

2ND EDITION OF

CARDIOLOGY WORLD CONFERENCE

17

SEPT, 2021

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CARDIOLOGY WORLD
CONFERENCE

SEPTEMBER 17, 2021

Theme:

Advances in Cardiology: Research and Innovations

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About **MAGNUS GROUP**

Magnus Group (MG) is initiated to meet a need and to pursue collective goals of the scientific community specifically focusing in the field of Sciences, Engineering and technology to endorse exchanging of the ideas & knowledge which facilitate the collaboration between the scientists, academicians and researchers of same field or interdisciplinary research. Magnus group is proficient in organizing conferences, meetings, seminars and workshops with the ingenious and peerless speakers throughout the world providing you and your organization with broad range of networking opportunities to globalize your research and create your own identity. Our conference and workshops can be well titled as 'ocean of knowledge' where you can sail your boat and pick the pearls, leading the way for innovative research and strategies empowering the strength by overwhelming the complications associated with in the respective fields.

Participation from 90 different countries and 1090 different Universities have contributed to the success of our conferences. Our first International Conference was organized on Oncology and Radiology (ICOR) in Dubai, UAE. Our conferences usually run for 2-3 days completely covering Keynote & Oral sessions along with workshops and poster presentations. Our organization runs promptly with dedicated and proficient employees' managing different conferences throughout the world, without compromising service and quality.

About **CWC 2021**

CWC 2021 will focus on most recent advancements in all aspects of Cardiology like Cardiovascular diseases Paediatric Cardiology, Stem Cell Research and Regeneration on Cardiology, Heart Transplantation, Interventional cardiology and radiology, includes prompt keynote presentations, Speaker presentations, Poster presentations and exhibitions to gain more information and meet leading Cardiology researchers and potential investigators and get recognition at this event.

KEYNOTE FORUM

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Senay Cetinkaya

Cukurova University, Turkey

The importance of nutrition of children with congenital heart disease (CHD)

The term Congenital Heart Disease (CHD) includes congenital structural or functional abnormalities of the cardiovascular system that can be identified at birth or later. A structural defect in the heart can be named as a congenital heart defect, congenital heart anomaly, or cardiovascular malformation. CHD is the most common congenital anomalies in newborns. The incidence rate is 1% on average and is between 8-12 per 1000 live births. 10-15% of children with this anomaly are included in the critical CHD group, and its frequency is 1.2-1.7 per 1000 live births. In a study conducted in Turkey, the frequency of CHD was found to be 5 per 1000 live births in the first week. In another study conducted in the Central Anatolian region, the frequency of CHD was found to be 7.7 per 1000 live births. In children with heart disease, secondary problems brought about by the disease are of great importance besides the characteristic findings of the disease. The most important of these problems are nutritional deficiencies, anemia and growth retardation. Frequent upper respiratory tract infections, pulmonary hypertension, genetic and intrauterine causes, anoxia, heart failure, abnormal endocrine functions, inadequate nutritional and energy intake are among the causes of growth retardation. Malnutrition is observed in 25-55% of children with CHD, and it is reported that 80% of children with CHD with malnutrition are hospitalized. Causes such as tachypnea, tachycardia, and respiratory distress in children with heart disease affect their nutrition negatively. The importance of nutrition for children with heart disease is emphasized because growth is directly affected. Mothers with 0-3-year-old children should fulfill their responsibilities in infant feeding correctly and ensure that their children are fed appropriately since children aged 0-3 have chronic diseases during the growth and development process, their immune systems are not fully developed, that is, because they are more susceptible to infections, they live their lives dependent on other people, they are in a rapid development and change, and for their full physical and mental development. It is important to plan and implement a holistic nursing care by supporting growth and development by providing appropriate family-centered care for children with CHD and meeting their nutritional needs.

Key Words: Nutrition, growth and development, child, congenital heart disease, nursing.

What will audience learn from your presentation?

- The importance of supporting nutrition in children with CHD
- Family-centered care philosophy in providing appropriate nutrition for children with CHD
- The role of the pediatric nurse in the nutrition of children

Biography

Associate Professor Dr Senay Cetinkaya has 5 patent applications. With the first of these, 2 European and 1 American patents were approved. She won the innovative nurse of the year award with one and a silver medal with the other. Senay Cetinkaya, has completed her bachelor of nursing, master's degree, and PhD in Ege University. In 1988 she was employed as nurse in ICU at the cardiovascular surgery clinic in Ege University, at the medical faculty hospital. In the mean time she has completed her postgraduate (1991) and PhD (1999) on pediatric nursing.



Geng Long Hsu^{1*}, Hong Chiang Chang²

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Vascular (Arterial and Venous) surgery for erectile dysfunction

Penile vascular surgery for the treatment of erectile dysfunction (ED) has been extensively studied across recent three centuries. It is still regarded with caution. We sought to provide an overview of the publications and new developments in this field over the latest decades. Recent studies support a penile vascular assembly in which the tunica albuginea of the corpora cavernosa (CC) is a bi-layered structure with a 360° complete inner circular layer and a 300° incomplete outer longitudinal coat whereby penile erection-related vasculature interacts with the collagen bundles. Meanwhile, chronological studies demonstrate CC drainage veins compose of one deep dorsal vein, two cavernosal veins, and four para-arterial veins between Buck's fascia and the tunica albuginea as opposed to just one deep dorsal vein in the convention version. Thus the emissary veins can be easily occluded by the shearing action elicited by the inner and outer layers of the tunica albuginea. CC is the most ideal milieu for applying Pascal's Law if no venous leak in the entire human body. Recent hemodynamic studies disclose the penile veins play a pivotal role in rigid erection on fresh and defrosted human cadavers despite the lack of endothelial activity and corporeal-venous occlusion function occurs at the transition point of inner and outer tunica albuginea. Overall, reports on revascularization surgery support its utility in arterial trauma in young males, and with a localized arterial occlusive disease in the older male. Penile venous stripping surgery has been shown to be beneficial in correcting veno-occlusive dysfunction, with outstanding results particularly feasible in most ED males. The traditional complications of irreversible penile numbness and deformity have been virtually eliminated with the venous ligation technique superseding venous cauterization. Penile vascular (arterial and venous) reconstructive surgery is viable if, and only if, the surgical handling is properly carried out using a sound method. It ought to be promising in the near future.

What will audience learn from your presentation?

- Penile vascular surgery deserves a promising view rather than being abandoned in most medical societies. It is resulting from the innovative penile fibro-vascular assembly. The audience is alerted from multiple disciplinary such as the plastic surgeon, vascular surgeon, urologist, andrologist, sexual medicines professional and family practitioner, and even pharmacology researcher.
- Give the penile detailed anatomy, erection physiology is disclosed, and penile vascular surgery is the only natural way for restoring erectile function.
- It is helpful to clear the controversy on penile vascular surgery for treating impotence across three centuries.

Biography

Since 1985, Dr Geng-Long Hsu, formerly a clinical professor at China Medical University, has developed a series of potency rejuvenating surgeries, including penile venous stripping, morphology reconstruction, and implantation, in tandem with innovative penile anatomy and erection physiology. In 2003, he was a director of microsurgery potency reconstruction at Taipei Medical University Hospital. Afterward, he established —Hsu's Andrology—which serves as both clinical practice and research works. In 2012, his latest method of penile venous stripping, via acupuncture-assisted local anesthesia on an ambulatory basis, was granted a USPTO patent. He hopes this surgery will be studied and practiced worldwide.

SPEAKERS

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Joan van Rotterdam

University of Newcastle, Australia

Measuring the responsiveness of the SF-36 in the cardiac rehabilitation literature: Combined results of a comparative effectiveness review and meta-analysis

Objective: To investigate the responsiveness of Patient Outcome Measures (POMs) which are essential to map treatment effectiveness of Cardiac (CR) rehabilitation programs, this is an area often overlooked and may be an influence in the variability of evidence currently available.

Data Source: A comparative effectiveness literature review was conducted of studies with a pre to post POM assessment of *responsiveness* (change in health status over time). This was followed by a meta-analysis whose purpose was to gather pooled information on the responsiveness of the main POMs.

Methods: A quality review of this literature not only included RCTs but also parallel studies as well as all observational and retrospective trials. This review included a list of articles and their characteristics, a quality assessment of the literature and a list of POMs utilised in this setting were assessed for *responsiveness*. For the meta-analysis a correlation analysis was undertaken between SF-36 pre and post “within” mean scores in the CR literature to define the degree to which the two sets of variables were related, this was for each domain of the SF-36 and for the PCS and MCS scores.

