

3rd Global Conclave on Advanced Cardiology and Cardiovascular Innovations

JUNE 27-28, 2024

AMSTERDAM, NETHERLANDS

Theme:

Holistic Cardiology: Innovations, Intersections, and Inclusivity

Sub-themes:

- The Next Wave of Innovations--Latest breakthroughs in cardiac therapies, technologies, research and signalling
- Digital Transformation in Cardiology
- Precision Medicine in Cardiology: A Tailored Approach
- The Heart-Mind Connection: Cardiology and Mental Health
- Vascular Innovations: Beyond the Heart
- Prevention Over Prescription: Lifestyle, Nutrition, and Cardiac Health
- · Interventional Advances: Catheters, Stents, and Beyond
- Cardio-Oncology: Navigating the Intersection

Adv. Cardiology 2024

https://advanced-cardiology.peersalleyconferences.com/

2 DAYS WITH MORE THAN 45 SESSIONS, KEYNOTES & ORAL PRESENTATIONS

12+ INNOVATIVE FEATURED SPEAKERS

20+ HOURS OF NETWORKING EVENTS

60+ INTERNATIONAL SPEAKERS





WHO SHOULD ATTEND

Cardiologists | Cardiac Surgeons | Non-Invasive Cardiologists | Non-Interventional Cardiologists | Interventional Cardiologists | Electrophysiologists (EP) | Healthcare Professionals | Cardiothoracic Surgeons | Cardiology Physicians | Nurse Practitioners | Cardiovascular Researchers | Cardiovascular Doctors | Universities | Hospitals | Faculty | Cardiovascular Scientists | Electrophysiologists | Cardiac Sonographers | Cardiac Perfusionists | Medical Students | Ph.D. Fellows | Family Practice | Internal Medicine | Hospitalists | Advanced Practice Nurses | Registered Nurses | Physician Assistants | Pharmacists | Cardiology and Cardiac Surgery Fellows and Residents | Researchers & Academicians | Educationalists

PRESENTATION Forum

KEYNOTE FORUM / MINI-Plenary sessions

Presentations under Keynote Forum or Mini-Plenary Sessions includes abstracts with remarkable research value selected by the program committee. These significant speeches are delivered by globally recognized honorable speakers and it is open to all registrants.

DISTINGUISHED SPEAKERS FORUM (ORAL ABSTRACT SESSIONS)

In this forum, speakers and experts of the research field gets an opportunity to showcase their noble research work that involves comprehensive research findings. These formal oral presentations include a wide range of talks covering basic research to advanced research findings in accordance to the theme and scientific sessions of the conference.

STUDENT FORUM Poster session

This session is particularly introduced to encourage more number of student participation at international conferences, however it is not restricted only to students since it is also available for the participants with language barrier. There are specific guidelines to be followed to prepare the poster. Poster topic should be selected only from relevant scientific sessions with in-depth technical details.

YOUNG INVESTIGATORS FORUM

An exclusive opportunity for students and young investigators to present their research work through a formal oral presentation. Young Investigators Forum provides a global platform for young researchers and scholars to showcase their valuable contribution to the scientific world and to get acknowledged by the global scientific community of experts. It is an excellent opportunity to recognize young scientific assets with promising research ideas. These oral presentations are of shorter time duration with 10-15 minutes of informative and precise presentations in relevant scientific sessions.

EDUCATIONAL WORKSHOPS/ RESEARCH WORKSHOPS/ CORPORATE WORKSHOPS/MINI-SYMPOSIA

With an aim of transferring knowledge among the participants, workshops are introduced as a part of international conferences. These interactive and occasionally practical sessions gives an opportunity for participants to engage in detail discussion. Workshops are mostly scheduled for 60 to 90-minutes. It may range from learning about a specific topic relevant to international education, products and research which sometimes involves practical demonstration. It helps in enhancing skills, knowledge and understanding of the research field in depth through interactive discussions.

HIGHLIGHTS OF THE DAY Sessions

"Highlights of the Day Sessions" is introduced to discuss and focus a ray upon previous day ORAL ABSTRACT presentations by experts to summarise the key findings. It helps in getting better insights into the various dimensions of the topic.

MEET THE PROFESSOR NETWORKING SESSIONS

This session involves open discussion between the experts and session attendees, it gives enough time for getting answers to specific questions and doubts. It is an opportunity for attendees to increase their professional networking, sometimes also leads to an excellent collaboration opportunity.

EDUCATIONAL SESSIONS/ TRAINING PROGRAMS

Educational Sessions or training programs are specifically designed for a better understanding of the latest findings and technologies. These are generally 45-minute sessions that gives an exposure to the multidisciplinary field, that provides in-depth learning experiences and address educational needs.

