience-nanotechnology/nanotek@scmeet.org">https://scholarsconferences.com/nanoscience-nanotechnology/nanotek@scmeet.org</a></td>
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<td><strong>4th Edition Scholars International Conference on Catalysis and Chemical Engineering</strong></td>
<td>March 29-30, 2023</td>
<td>London, UK</td>
<td><a href="https://scholarsconferences.com/catalysis-frontiers/catalysis@scmeetings.org">https://scholarsconferences.com/catalysis-frontiers/catalysis@scmeetings.org</a></td>
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<td><strong>Global Summit on Oil, Gas, Petroleum Science and Engineering</strong></td>
<td>March 29-30, 2023</td>
<td>London, UK</td>
<td><a href="https://petroleumscienceconference.com/organizer@petroleumscienceconference.com">https://petroleumscienceconference.com/organizer@petroleumscienceconference.com</a></td>
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<td><strong>Scholars World Congress on Material Science and Engineering</strong></td>
<td>June 19-20, 2023</td>
<td>Paris, France</td>
<td><a href="https://materialssciencemeet.com/organizer@materialssciencemeet.com">https://materialssciencemeet.com/organizer@materialssciencemeet.com</a></td>
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<td><strong>World Biopolymers &amp; Polymer Chemistry Congress</strong></td>
<td>June 19-20, 2023</td>
<td>Paris, France</td>
<td><a href="https://polymerscience.scholarsconferences.com/biopolymers@materialssciencemeet.com">https://polymerscience.scholarsconferences.com/biopolymers@materialssciencemeet.com</a></td>
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<td><strong>6th Edition World Congress on Drug Delivery and Nanomedicine</strong></td>
<td>June 19-20, 2023</td>
<td>Paris, France</td>
<td><a href="https://scholarsconferences.com/drugdelivery-nanomedicine/drugdelivery@scholarconferences.org">https://scholarsconferences.com/drugdelivery-nanomedicine/drugdelivery@scholarconferences.org</a></td>
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<td><strong>4th World Congress on Advances in Mental Health and Psychiatry</strong></td>
<td>June 21-22, 2023</td>
<td>Paris, France</td>
<td><a href="https://mentalhealth.scholarsconferences.com/mentalhealth@scholarconferences.org">https://mentalhealth.scholarsconferences.com/mentalhealth@scholarconferences.org</a></td>
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<td><strong>World Congress on Otolaryngology, Rhinology &amp; Laryngology</strong></td>
<td>June 21-22, 2023</td>
<td>Paris, France</td>
<td><a href="https://otorhinolaryngology.scholarsconferences.com/otorhino@scholarconferences.org">https://otorhinolaryngology.scholarsconferences.com/otorhino@scholarconferences.org</a></td>
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<td><strong>4th Edition Global Summit on Breast and Women’s Cancer</strong></td>
<td>June 21-22, 2023</td>
<td>Paris, France</td>
<td><a href="https://breast-womens-cancer.scholarsconferences.com/cancerscience@scmeetings.org">https://breast-womens-cancer.scholarsconferences.com/cancerscience@scmeetings.org</a></td>
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<td><strong>3rd World Congress on Nursing and Advanced Healthcare</strong></td>
<td>June 21-22, 2023</td>
<td>Paris, France</td>
<td><a href="https://nursingworldcongress.com/organizer@nursingworldcongress.com">https://nursingworldcongress.com/organizer@nursingworldcongress.com</a></td>
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<td><strong>2nd Edition Scholars World Congress on Cancer Research and Oncology</strong></td>
<td>October 23-24, 2023</td>
<td>Tokyo, Japan</td>
<td><a href="https://scholarsconferences.com/cancer-oncology/cancerscience@scmeetings.org">https://scholarsconferences.com/cancer-oncology/cancerscience@scmeetings.org</a></td>
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<td><strong>2nd Edition Scholars International Conference on Gynecology, Obstetrics &amp; Women's Health</strong></td>
<td>October 23-24, 2023</td>
<td>Tokyo, Japan</td>
<td><a href="https://scholarsconferences.com/gynecology-obstetrics/gynecology@frontiersevents.com">https://scholarsconferences.com/gynecology-obstetrics/gynecology@frontiersevents.com</a></td>
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<td><strong>7th Edition Scholars World Heart Congress</strong></td>
<td>October 23-24, 2023</td>
<td>Tokyo, Japan</td>
<td><a href="https://cardiologymeet.org/heartcongress@scholarsconferences.org">https://cardiologymeet.org/heartcongress@scholarsconferences.org</a></td>
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<td><strong>7th Edition International Conference on Pharmaceutics and Novel Drug Delivery Systems</strong></td>
<td>October 25-26, 2023</td>
<td>Tokyo, Japan</td>
<td><a href="https://scholarsconferences.com/pharmaceutics-drugdelivery-research/victor.oliver@scholarsconferences.com">https://scholarsconferences.com/pharmaceutics-drugdelivery-research/victor.oliver@scholarsconferences.com</a></td>
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7th Edition Scholars

World Heart Congress
October 25-26, 2023 | Tokyo, Japan

heartcongress@scholarsconferences.org

Hosted By:
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