Results: There was inconsistency in the literature with the measurement of responsiveness or effect-size. The most *responsive* POM in this setting was the Global Mood Scale (GMS). The most commonly used POM was the SF-36 with the SF-36 PCS domain being the most responsive of the composite SF-36 domains, however the PCS shows less ability to discriminate in the higher SF-36 scores. In the individual domains Role Physical, Role Emotional and Physical function are closely grouped as being the most responsive.

Conclusion: The surveyed literature found no “gold standard” POM for CR. The domains of the SF-36 are not responsive to CR, and this is true particularly in the area of more severe disease. Overall it was found that a Likert scale is more responsive than a dichotomous scale and that a simple questionnaire is more responsive in a pre to post setting than a complex questionnaire.

Biography

In 1986 I completed a BSc in Science and I commenced a Postgraduate Diploma in Epidemiology (1993) that I later translated to a Masters in Medical Science (Clinical Epidemiology), which was completed in 2003. Between 2002 and 2003 I undertook a part-time position with the Newcastle Institute of Public Health (NIPH) as a manager of a research project entitled “An Evaluation of the Hunter Chronic Disease Rehabilitation Program”. Then in 2006 I commenced my PhD candidature on a part-time basis and I completed this in April 2019. I have also collaborated on other research projects with the charity Hands on Health Australia.



Putri Bt. Yubbu

University Putra Malaysia, Malaysia

Assessment of diastolic function in children: The dilemma and potential solution

Left ventricular(LV) is characterized by LV relaxation, early diastolic recoil, and myocardial stiffness. LV diastolic dysfunction usually results from impaired LV relaxation with or without reduced restoring forces (and early diastolic suction) and increased LV chamber stiffness resulting in increased cardiac filling pressure. The abnormal diastolic function has been recognized in many cardiovascular diseases and is associated with worse outcomes, including total mortality and hospitalizations due to heart failure. Therefore, accurate assessment of LV diastolic function is crucial as it determines symptoms and predicts outcomes in patients with cardiovascular disease. Unfortunately, despite the multitude of available indices, assessment of diastolic dysfunction remains a challenging area in pediatric cardiology. Studies on the interpretation of left ventricular diastolic dysfunction in children with cardiomyopathy found that adult ASE/EACVI criteria may not be applicable in detecting abnormal diastolic function in the pediatric population. Current advancements in echocardiographic techniques have provided more significant insights on diastolic function assessment beyond traditional measures. This presentation will discuss the dilemma in evaluating diastolic function in children and the potential solution.

What will audience learn from your presentation?

- Diastolic function assessment in Children
- Traditional diastolic parameter and its limitation
- The use of speckle tracking echocardiography in the assessment of diastolic function
- Peak apical recoil rate as a simplified index of LV untwisting and its potential use as a new diastolic parameter in a pediatric population

Biography

Work as a Senior Pediatric lecturer and Pediatric Cardiologist. She did her training in Pediatric Cardiology at National Heart Institute of Malaysia (IJN) and in the world-renowned, Children's Hospital of Philadelphia (CHOP), United States. While in CHOP, she had the opportunity to learn on fetal echocardiography and to do research on Left ventricular mechanics and strain in children with Left Ventricular Non-Compaction and Dilated Cardiomyopathy using speckle tracking echocardiography. She presented the best poster presentation at the American college of cardiology conference in Jeddah. She won a travel grant to attend the American college of cardiology conference in Washington DC. Currently, her main interest is on fetal echocardiography to provide an antenatal diagnosis of congenital heart disease.



Souravh Bais^{1*}, Nilesh J Patel², Nirmal Dongre³

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Insulin resistance and cardiovascular disease: A future perspective

Cardiovascular disease (CVD) has been the major cause of death worldwide for many years. Comorbidities include obesity, altered lipid profiles, and insulin resistance are frequently linked to CVD. Insulin is a crucial hormone that regulates cellular metabolism in a variety of tissues throughout the human body. Insulin resistance is distinguished by problems in glucose absorption and oxidation, a reduction in glycogen synthesis, and, to a lesser extent, the capacity to control lipid oxidation. Free fatty acids appear to be the most common substrate for ATP generation in adult myocardium, according to the literature. The purpose of this study is to address the processes that link insulin resistance to the development of cardiovascular disease. New medicines aimed at reducing insulin resistance may help to reduce both CVD and the formation of atherosclerotic plaques.

What will audience learn from your presentation?

- Future research is needed to understand the precise mechanism between insulin resistance and its progression to heart failure with a focus on new therapy development.
- This study will allow researchers and other scientists to target the specific biomarkers which effects the disease more specifically.

Biography

Souravh Bais, Working as Assistant Professor in department of Pharmacology, SAGE University, Indore, India. He has more than 9 years of experience in teaching and research. He has published more than 50 papers in peer reviewed journals in both national and international journals. His areas of research are neurological disorders, Obesity and inflammatory disorders. He is acting as Academic Reviewer in Science Domain and Invited as reviewer in reputed publisher's like- Elsevier, Springer, Hindawi, Bentham and Wiley and reviewed more than 92 papers. He is a member British Pharmacological Society. Recently he is selected as "Bentham Ambassador" for the year 2019-20.

Pooja M R

Vidyavardhaka College of Engineering, India

Analytics for intelligent healthcare systems

Intelligence has been an integral component of every aspect in all most all arenas of life. In the healthcare industry, the degree to which it has been impacted is comparatively low and the progress is in smaller steps when compared to those made in other fields. This can be attributed to several challenges and hurdles faced in healthcare systems. Adding to this, intelligence is not justified in beyond proof of concept studies. Recent years however have embraced hybrid models that involve incorporation of intelligence from AI systems, besides leaving the ultimate responsibility of disease identification/ outcomes in the hands of the clinician as a means of critical intervention. Growing number of studies have indicated the successful implications of intelligence through analytics in areas including patient stratification, decisions at triage and prediction of severity levels of disease.

Biography

Dr Pooja M R, currently working as Associate Professor in the department of Computer Science and Engineering is a researcher in the area of health informatics. Her research work focuses on the application of artificial intelligence to healthcare applications with specific implications to machine learning. She has published research papers in both, peer reviewed journal and conference publications. She has been invited as speaker for various international events focusing on health informatics.



Christopher Osarumen Osagie^{1*}, Sanjiv Petkar²

New Cross Hospital, Wolverhampton, United Kingdom

Tri-faceted myocardial infarction management and variable response to cardiac resynchronization therapy: A gain to the naive heart

Cardiac Resynchronization Therapy (CRT) is a non-surgical device treatment of heart failure with reduced ejection fraction after an unsatisfactory response to optimal tolerated medical therapy. Response to CRT has been non-uniform with some patients failing to respond despite meeting the selection criteria. The study assessed the contribution of the background treatment modality for myocardial infarction to CRT response and the post CRT events in patients with ischaemic cardiomyopathy. The study was a retrospective analysis of electronic records of consecutive patients who had CRT implantation for ischaemic cardiomyopathy between March 2017 to February 2019. Only 33 of the 80 patients who underwent CRT during this period meant the selection criteria and were included. This cohort was sub grouped, based on the most advanced management received for ischaemic heart disease prior to CRT viz. medical, percutaneous coronary intervention (PCI) and coronary artery bypass grafting (CABG). The echocardiographic measurements pre and approximately one year post CRT were analysed. At least 15% reduction in left ventricular end systolic volume (LVESV) was defined as a positive response. Events (ventricular arrhythmias treated with shocks/ anti-tachycardia pacing, admission for heart failure and mortality) developing within two years of receiving the CRT were also analysed. The mean age of participants was 75.3 ± 8.1 years with males constituting 84.8%. The medical, PCI and CABG groups constituted 27.3%, 33.3% and 39.4% respectively. The mean LVESV prior to the intervention was 123.8 ± 56.2 ml while the mean LVESV post CRT was 104.8 ± 45.9 ml. The proportion of responders was 88.9%, 72.7% and 30.8% for the medically treated, PCI and CABG group respectively ($p = 0.014$). At the two-year post CRT review, 15.2% of patients received at least a single ATP, 6.1% had treatment with at least a shock, 9.1% were admitted for heart failure and another 9.1% had died. There was no statistically significant difference in the post CRT ventricular arrhythmias treated with ATP/ shocks, admission for heart failure, mortality and composite of these outcomes between the three prior treatment groups. Interventional naive (medically managed) ischaemic cardiomyopathy patients appear to have a better response to CRT compared with those with prior PCIs and CABGs. Background management modality of ischaemic heart disease may be an important consideration when selecting this cohort for CRT implantation.