TYPES OF ACADEMIC REGISTRATIONS

Speaker Registration

COMBO A (Registration + 2 Night Accommodation)

COMBO B (Registration + 3 Night Accommodation)

Delegate Registration

TYPES OF BUSINESS REGISTRATIONS

Speaker Registration

COMBO A (Registration + 2 Night Accommodation)

COMBO B (Registration + 3 Night Accommodation)

Delegate Registration

TYPES OF STUDENT REGISTRATIONS

Registration

YIF

COMBO A (Registration + 2 Night Accommodation)

COMBO B (Registration + 3 Night Accommodation)

Posters

TYPES OF ADDITIONAL REGISTRATIONS

Accompanying Person

E-Poster

Virtual Presentation

Workshops

Start-Ups

6

Register B Participate

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Adv. Cardiology 2024

TIME TO CONNECT

WITH YOUR PEERS

CONCURRENT EDUCATIONAL SESSIONS



 Advances in Non- Invasive Cardiac Imaging Techniques Cardiologist Clinical Cardiology 	 Innovations in Cardiovascular Surgery Heart Diseases Hypertension
GROUP PHOTO I COFFEE BREAK	
 Artificial Intelligence in Cardiovascular Medicine Electrocardiography Cardio-Oncology 	 Precision Medicine in Cardiology Interventional Cardiology Nuclear Cardiology
LUNCH BREAK	
 Telemedicine and Remote Monitoring in Cardiac Care Cardiac Nursing Pediatric Cardiology 	 Cardiac Biomarkers and Diagnostic Tools Stroke Cardiac Surgery
COFFEE BREAK	
 Cardiogenomics and Personalized Treatment Thrombosis Heart Arrhythmia 	 Cardiovascular Epidemiology and Public Health Cardiovascular Disease

CONCURRENT EDUCATIONAL SESSIONS



Stem Cell Therapy for Cardiac Imaging in the Era **Cardiac Regeneration** of 3D and 4D Cardiac Devices and Valvular Heart Disease Implantable Technologies Pulmonology and **Atherosclerosis** Cardiology Sports Cardiology **GROUP PHOTO I COFFEE BREAK** Cardiovascular Risk Genetics of Cardiac Arrhythmias Assessment and Prevention Big Data and Analytics in Cardiovascular Disease in Cardiology Women Cardiac Imaging Cardiology Case Reports Vascular Biology **Geriatric Cardiology LUNCH BREAK** Artificial Heart Devices and Cardiac Biomaterials and Transplants **Tissue Engineering** Cardiovascular • **Cardiac Regeneration** Pharmacology Dyslipidemia **Robotic Cardiac Surgery COFFEE BREAK** Cardiac Imaging for Risk Prediction Cardiology Education and **Training Innovations** Integrative Medicine in Cardiology Acute Coronary Syndrome **Congestive Heart Failure**





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Biomarkers and Mechanisms Associated with Cancer-Induced Cardiac Cachexia: A Systematic Review

Lisa Anne Bagnall

James A. Haley Veterans Hospital - Veterans Health Administration, USA

Abstract:

<u>Aims:</u> Cancer-induced cachexia affects up to 80% of patients with cancer. Patients with cancer-induced cachexia may experience cardiac wasting through inter-tissue and inter-organ crosstalk. This review aims to identify evidence of cancer-induced cardiac cachexia in human and non-human models by examining the contribution of biomarkers and other factors leading to the development and progression of cardiac cachexia.

<u>Methods</u>: A systematic review included publications from 2011 to 2021 with eligibility criteria of randomized controlled trials, retrospective, prospective, descriptive animal, cadaver, and human studies. Fifteen animal and four human studies met the eligibility criteria and were included in this review.