What will audience learn from your presentation?

- It will provide entirely new perspective for the selection of patients with ischaemic cardiomyopathy for CRT
- It will provide some explanation for the non-uniform response to CRT
- It will provide the audience with entirely new research ideology

Biography

Dr C. O. Osagie graduated from the School of Medicine, University of Benin, Nigeria in 2008 and completed his Internship and National Youth Service in 2010 and 2011 respectively. He then worked as a Medical Officer with the Nigeria National Petroleum Corporation between 2011 and 2013. He did his residency training in Internal Medicine between 2013 – 2016 and progressed to Cardiology Training at the same centre (University College Hospital, Ibadan) between 2016 and 2019. He joined the Royal Wolverhampton NHS Trust as a Cardiology Fellow in 2019.



Muhammad Haris^{1*}, Ayesha Sikandar Baig²

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²Medicine Department, Mayo Hospital, Lahore, Pakistan

Immune-check point inhibitors: Acute cardio-oncology challenges and concerns

Introduction: Immune check point inhibitors (ICI) are increasingly used in management of cancers. Their ultra-modern benefits are often over-shadowed by adverse events collectively termed as 'Immune-related Adverse Events'. The incidence of ICI-Induced cardiotoxicity is immensely under-reported and the most common presentation is Acute Myocarditis in up to 2.4% patients. Other manifestations include Takotsubo cardiomyopathy, VTE, Plaque rupture etc. We present a case of Pembrolizumab (ICI) induced Symptomatic stable Myocarditis.

Case Presentation: 48 year old Gentleman with Metastatic Melanoma managed with Immunotherapy admitted to CCU from oncology day unit with cardiac chest pain over three days. Initial investigations revealed non-specific changes on ECG, Troponin-T of 474 and CRP of 14. Chest X-ray showed mild congestion whilst Echo demonstrated normal EF and CTPA excluded PE. An IP-Coronary Angiogram showed normal coronary arteries. Finally, Cardiac-MRI showed edema and non specific inflammatory reaction. This patient was managed as Myocarditis with IV steroids.

Mechanism of ICI- induced Myocarditis: Although Mechanism is not entirely clear. The most widely accepted hypothesis is based on suppression of immune inhibitory receptors (overly expressed in cardiac tissue) by these novel agents. Certain mice models have suggested that this leads to unregulated activation of T-cells and infiltration of myocardium.

Diagnosis and Management of ICI-induced Myocarditis: ICI- induced myocarditis presents with non specific symptoms like chest pain and SOB posing diagnostic challenges. Almost 100% patients present with rise in troponin. ECG, Echo and Angiogram helps exclude ACS. Cardiac MR remains imaging modality of choice based on Lake-Louise criteria whilst the gold standard is Endomyocardial biopsy. Management is based on grades of severity and involves use of steroids and immunosuppressive therapies. Grades encompass subclinical and symptomatic (Stable, Unstable or Decompensated) myocarditis.

Future Considerations: ICI's, although cutting-edge pose multi-system challenges that merit further research. Concerns looming around diagnostic uncertainty with exact timings of tests to be done needs further randomized control trials.

What will audience learn from your presentation?

- Acute cardio-oncology and cardio-immunology disease manifestations have always been underreported due to dearth of solid case based evidence. Whilst Immunotherapies have revolutionized the management of various cancers, their systemic side effects still remain unexplored.
- This topic provides rare insights into the acute cardiac presentation of a drug which is now widely used in the management of various cancers.
- The audience of this conference who will be aspiring cardiologists and acute medics will be able to broaden their differential horizon when dealing with acute cardiac chest pain.

- This presentation will also be able to initiate discussion on how immune system modification refashions various organ systems response including cardiovascular system.
- This case presentation will benefit audience in a way that it will act as a ground breaking idea for future observational and analytical studies.

Biography

Dr Haris is a young Internal medicine trainee doctor in northwest of England. He graduated in 2017 from Pakistan and is a Cardiology aspirant. He is the Valedictorian of his undergraduate batch and is medical trainee representative of his hospital. He wishes to present this case in forthcoming cardiology conference to increase awareness of immunotherapy related cardiac acute presentations and to enhance his portfolio for cardiology interviews in December 2021. He is involved in various PubMed publications including systematic reviews and case reports. He has worked on various topics in research field including cardiology, oncology and immunology. His abstract on “Atypical presentations of Covid-19 in frail population” was accepted in EGS October 2020 edition and his systematic review on “Can Targeting Iron Help in Combating Chronic Pseudomonas Infection?” will be placed for PMC indexing on 4/4/21.



Hasan Jamjoom

London North West Hospital trust, United Kingdom

The effect of COVID-19 infection on cardiac function in patients with pre-existing heart failure

Background: There has been increasing evidence over the past 12 months regarding the multi-systemic implications of the COVID-19 virus. More specifically, it has been linked to various cardiovascular sequela including myocarditis, arrhythmias, cardiomyopathy, and STEMI like mimics. The exact mechanism of COVID-19 related myocardial injury remains unknown, however hypoxemia, adrenergic hyperactivation, and systemic inflammation have been implicated. Several studies have outlined the role of cardiac biomarkers – namely Troponin and Brain Natriuretic peptide (BNP)- in predicting morbidity and mortality associated with COVID-19. Evidence so far suggests that significant increases in both Troponin and BNP are associated with more severe infection, ICU admissions, and deaths. Despite the observed association, little data is available regarding the implications of COVID-19 infection on patients with pre-established heart failure, and its subsequent effect on heart function in this patient group. Purpose To evaluate the implications of COVID-19 infection on patients with pre-existing heart failure; whether there is a notable change in heart function post COVID-19 infection as demonstrated by trans-thoracic echocardiography.

Methods: A retrospective study was carried out in The London North West Hospital trust looking at patients with pre-existing heart failure who contracted the COVID-19 virus. The patients identified were under the care of the trusts heart failure team and were noted to have tested positive for the virus between March 2020 and Feb 2021.

Results: A total of 141 patients who were COVID-19 positive (including patients requiring hospital admission and those managed at home) were selected. Of those, only 25 had a pre (within 3 years) and post COVID-19 echocardiogram. Of 25 patients, 11 patients (44%) had no interval echocardiographic changes post COVID-19 infection. Of the remaining 14 patients, 5 patients (20%) showed evidence of LVH and hyperdynamic circulation, 4 patients (16%) had either new or worsening diastolic heart failure, 1 patient (4%) had worsening of RV function only, 1 patient (4%) had worsening of LV function only, and 3 patients (12%) had biventricular function decline.

Conclusions: COVID-19 infection may result in several echocardiographic changes in a significant proportion of patients with pre-existing heart failure. This emphasises the need for echocardiographic monitoring and follow- up of heart failure patients post COVID-19 infection, as this will ensure appropriate management is delivered in a timely manner, ultimately improving overall patient outcomes.

Abstract learning points:

- To outline the possible consequences of COVID-19 infection on patients with pre-existing heart failure.
- To raise awareness of the importance of interval echocardiography and follow- up post COVID-19 infection in heart failure patients.
- To prompt further research into the long-term impact of COVID-19 infection on cardiac function, to enable appropriate and timely interventions, hence improving outcomes.

Biography

Dr Hasan Jamjoom graduated with a Bachelor of Medicine and Surgery from the University of Birmingham (UK) in 2016. He initially worked as a junior doctor in the City of Birmingham for 2 years, and subsequently moved to London to complete his Core medical training years. He is currently working as a teaching fellow at the London North West Hospital trust and is completing an online post graduate diploma in Epidemiology with the University of Aberdeen.



Aristotle G. Koutsiaris

University of Thessaly, Greece

Hemodynamics in the human microcirculation

Microcirculation is the largest part of the human cardiovascular system performing the primary function of this system which is chemical exchange. However, due to the small size of the microvessels and the difficulty of access, the hemodynamic status of the human microcirculation remained for a long time unknown. This situation changed with the advent of state of the art image acquisition and processing techniques which can be applied at appropriate “windows” to the microcirculation such as the conjunctival tissue of the eye. In this non-invasive and non-contact way, blood flow velocity was measured in the capillaries and post-capillary venules of physiological subjects and later, velocity pulsation was quantified in the pre-capillary arterioles using the Resistive Index (RI) and the Pulsatility Index (PI). Another important hemodynamic parameter implicating in many physiological and pathological phenomena is Wall Shear Stress (WSS) acting on the inner microvessel wall. WSS can be quantified in the human microcirculation using blood flow velocity measurements. After the successful “mapping” of the normal human conjunctival microvascular hemodynamics, there were a series of studies on systemic disorders and cardiology pathologies such as diabetes mellitus, hypertension, sickle cell disease, ischaemic stroke, cyanotic congenital heart disease and acute myocardial infarction that found statistically significant changes in conjunctival microcirculation. Significant changes were also found in normal pregnancy and in diabetic retinopathy patients after the administration of drugs. In addition, microvascular blood velocity was significantly correlated to albuminuria in sickle cell disease patients and to cardiovascular risk (Framingham risk score) showing good potential for prediction. There are also reports showing severe alterations of the microcirculation in patients with COVID-19. In conclusion, it seems there is a bright future of microvascular hemodynamics not only for basic research but also for clinical applications in diagnosis and prediction of various pathologies.

What will audience learn from your presentation?

- Some basic understanding of the imaging technique for quantifying hemodynamics in the microcirculation.
- Among various techniques in the human microcirculation, conjunctival bio-microscopy is non-invasive and contactless.
- Information on the latest developments regarding human microvascular hemodynamics especially for conjunctival tissue.
- It will be understood that many medical specialties could expand their research efforts including microvascular hemodynamics.

Biography

Dr Aristotle G Koutsiaris studied Electrical and Computer Engineering at Aristotle University of Thessaloniki, Greece, Biomedical Engineering at University of Dundee, UK (Master of Science) and he received his PhD degree in 2000 (University of Patras and National Technical University of Athens, Greece). He has worked as lecturer at the Medical School of Athens and the Technological Institute of Thessaly and he obtained the position of an Assistant Professor at the Medical Department of the University of Thessaly. He has published more than 20 research articles in scientific journals.



Hamidreza Goodarzynejad^{1*}, Navid Rokni², Mojtaba Salarifar², Elham Hakki Kazazi¹

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Predictors of renal artery stenosis in patients referred for coronary angiography

Atherosclerotic renal artery stenosis (ARAS) is a major comorbid condition in patients with coronary artery disease (CAD) which remains underdiagnosed due to nonspecific demonstrations. The most important consequences of ARAS are secondary hypertension and ischemic nephropathy that can progress to end-stage renal disease (ESRD) in 6–17% of patients. The presence of ARAS is not only the most common potentially reversible disorder leading to renal replacement therapy, but it has also been independently associated with increased mortality, particularly in patients with CAD and ESRD. The aim of this study was to detect the prevalence and predictors of ARAS in patients referred for elective coronary angiography. The clinical and procedural data of all patients included in this study were retrieved for analysis from our computerized database (Tehran Heart Center -Coronary Angiography Data Bank). Between October 2009 and July 2011, a total of 18,419 cardiac catheterizations were performed for evaluation of undiagnosed chest pain or anginal equivalent in suspected CAD patients at our centre. The records of all 866 (4.7%) patients aged ≥ 21 years undergoing simultaneous coronary and renal angiography were used for statistical analyses. Using standard angiographic techniques, coronary angiographies were performed from the percutaneous femoral approach. The presence and severity of CAD was determined by clinical vessel score as well as Gensini score. The degree of ARAS stenosis was estimated visually by the attended experienced interventional cardiologists. Lesions with estimated stenosis of $\geq 50\%$ considered to be significant. Multivariable stepwise logistic regression models were used to identify risk factors predicting the presence and extent of ARAS (i.e., from no ARAS to unilateral and from unilateral to bilateral ARAS). Using significant ARAS as the dependent variable, six variables were identified as independent predictors significantly associated with the presence of ARAS including age, female sex, hypertension, history of renal failure, left anterior descending (LAD) stenosis $> 50\%$, and left circumflex (LCX) stenosis $> 50\%$. Gensini score was not found a predictor for the presence of ARAS, but it was associated with a trend towards more extent ARAS (adjusted OR= 1.00, 95% CI= 1.00-1.01; $p= 0.039$). Other independent determinants of ARAS extent were the same as the predictors for ARAS presence. The predictive performance of the risk model assessed by using the area under the ROC curve (AUC) was good ($c= 0.70$). Because Hosmer-Lemeshow p -value was 0.52 ($p < 0.05$ indicates a poor fit), the model was also found to fit the data well. Given the progressive nature of ARAS and the need for its early detection and intervention, our data suggest that in patients referred to coronary angiography, female sex, advanced age, significant CAD stenoses in LAD and LCX coronary vessels, hypertension, and history of renal failure may be strong predictors of ARAS, and dual investigation (i.e., renal catheterization in combination with coronary angiography) should be considered in high risk patients with multiple risk factors.

What will audience learn from your presentation?

- Six variables were identified as independent predictors significantly associated with the presence of ARAS including age, female sex (male sex was found to be protector), hypertension, history of renal failure, LAD stenosis $> 50\%$, and LCX stenosis $> 50\%$.
- The independent determinants of ARAS extent were the same as the predictors for ARAS presence except that Gensini score was associated with a trend towards more extent ARAS (adjusted OR= 1.00, 95% CI= 1.00-1.01; $p= 0.039$) but not with the presence of ARAS itself.

- Dual investigation (i.e., renal catheterization in combination with coronary angiography) is recommended in high risk patients with multiple risk factors in order to detect ARAS in early stages.
- Further researches are required to determine appropriate patients for percutaneous transluminal renal angioplasty treatment.

Biography

Dr Goodarzynejad is an internationally trained medical doctor graduated in 1997. He then joined the Department of Basic and Clinical Research at Tehran University Heart Center. He received his PhD degree in 2015 at the same institution. His research focuses on risk factors for coronary artery disease. In particular, he is interested in sex differences in cardiovascular disease and studying HDL cholesterol and also in the genetic basis of coronary disease. He has published more than 60 research articles in Science Citation Index (SCI) journals and currently works as a Research Associate at Toronto Rehabilitation Institute (KITE).



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⁵University of Glasgow, United Kingdom

Effectiveness of mobile health augmented cardiac rehabilitation (MCard) on health-related quality of life among post-acute coronary syndrome patients: A randomized controlled trial

Objective: To determine the effectiveness of Mobile health augmented Cardiac rehabilitation (MCard) on health-related quality of life (HRQoL) among post-acute coronary syndrome(post-ACS) patients.

Methodology: In a randomized controlled trial, post-ACS patients were randomly allocated (1:1) to an intervention group (received MCard; counselling, empowering with self-monitoring devices, short text messages, in addition to standard post-ACS care) or control group (standard post-ACS care). HRQoL was assessed by generic Short Form-12 and MacNew quality of life myocardial infarction (QLMI) tools. Participants were followed for 24 weeks with data collection and analysis at three time-points (baseline, 12 week and 24 weeks).

Result: At baseline, 160 patients (80 in each group; mean age 52.66+8.46 years; 126 males, 78.75%) were recruited, of which 121(75.62%) continued and were analysed at 12-weeks and 119(74.37%) at 24-weeks. The mean SF-12 physical component score significantly improved in the MCard group at 12 weeks follow-up (48.93 vs control 43.87, p<.001) and 24 weeks (53.52 vs 46.82 p<.001). The mean SF-12 mental component scores also improved significantly in MCard group at 12 weeks follow-up (44.84 vs control 41.40, p<.001) and 24 weeks follow-up (48.95 vs 40.12, p<.001). At 12-and 24-week follow-up, all domains of MacNew QLMI (social, emotional, physical and global) were also statistically significant (p<.001) improved in the MCard group, unlike control group.

Conclusion: MCard is feasible and effective at improving all domains of HRQoL. There was improvement in physical, mental, social, emotional and global domains among MCard group in comparison to control group. The addition of MCard programs to post-ACS standard care may improve patient outcomes and reduce the burden on the health care setting.

What will audience learn from your presentation?

- Whether mHealth is effective in impacting health of cardiac patients in developing country.
- The acceptability of mHealth intervention among cardiac patients in developing country with low resources.
- Explain how the audience will be able to use what they learn?
- How can mHealth be integrated into other health care delivery among chronic conditions.

Biography

Dr Aliya Hisam, MPH, FCPS in Community Medicine, a PhD Scholar in Public Health, studied in Pakistan, working in teaching field from the last 12 years, in the field of public health, especially working on quality of life. Her PhD project was on effectiveness of mobile health augmented cardiac rehabilitation on quality of life, clinical and behavioral outcomes in post-acute coronary syndrome patients. Currently she is working at a teaching institute in Pakistan, having undergraduate and post graduate students and supervising their research projects. She has published around 30 articles in renown journals over the period of a decade.