Results: Four common biomarkers were identified in animal studies with upregulated gene expression, namely Tumor Necrosis Factor-alpha (TNF- α), Atrogin-1, Muscle RING-finger protein-1 (MuRF1), and Interleukin-6 (IL-6). The upregulation of Atrogin-1, noted in 5 out of 15 studies, facilitated cardiac atrophy, cardiac wasting, and remodeling by ubiquitinating proteins in the heart, marking them for degradation. The upregulation of IL-6, TNFa, and MuRF1 caused cardiac muscle breakdown and led to decreased intraventricular septal wall thickness, decreased ejection fraction, heart rhythm disturbances, heart failure, and death. Atrophied hearts showed decreased myocyte size, decreased sarcomeric proteins, and an increase in the b-myosin heavy chain, which is indicative of muscle atrophy. In one human study, 103 subjects with newly diagnosed stages of II-IV malignancies were classified as either non-cachectic, pre-cachectic, or cachectic. Non-cachectic cancer patients showed the least number of cardiovascular symptoms. Those with pre-cachexia and cachexia had the most cardiac findings, such as high-grade premature ventricular contractions (PVCs), hypertension, and either new or progressive chest pain. Cardiac wasting (measured by heart weight and ventricular wall thickness) was examined in 219 deceased patients using retrospective analysis. Of these, 177 were diagnosed with cancer, and 42 patients had non-cancer non-cardiovascular diagnoses. The diagnoses for the 177 cancer patients included 58 lung cancer, 60 pancreatic, and 59 non-pancreatic gastrointestinal cancers. Of those, 54 (30.5%) showed cancer-associated cachexia and had a significantly lower heart weight compared to non-cachectic patients (p < 0.001) and patients with non-cancer and non-cardiovascular diagnoses (p < 0.05).

<u>Conclusion</u>: The cardiac effects associated with cachexia-induced biomarkers showed reduced heart weight, function, and overall quality of life. Despite the extensive search, we found only a limited number of high-quality studies. Further studies are needed to determine if targeted treatments can effectively block the upregulation of various genes and cytokines that initiate and facilitate cancer-induced cardiac cachexia.





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Title: Independent Research – Possibilities Remain

Roger H Coletti

Interventional Health, USA

Abstract:

In the world of medicine, now bowing down to guideline directed medical therapy protocols, is there still room for the independent researcher who does not fall in line with generally accepted although not always proven concepts and treatment. This presentation details how one researcher challenged to accepted theory and practice of treatment of chronic muscle spasm and resultant chronic muscle spasm. New concepts of the etiology of chronic muscle spasm emerged and a successful treatment of chronic pain resulting from chronic muscles spasm was developed without the use of opioid medications. Data demonstrating the successful outcomes of a procedure trademarked as CMECD is presented. Additional findings that the length of time a muscle is in spasm does not affect the success of the CMECD® procedure are included. Details in the pathophysiology of chronic muscle spasm are explained and the procedure and the EMG findings of normal muscle and muscle in chronic spasm are demonstrated. EMG findings on normal muscle, muscle with increased insertional activity and muscle is chronic spasm are shown. References to articles and a book on this topic by this author are given. The entire procedure is visualized in a video presentation. Requirements for the use of medications in an off-label use according to FDA requirements are presented. Discussion regarding a proposed theory of the etiology of tendinopathy and as a vascular event are presented. The phenomenon described as the Hierarchy of Pain is presented and explained. Comparison to cardiac and skeletal states of hibernation are discussed.



FEATURED

TALKS

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Title: Isolated Spontaneous Renal Artery Dissection: Endovascular Management

J Gregory Roberts

Centura St Francis Health Center, USA

Abstract:

Isolated spontaneous renal artery dissection (ISRAD) is a rare clinical phenomenon that typically presents with refractory hypertension and abdominal and flank pains but may also induce hematuria and severe headache. The protean manifestations of ISRAD may be misinterpreted as renal colic or intrabdominal pathology and requires a high index of clinical suspicion. Computerized tomography (CT), coupled with angiography (CTA) clarifies the diagnosis. No evidence-based management exists as intervention is reserved for persistent symptoms despite optimal medical treatment. The sporadic incidence remains limited to but a few cases illustrating endovascular management. Herein between 2014 and 2019 are presented three, healthy Caucasian males, ages from 47 to 54 years-old who presented with symptomatic ISRAD, coupled with limited renal infarctions, and treated with mid-renal and segmental arterial stenting.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Comparison of Severity of Illness Scores and Artificial Intelligence Models that are Predictive of Intensive Care Unit Mortality

Cristina Barboi

Indiana University, USA

Abstract:

Severity of illness scores—Acute Physiology and Chronic Health Evaluation, Simplified Acute Physiology Score, and Sequential Organ Failure Assessment—are current risk stratification and mortality prediction tools used in intensive care units (ICUs) worldwide. Developers of artificial intelligence or machine learning (ML) models predictive of ICU mortality use the severity of illness scores as a reference point when reporting the performance of these computational constructs.

The objective of this study is to review the performance of Machine Learning models versus Severity of Illness Scores in predicting Intensive Care Unit (ICU) mortality.

Methods: We reviewed 47 ML models based on 7 types of algorithms and compared them with 3 types of the severity of illness score models. We assessed the models' characteristics, synthesized the results, meta-analyzed the discriminative performance of the ML and severity of illness score models, and performed tests of heterogeneity within and among studies.