Pavel Ermolaev^{1*}, Tatyana Khramykh²

Omsk State Medical University, Russian Federation

New directions of donor heart preservation

The problem of preserving the viability of donor organs is relevant for modern transplantation. The need for further development is associated with a global shortage of donor organs of ideal quality, with the need to prolong the terms of their guaranteed conservation to improve the logistics of the transplant process, as well as to ensure the restoration of the viability of initially compromised donor organs obtained from donors with “extended evaluation criteria”. The report will present methods for the preservation of the donor heart, indicate further ways to improve technologies in this area, in particular, options such as extracorporeal perfusion and gas preservation of the heart will be considered.

What will audience learn from your presentation?

- The audience will know the current state of donor heart preservation. The audience will be able to use the knowledge to plan their own research projects.

Biography

Dr Pavel Ermolaev studied Medicine at the Omsk State Medical University, Russia and graduated in 2009. He then joined the research group of Prof. Dolgikh at the same institution. He received his PhD degree in 2017. After two years postdoctoral fellowship supervised he obtained the position of an Associate Professor at the Omsk State Medical University. He has published more than 50 research articles in journals.



Yasser Mohammed Hassanain Elsayed

Egyptian Ministry of Health, Egypt

Movable-weaning off an electrocardiographic phenomenon in hypocalcemia

Background: Hypocalcemia is a famous serious electrolyte disorder characterized by calcium deficiency. It is recently associated with specific electrocardiographic changes such as both wavy triple and double electrocardiographic signs.

Method of study and patients: My study was an observational retrospective for 43 cases. The study was conducted in both Fraskour Central Hospital and Physician Outpatient Clinic. The author reported the 43-cases thorough nearly 24-months, started from December 3, 2018, and, ended on October 29, 2020. Wavy triple an electrocardiographic sign (Yasser Sign) of hypocalcemia was the target. Both manifested tetany or latent hypocalcemia are included. Parenteral or oral calcium preparation was supplied.

Results: The Mean age was: 36.4 years, with female sex predominance (67.44%). The main presentations in the study were carpopedal spasm (55.81 %) vs. Parathesia and tingling (44.19%). Hyperventilation syndrome (60.47 %) and malnutrition (9.3%) are the most common risk factors. Manifested tetany was the commonest final diagnosis (55.81). The patterns of Movable phenomenon were: regressive (30.23%), weaning-off (20.93%), progressive (13.95%), changeable (13.95%), variable: 4.56%, reversed (4.56%), regressive characteristic (2.33%), unknown (2.33%), reversed with progression (2.33%) changeable with regression, (2.33%), and intermittent with regression (2.33%).

Conclusions: Movable-weaning off an electrocardiographic phenomenon in hypocalcemia (changeable phenomenon or Yasser's phenomenon of hypocalcemia) is defined according to the author's opinion in the study as a novel electrocardiographic phenomenon characterized by serial dynamic changes in present in all cases of either Wavy triple or double electrocardiographic signs (Yasser signs) of hypocalcemia. Movable-weaning off an electrocardiographic phenomenon is a guide for both Wavy triple or double electrocardiographic signs (Yasser signs) of hypocalcemia. Don't be angry if the staring electrocardiography or the last one was normal.

Biography

Yasser Mohammed Hassanain Elsayed is a researcher, reviewer, critical care physician, and cardiologist in the Egyptian Ministry of Health. He has (86) publicized articles as a single author and (4) medical books since December 2017. He has reviewed (47) articles since November 2020. He is a Keynote Speaker in many international cardiovascular conferences. The most famous article for the researcher; 1. Graded Phenomenon (Yasser's Phenomenon). 2. Wavy Triple An Electrocardiographic Sign (Yasser's Sign). 3. Connected Aircraft Squadron Electrocardiographic Sign (Yasser's sign). 4. Electrocardiographic Passing Phenomenon (Flying Phenomenon or Yasser's Phenomenon). 5. Movable-weaning off an electrocardiographic phenomenon (changeable phenomenon or Yasser's phenomenon). 6. Yasser's COVID-19 Discrepancy phenomenon He is also an editorial member in several medical journals e.g. Anaesthesia & Surgery Open Access Journal, Journal of Clinical & Community Medicine, Annals of mental health and addiction sciences, Research and Reviews on Healthcare Open Access Journal, International Journal of Clinical Case Reports and Reviews, International Journal of Clinical and Medical Case Reports, Journal of MAR Cardiology, Research International Journal of Anesthesiology, etc.



Michael J Bonios

Onassis Cardiac Surgery Center, Greece

Optimizing right ventricular function before LVAD implantation

Right ventricular (RV) failure complication following Left Ventricular Assist Device (LVAD) implantation increases morbidity and mortality in end-stage heart failure (HF) patients. Many prognostic markers of RV failure post LVAD implantation are used in various centers. For those patients that are at high risk for RV failure following LVAD implantation, many centers prefer to implant a biventricular mechanical circulatory support system. However, this option results in suboptimal outcomes, more complications and impairs patient's life quality. For this reason, efforts are focusing to optimize RV function before LVAD implantation with various therapeutic strategies. These therapeutic options are mainly focused on the reduction of the RV preload, the increase of the RV contractility and the reduction of the RV afterload. Our Institution applies specific RV function eligibility prerequisite criteria for LVAD implantation, that are based on biochemistry, echocardiographic and hemodynamic parameters. In parallel we are trying to identify prognostic markers (ie RV extension fibrosis) that will help us to identify who of those patients that are in need for LVAD implantation and have in addition impaired RV function, can become eligible for LVAD by improving their RV function, applying various therapeutic options (ie prolonged heart unloading using intra-aortic balloon Counterpulsation)

What will audience learn from your presentation?

- Right ventricular failure following a left ventricular assist device implantation has poor outcomes for the patients
- The evaluation of the right ventricle before LVAD implantation can identify patients at risk for RV failure post- LVAD implantation.
- Efforts to improve the right ventricular function before LVAD implantation includes various therapeutic options

Biography

Dr Michael J. Bonios earned his M.D. from University of Athens Medical School, Athens, Greece and his Ph.D. from the same Institution. He completed a research Fellowship at Johns Hopkins University, Baltimore, Maryland on in vivo stem cell Imaging and an Advanced Heart Failure and Transplant Clinical Fellowship at University of Utah Hospital, Salt Lake City, Utah. He is currently an Advanced Heart Failure and Transplant Attending Cardiologist at Onassis Cardiac Surgery Center, Athens, Greece and an Adjunct Faculty at the Division of Cardiovascular Medicine, University of Utah. He has published more than 40 research articles in science journals.

Natallia Maroz Vadalazhskaya

Belarusian State Medical University, Republic of Belarus

Viable myocardium: Clinical sufficiency and prognostic implication

The estimation of prognosis of the different cardiovascular diseases is still very challenging because of the multifactorial impact in the condition of therapeutic or surgical treatment, their subsequent or simultaneous affect. Ischemic heart disease, as a chronic progressive disease, is complicated by transient nonfatal or fatal damage of myocardium in the majority of cases. Loss of the number of myofibrils leads to loss of heart contractility with the depression of local systolic and diastolic deformation and in patients with transmural or large scar area – loss of local systolic function. Described histologic changes in the area of post ischemic myocardial scar can be visualized by diagnostic ultrasound, cardiac single-photon emission computer tomography (SPECT), magnetic resonance (CMR), cardiac computer tomography (CardiacCT), positron-emission tomography (PET). In this case prognosis is based on the function of damaged myocardium in the rest conditions, not mentioning any provoking factors, which are common in the real life and resulted hemodynamic storm, increasing myocardial wall stress, decreasing of pump function dramatically, worsening follow up and survival. A study of contractility reserve is advised to be more appropriate diagnostic method in patients with ischemic depressed myocardium to judge a global response to physical or psychoemotional load, and build short and long term prognosis, following the steps of a treatment algorithm. Diagnostic approach to measure myocardial viability using cardiac ultrasound is acceptable in the majority of patients with favorable acoustic window. A diagnosed myocardial viability at low dose dobutamine or low dose dipyridamole echo gives opportunity to perform a left ventricle reconstruction with an optimization of left ventricle end-diastolic volume, following Frank-Starling law. Poor acoustic window doesn't give to estimate myocardial contractility. In these patients other noninvasive techniques (stress-SPECT, stress-CMR, stress-CardiacCT, stressPET) are used with a modelling of the stress condition by dipyridamole. A prognostic significance of viable myocardium in patients with ischemic heart disease was assessed in multicenter studies. Nevertheless, an existed criticism of the results of STICH and ISCHEMIA triggered subanalysis in frame of these studies and shows we still need more proves to perform an estimation of myocardial viability routinely using high quality equipment and clinical experience of high grade cardiologists and radiologists.

What will audience learn from your presentation?

- What is viable myocardium and what are the clinical tools to estimate it?
- The data from presentation will help to personalize treatment of patients with ischemic reduced contractility of the left ventricle. Presented information can help also to expand the research or teaching. Moreover, it is sufficient to create more detailed and accurate a design of scientific projects regarding the chronic myocardial ischemia.

Biography

Dr Maroz Vadalazhskaya studied Medicine at the Belarusian State Medical University (BSMU), Minsk, Republic of Belarus as MD in 1994. She then worked at Scientific-Practical Center of Cardiology in Minsk, Republic of Belarus. She received her PhD degree in 1998 at the same institution. In 2012-2014 she worked as a head of Minsk City Cardiologic Centre, 2015-2017 –chief of biomedical laboratory of Scientific-Practical Center of sports. In 2017 she obtained the position of an Associate Professor at the BSMU. She has published more than 100 research articles in Russian and English, presented her work during multiple European and International congresses.



Fernanda de Souza Nogueira Sardinha Mendes^{1*}, Roberto M Saraiva², Mauro Felipe F Mediano³, Gilberto Marcelo Sperandio da Silva⁴, Henrique H Veloso⁵, Luiz Henrique C Sangenis⁶, Paula Simplicio da Silva⁷, Flavia Mazzoli-Rocha⁸, Andréa S Sousa⁹, Marcelo T Holanda¹⁰, Alejandro Marcel Hasslocher-Moreno¹¹

Oswaldo Cruz Foundation, Brazil

Chagas cardiomyopathy - what every cardiologist needs to know

Chagas disease (CD) is classified as a neglected tropical disease caused by the protozoan *Trypanosoma cruzi*. It affects around 6 to 8 million people worldwide, especially in Latin America but also in United States and Europe. Thirty percent of all CD patients progress to the most serious manifestation of CD, the Chagas Heart disease (CHD) with a high morbidity and mortality rates and a great impact for health and social systems. CHD is classified into four stages of increasing severity according to electrocardiographic, echocardiographic, and clinical criteria. Stage A – abnormal electrocardiogram and normal echocardiogram findings; Stage B1 - abnormal electrocardiogram and echocardiogram findings with a left ventricular ejection fraction (LVEF) > 45%; Stage B2 - abnormal electrocardiogram and echocardiogram findings with LVEF < 45% and no HF symptoms; Stage C - compensated HF; and stage D - refractory HF. The main clinical manifestations of CHD are cardiac arrhythmias, thromboembolism, and heart failure (HF) and has a higher incidence of sudden death and stroke than heart failure caused by other etiologies. Because of this, it is important to understand the clinical manifestations, diagnosis, risk stratification and specialized approach to help clinicians and cardiologists to better care of CHD patients using diagnostic tools and pharmacological and non-pharmacological treatments.

What will audience learn from your presentation?

- To consider Chagas disease as a differential diagnosis in complex cases of people from endemic areas for Chagas disease.
- To manage and treat Chagas heart disease individually with the latest scientific evidence.
- To understand the risks and prognosis involved in each Chagas Heart disease classification

Biography

Dr Fernanda Sardinha is graduated in Medicine at the Federal Fluminense University. She then conclude a post- graduation in Sports and Exercise medicine, then residence in internal medicine in the Brazilian Air Force (Air Force Central Hospital) and cardiology in the Rio de Janeiro Federal University. In 2014 received a master degree in Cardiology in the same University. She then joined the research group of Chagas disease at the Evandro Chagas National Institute of Infectious Disease / Fiocruz. She received her PhD degree in 2018 at the same institution where she is associate professor. She has published more than 30 research articles in science journals.



Nadiye Baris Eren

Tarsus University, Turkey

Enhanced external counterpulsation treatment in patients with refractory angina pectoris

Enhanced External Counterpulsation (EECP), a treatment method used in heart failure and coronary artery diseases, is an evidence-based alternative noninvasive treatment. In addition, patients show good compliance with EECP. In this treatment carried out by a professional team, a cardiologist, a trained and experienced nurse and an assistant physician are included. The EECP device used in the treatment consists of a control console, a patient treatment table, an air compressor and three sets of cuffs. The cuffs are wrapped around the lower leg, upper leg and hip areas. During the treatment, the systolic and diastolic pressure waves of the patient, who are connected to the electrocardiogram, are followed by the finger probe. The cuffs are inflated sequentially during diastole by filling with air through the microprocessor and computer in the system. Thus, it increases the blood flow to the heart and provides oxygenation of the heart muscle. During systole, the cuffs descend simultaneously, reducing the preload of the heart. This reduces the workload of the heart. EECP is the safe and probably most appropriate treatment modality, especially for patients presenting with symptomatic Coronary artery disease who are not amenable to further revascularization. As a result of the literature review, it has been revealed that EECP consistently reduces angina pectoris and extends the time until exercise-induced ischemia. In addition, it is reported that the dependence on nitroglycerin use for frequent chest pain decreased and the quality of life increased in symptomatic patients with stable angina. Patients with refractory angina pectoris experience recurrent symptoms despite receiving medical treatment. These reduce their functional capacity, which consists of psychological distress and health-related quality of life. Symptoms seen in these patients due to EECP treatment decreased, their physical capacity levels increased and their cardiac anxiety decreased. Accordingly, the physical activity levels and life satisfaction of the patients increased. The reviewed literature also reported a small number of adverse events related to EECP. Although EECP seems to be a safe and well-tolerated treatment option in patients with refractory angina, nurses need to be careful and flexible to prevent adverse events and terminate treatment early.

Key Words: angina pectoris, coronary artery disease, Enhanced External Counterpulsation, nurse, patients

What will audience learn from your presentation?

- Enhanced External Counterpulsation (EECP) is an evidence-based alternative noninvasive treatment.
- Patients show good compliance with EECP.
- EECP consistently reduces angina pectoris and extends the time until exercise-induced ischemia.
- In symptomatic patients with stable angina as a result of treatment, dependence on nitroglycerin for frequent chest pain decreased and quality of life improved.
- Recurrent symptoms seen in Patients with refractory angina pectoris due to EECP treatment decreased, their physical capacity levels increased and their cardiac anxiety decreased. Accordingly, the physical activity levels and life satisfaction of the patients increased.
- EECP can be widely used in the clinic.
- EECP can be used in different areas.
- Studies in this area can be increased.

Biography

Nadiye Baris Eren, has completed her bachelor of nursing in Baskent University, master's degree in Cukurova University, and PhD in Hacettepe University. In 2010- 2014 she was employed as nurse in internal medicine intensive care unit and Surgical intensive care and reanimation unit in Baskent University Hospital in Adana in Turkey. In the mean time she has completed her postgraduate (2015) and PhD (2021) on Fundamentals of Nursing. She worked at various universities. She is currently working as assistant professor doctor at Tarsus University.

POSTERS

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Shuang Zhou^{1*}, Kun Sun²

Shanghai Jiao Tong University, China

Conotruncal defects: Congenital heart disease with the highest mortality rate in the neonatal period

Congenital heart diseases (CHD) are the most common congenital malformations, with an incidence of about 1 per 100 at live birth in China. Conotruncal defects (CTD) are a heterogeneous type of CHD, and little is known about their etiology. They are a group of diseases characterized by abnormal development and separation of the outflow tract in the embryonic period, which are the type of congenital heart disease with the highest mortality in the neonatal period, and the untreated mortality rate is as high as 78%. CTD usually require catheter-based or surgical treatment early in life, but the mortality rate remains high.

What will audience learn from your presentation?

- Understand the disease spectrum of CTD.
- Master the anatomical basis of the outflow tract.
- Understand the treatment methods of different types of CTD.

Biography

Dr Shuang Zhou studied pediatry at the Shanghai Jiao Tong University, China.

Qianlan Tao^{1*}, Kaisen Huang²

Hospital of Chengdu Medical College, China

Disability-adjusted life years (DALYs) due to ischemic heart disease (IHD) associated with natural disasters: A worldwide population-based ecological study

Background: Recent studies have reported an association between natural disasters of various kinds and ischemic heart disease (IHD). We investigated the association between Disability-adjusted life years (DALYs) due to IHD and natural disasters, and aimed to assess DALYs as a quantification of the burden of IHD related to natural disasters at the global level.

Methods: Country-specific data of natural disaster impacts, DALYs due to IHD and socioeconomic variables, were obtained from open sources for two equal periods(1990–2003 and 2004–2017). A population-based trend ecological design was conducted to estimate the association between trends in DALYs and natural disasters (occurrence, casualties and total damage), adjusting for socioeconomic variables.

Results: Most countries have experienced increases in natural disaster occurrences and decreases in DALYs during this study period. The unadjusted correlation analysis demonstrated a positive and significant correlation between DALYs and natural disasters for females and for both sexes ($R=0.163$ and 0.146 , $p=0.024$ and 0.043), and a marginally significant correlation for males($R=0.128$, $p=0.076$). After adjusting for socioeconomic variables, multiple linear regression demonstrated independent associations between the occurrence and DALYs due to IHD for males, females and both sexes (standardized coefficients= 0.192 , 0.23 and 0.187 , $p=0.016,0.004$ and 0.022).

Conclusions: A weak but significantly positive association between natural disaster and IHD was confirmed and quantified at the global level by this DALY metric analysis. Adaptation strategies for natural disaster responses and IHD disease burden reduction need to be developed.

What will audience learn from your presentation?

- To increase awareness of the association between natural disasters and IHD.
- Adaptation strategies, including environmental restoration, psychological interventions, lifestyle improvement and infrastructure reconstruction, should be developed and promoted for natural disaster responses and IHD disease burden reduction.

Biography

I'm a postgraduate student in Chengdu Medical College graduated from Chengdu University of Traditional Chinese Medicine. During the undergraduate period, I won several national and university-level scholarships and was awarded as an outstanding graduate.

Published papers:

1. Changes in ischemic heart disease mortality at the global level and their associations with natural disasters: A 28-year ecological trend study in 193 countries DOI: 10.1371/journal.pone.0254459
2. Disability-Adjusted Life Years (DALYs) Due to Ischemic Heart Disease (IHD) Associated with Natural Disasters: A Worldwide Population-Based Ecological Study DOI: 10.5334/gh.919



Maniou Maria^{1*}, Zyga Sofia², Kleisiaris Christos³, Togas Konstantinos⁴

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⁴Corinth Prison, Greece

The effect of anonymous group psychotherapy via teleconference as a treatment of cardiological and respiratory health problems in clinical and community nursing personnel who experience anxiety and are victims of workplace harassment

Background: It is widely accepted that harassment in the workplace may have negative effects on the mental and physical health of nurses. We hypothesized therefore that short schema psychotherapy may cure cardiological and respiratory health problems in clinical and community nursing personnel who experience anxiety and are victims of workplace harassment thus improve nurses quality of life. Anonymous group psychotherapy provide a practical solution to a problem that could simplify that is the stigmatization of the nurses that could avoid by not mentioning their real name and by not appearing their faces on the screen during the treatment.

Purpose: This study is sought to identify the effectiveness of anonymous group psychotherapy via teleconference on victims of workplace harassment in nursing personnel working on NHS of Greece.

Method: A case-control study enrolled 14 nurses victims of workplace harassment were randomly allocated in parallel and anonymous psychotherapy groups during August 2017 and January 2018. A qualified psychologist delivered a schema method by not mentioning nurses' real names and by not appearing their faces on the screen during sessions to cure cardiological and respiratory health problems. Validated screening tools were used to assess anxiety State-Trait Anxiety Inventory (STAI) and the Hamilton Anxiety Rating Scale (HAM-A) to assess the intensity of the anxiety. Individuals characteristics were also assessed. P-values >0.50 were considered statistically significant.

Results: Significant chronic and temporary anxiety reduction were presented in the psychotherapy group compared to the control group (p-value = 0.038). In particular, individuals before the intervention (week 0, t = 0), presented with a higher level of total anxiety (STAI= mean 81.42) in comparison to (mean 67.28 - week 14, t = 1) after the intervention, suggesting that the psychotherapy schema was efficient. Similarly, decreased anxiety symptoms were also found after the intervention (mean 9.71 to 4.85) using the Hamilton Anxiety Scale. No other significant differences were found even though most of the participants were females. Specifically, there was a reduction in the severity of symptoms related to the following chronic health problems: anxiety, cardiovascular problems, and respiratory problems.

Conclusions: Our data suggest that anonymous group psychotherapy via teleconference is a safe and effective method for the treatment of the intensity of the symptoms arising from the anxiety in the persons who have suffered from work harassment and specifically in the following health problems: anxiety mood, cardiovascular problems and respiratory problems.

Keywords: Anonymous group psychotherapy, Teleconference, Cardiological health problems, Respiratory health problems, Anxiety, Nursing Personnel.

What will audience learn from your presentation?

- The audience and especially nursing personnel will learn that Anonymous group psychotherapy could be used as a treatment for the psychosomatic health problems (cardiac and respiratory disorders) resulting from anxiety. This survey will help the audience in their job by improving nurses' quality of life. This research another faculty could use to expand their research applying other forms of treatments e.g. anonymous individual psychotherapy. This provides a practical solution to a problem that could simplify that is the stigmatization of the nurses that could be avoided by not mentioning their real name and by not appearing their faces on the screen during the treatment.

Biography

Dr Maria Maniou studied Nursing at the Technological Educational Institute of Crete in Iraklion, Greece and graduated as MS in 2007. She then joined the teaching as a lab assistant at Technological Educational Institute of Crete until 2018. She received her PhD degree in 2019 at the University of Peloponnese. After one year she obtained the position of a research fellow at the Hellenic Mediterranean University. She has published more than 30 research articles in scientific journals.



Dr Leslie Rodriguez^{1*}, Dr Hilary DeShong², Dr Michael Shriner³

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Type D personality as a predictor of COVID-19-related dysfunctional anxiety and psychological trauma

A significant relationship exists between personality type and cardiovascular health, particularly among individuals with Type D personality. Individuals with Type D personality are at significantly higher risk of recurrent cardiac episodes, myocardial infarction, poorer outcome following a myocardial infarction, and premature cardiac-related death compared to individuals that are not Type D personality. The purpose of this study was to determine whether patients with Type D personality were at higher risk of experiencing COVID-19-related dysfunctional anxiety and psychological trauma. Using a cross-sectional design, 203 individuals with Type D and non-Type D personality were compared. Demographic, clinical, and psychological data was collected. Correlation test, independent sample t-test, odd ratio, and Chi Square analysis were used to examine the relationship between Type D personality, dysfunctional anxiety, and psychological trauma while adjusting for demographic, clinical, and psychological factors. The probability of experiencing dysfunctional anxiety and psychological trauma was greater among individuals who had a Type D personality. Individuals with a Type D personality were more likely to suffer debilitating stress and be particularly affected by the COVID-19 pandemic. Type D personality is a predictor of COVID-19-related dysfunctional anxiety and psychologic trauma. The implication for the cardiovascular and medical professionals is that particular attention should be paid to patients showing signs of negative affectivity, social inhibition, dysfunctional anxiety and psychological distress and effort should be made to determine if the individual is a Type D personality as these are at higher risk of suffering cardiovascular event and have poor cardiovascular and mental health outcomes during the pandemic.

What will audience learn from your presentation?

- Type D personality is a normal personality disposition and not a psychopathology
- Individuals with Type D personality have a higher rate of mortality and nonfatal myocardial infarction and is a predictor of poor cardiovascular outcomes
- COVID-19 has been particularly damaging to individuals with Type D personality measured as dysfunctional anxiety and psychological trauma
- Patients exhibiting negative affectivity, social inhibition, high levels of debilitating anxiety, and psychological distress should be evaluated to determine if the individual is a Type D personality as these are at particular risk of suffering cardiovascular event.

Biography

A trained engineer and psychologist with doctorate in Health Psychology/Behavioral Medicine from Northcentral University, USA and advanced degrees in engineering, psychology, and business from Florida International University, Mississippi State University, and Southern New Hampshire University, and undergraduate degrees in psychology, business management, and biology from Columbia College, Interamerican University of Puerto Rico, and Pikes Peak CC. Is a former professor with Southern New Hampshire University and dual career, with 30 years' experience in mental health and 38 years designing and manufacturing medical devices for clinical chemistry, hematology, ophthalmology, and cardiovascular. Is a Mental Health Diplomat/Director with Johnson & Johnson.

Listowell Sarfo Ababio^{1*}, Eric Chang², Christabel Nyange³, Valery Effe⁴, Adwoa Winful⁵, Melvin Echols⁶

Morehouse School of Medicine, USA

The importance of gender and race in chest pain: A case presentation

Background: A clinical picture of typical angina with elevated troponin and ischemic changes on electrocardiogram (ECG) has been traditionally used as a triad in diagnosing acute myocardial infarction (AMI). With a normal ECG however, proper diagnosis can be challenging and lead to delays in management. We present a case of a female presenting with persistent chest pain and elevated troponin despite a normal ECG, who was later found to have spontaneous coronary artery dissection (SCAD) due to undiagnosed fibromuscular dysplasia (FMD).

Case: A 56-year-old African American woman with history of hypertension, heart failure with preserved ejection fraction, and chronic bronchitis presented to the emergency department with persistent left sided chest pain that was initially exertional but progressed to rest pain. Review of system was positive for chest tightness and shortness of breath. On evaluation, the patient appeared anxious. Labs showed elevations in troponin (peak of 5.68ng/mL) and lactic acid (3.2mmol/L). ECG showed sinus rhythm without any ST segment changes. CT pulmonary embolism (PE) protocol was negative for pulmonary embolism. Transthoracic echocardiogram showed normal ejection fraction and no hypokinesis. She was initiated on heparin and nitroglycerin drip after risk stratification for presumed NSTEMI. However, the patient had persistent chest pain with no relief despite aggressive anti-anginal management. She was taken emergently for a left heart catheterization (LHC) which revealed an angiographically normal right coronary artery and a long proximal to distal segment obtuse marginal-1 dissection. Given the lack of atherosclerosis, the lesion was not stented and medical management was pursued. Given this isolated finding, work up for FMD was initiated, where a CT abdomen / pelvis revealed a beaded appearance of the right main and segmental renal artery (FMD). Aggressive blood pressure control was initiated and the patient was discharged home in stable condition.

Discussion: The overall prevalence of SCAD remains uncertain. However, after excluding atherosclerosis, trauma, and iatrogenic causes, some studies suggest that SCAD is responsible for 1-4% of all ACS. Management can be difficult as SCAD patients can present with normal ECG findings. However, prompt evaluation is necessary to avoid any delays in care.

Conclusion: The possibility of SCAD clearly echoes the importance of considering female-predominant cardiovascular diseases, especially in young and middle-aged African-American women presenting with chest pain.

What will audience learn from your presentation?

- Gender and race play a significant role in acute coronary syndrome presentation.
- Persistent chest pain despite the absence of ECG changes should prompt immediate evaluation.
- Uncommon presentations of acute coronary syndrome should prompt further work up for secondary causes.

Biography

Dr Listowell Sarfo Ababio studied Optometry at the Kwame Nkrumah University of Science and Technology, Ghana and graduated as a Doctor of Optometry (OD) in 2011. He then travelled to the United States and pursued a study in Master of Business in Healthcare Administration. In one and a half years of working and volunteering in a global tutoring program, he decided to pursue medicine. He enrolled with the American University of Antigua College of Medicine. He received his MD degree in 2018 with Magna Cum laude and is currently an internal medicine resident with Morehouse School of Medicine.

Damian Casadesus

Jackson Memorial Hospital, USA

Luxatio cordis, A heart transplant complications

Cardiac luxation is a rare, difficult-to-diagnose, dramatic complication. It has only been reported until now as a consequence of blunt chest trauma causing pericardial rupture. These cases may require prompt surgical intervention to reposition the heart and restore hemodynamic stability. However, to our knowledge, here we present the first case of luxatio cordis that was found incidentally in a 54-year-old woman s/p Orthotopic Heart Transplant (OHT) procedure. The patient's past medical history was significant for chronic kidney disease, scleroderma, rheumatoid arthritis, interstitial lung disease, and nonischemic cardiomyopathy with reduced ejection fraction, for which she underwent a heart transplant two years ago. Before admission, the patient presented to the outpatient clinic with gradually progressive dyspnea on minimal exertion, paroxysmal nocturnal dyspnea (PND), peripheral edema, and abdominal distention, which improved only transiently with oral diuretic regimen. She was diagnosed with acute pulmonary edema and her symptoms improved after IV Lasix was administered. A CT scan was obtained to confirm her diagnosis which incidentally revealed that the heart was herniated through the ribs. Since the patient had a benign clinical course, we recommended follow up with cardiothoracic surgery as an outpatient.

What will audience learn from your presentation?

- The prognosis of patients with luxatio cordis has not been recorded but recognizing this diagnosis is important in order to provide immediate treatment since the condition can deteriorate quickly especially in the setting of a blunt trauma that could lead to a potentially fatal outcome.
- Nonetheless, it should be noted that heart luxation can also be asymptomatic and present as an incidental radiographic finding status post heart surgery.
- If the patient is hemodynamically unstable, surgical intervention is necessary whereby the heart could be repositioned and the pericardium could be reconstructed.
- However, if the patient is stable, a careful watch-and-see approach is justified. Careful echocardiogram follow up in patients with this condition is necessary to prevent hemodynamic impairment.

Biography

Dr Casadesus graduated summa cum laude with the degree of Doctor in Medicine from Havana University, Cuba in 1994. He completed his residency in colorectal surgery in Calixto Garcia University Hospital, Cuba in 1997, followed by a completion of residency in internal medicine at Capital Health Regional Medical Center, New Jersey in 2012. In addition, he also received a PhD in Medical Sciences in Niigata University, Graduate School of Medical and Dental Sciences, Japan in 2007. Dr. Casadesus has received many honors and awards throughout his career eg, honorable mention in the general internal medicine annual house staff research competition in 2011 by John Hopkins University, and awarded grant for research in inflammatory bowel disease by the Japanese Ministry of Science, Education, Technology, and Health in 2002, etc. In addition to numerous peer-reviewed abstracts and poster presentations, he has more than 16 journal publications.

VIDEO PRESENTATION

2ND EDITION OF

CARDIOLOGY WORLD CONFERENCE

SEPT 17, 2021

CWC 2021



Namitha Aravind Baliga

Manipal University, India

A stepwise approach to fetal echocardiography

Fetal echocardiography is an ultrasound examination of the fetal heart, which includes fetal anatomic ultrasound planes of the upper abdomen, the 4 chamber view, the 5 chamber view, the short axis view, the 3-vessel-trachea, and if needed, longitudinal planes of the aortic arch, the ductal arch, and the systemic veins. Improved diagnostic accuracy of fetal echocardiography is attained by the application of gray scale and color Doppler ultrasound in order to demonstrate blood flow in the cardiac chambers and great vessels. While the atria, ventricles, and atrioventricular valves are simultaneously visualized in the 4-chamber-view, the great vessels are assessed in the left and right outflow tracts thus demonstrating their origin, course, and spatial relationships. Documentation of the fetal echocardiography examination is required and includes storing of still images and movie clips of cardiac anatomy. I would be discussing on a systematic way we approach Fetal Echocardiography. And a few interesting cases seen on Fetal Echocardiogram recently.

What will audience learn from your presentation?

- Fetal Echocardiography should be practiced in every hospital in the OPD's on a regular basis.
- Lots of Hand-On opportunities in Fetal Echocardiography with a good training and experience for Cardiac Sonographers/ Physiologist would definitely add on to the career growth and development.
- While performing Fetal Echocardiography one can also show interest on Fetal sonogram to look for the normal and abnormal findings. PhD opportunities in depth learning.

Biography

Mrs Namitha Arvind Baliga completed B.Sc in CardioVascular Technology in Manipal University; M.Sc in Echocardiography from Narayana Hrudayalaya Institute of Medical Science and Research Centre, Bangalore, India. Was working part-time in a Clinic(Sigma) as a Cardiac Sonographer for the 2 years during M.Sc(2015-2017). After M.Sc worked for near 2 years as an Assistant Professor/Cardiac Sonographer (full-time) in Cardio Vascular Technology Department(Allied Health Stream) in KMC Mangalore(Manipal University). And a part-time as Cardiac Sonographer in a nearby Clinic(Amritha Polyclinic) for 2 years. Published an original research article in JEMDS in August 2018. Participated in Cardiology Conference, at Manipal university with an E-poster presentation on an original research article in 2019 November. Started working as an Assistant Professor/Course Co-ordinator in the Department of Cardiac Care Technology (Allied Health Stream) in AJIMS Mangalore in March 2021. Participated as a Speaker in the International Webinar conducted by Srinivas University in May 2021. Currently waiting for more opportunities as a Speaker in various conferences and also looking forward for career growth in Advance ways of clinical Approach and in PhD opportunities.

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again at our upcoming Conference:*

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