<u>Results:</u> Of the models reviewed, 20% were found to have a low risk of bias and applicability in model development, 35% performed external validation, 45% reported on calibration, 60% reported on classification measures, and 20% addressed explainability. The discriminative performance of the ML-based models, which was reported as AUROC, ranged between 0.728 and 0.99 and between 0.58 and 0.86 for the severity of illness score–based models. We noted substantial heterogeneity among the reported models and considerable variation among the AUROC estimates for both ML and severity of illness score model types.

Conclusions: ML-based models can accurately predict ICU mortality as an alternative to traditional scoring models. Although the range of performance of the ML models is superior to that of the severity of ilss score models, the results cannot be generalized due to the high degree of heterogeneity. When presented with the option of choosing between severity of illness score or ML models for decision support, clinicians should select models that have been externally validated, tested in the practice environment, and updated to the patient population and practice environment.



FEATURED Titl

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Title: Omics Strategies to Identify Senescent Subpopulations in Atherosclerosis

Allison B Herman

National Institute on Aging (NIA), USA

Abstract:

The accumulation of senescent cells, a hallmark phenotype of aging tissues, increases the risk of cardiovascular disease with age. To systematically investigate the heterogeneity of senescent vascular cells in atherosclerosis, we employed the senescence reporter mouse p16TdTomato+/-, injected with an adeno-associated virus expressing Proprotein Convertase Subtilisin/Kexin type 9 (PCSK9) to induce atherosclerosis when fed a high-fat diet (HFD), and left untreated or treated with the senolytic drug ABT-737. Whole-aorta single-cell RNA-sequencing analysis identified 28 unique clusters, and 7 of them, mainly vascular smooth muscle cells (VSMCs) and monocytes, were increased by HFD and reduced by ABT-737. To investigate the incidence of cellular senescence among all clusters, we performed Gene Set Enrichment Analysis (GSEA) using the SenMayo and Cell Age panel, used for monitoring senescent cells in vivo and across organisms. This analysis uncovered 9 cell clusters with increased senescent features that were lowered by ABT-737, including two vascular smooth muscle clusters, fibroblasts, and neutrophillike cells. Unbiased sub clustering of each potentially senescent cluster identified a small population of cells enriched with HFD and reduced by ABT-737, suggesting these cells are indeed senescent. Comparison of the gene expression profiles across senescent cells revealed common and unique genes associated with each subpopulation, and those genes were often implicated in senescence-related signaling pathways. For example, within the most abundant cluster, Spp1 and Serpine2 strongly represented the senescent VSMC subpopulation that was enriched for TGFβ signaling, ECM remodeling, coagulation cascade genes, and hypoxia. To complement the single-cell analysis, we validated these findings by spatial transcriptomic sequencing of brachiocephalic arteries from atherosclerotic mice and atherosclerotic mice depleted of senescent cells. Our results uncover a new transcriptomic signature for senescent vascular cells that may be exploited for therapeutic targeting in age-related vascular diseases.





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Title: High Prevalence of Renal Salt Wasting (RSW), Identification of Novel Protein in RSW to Simplify Diagnosis of RSW And Introducing New Syndrome of RSW In Alzheimer's Disease

John K Maesaka

NYU Grossman Long Island School of Medicine, USA

Abstract:

Background: The approach to hyponatremia is in a state of flux. Cerebral/renal salt wasting (RSW) is considered rare and presents with identical parameters as SIADH that create a diagnostic and therapeutic dilemma, whether to fluid-restrict water-logged patients with SIADH or administer saline to dehydrated patients with RSW. We previously demonstrated the presence of a natriuretic protein (NP) in the plasma of RSW neurosurgical patients and in patients with Alzheimer's disease (AD).

Methods: We determined the causes of hyponatremia in the general hospital wards by utilizing a new algorithm and identified the NP in an RSW patient with subarachnoid hemorrhage (SAH) and another with AD by the same rat clearance methodology.

<u>Results:</u> Of 62 hyponatremic patients, (A) 17 (27%) had SIADH, (B) 19 (31%) had a reset osmostat (RO), (C) 24 (38%) had RSW, (D) 1 had Addison's disease and (E) 1(1.6%) due to hydrochlorothiazide. The SAH and AD sera had identical robust increases in FEsodium and especially FElithium, a marker of proximal tubule sodium transport. We identified haptoglobin related protein (Hpr) without signal peptide (Hpr-WSP) as the natriuretic protein. Recombinant Hpr with signal peptide had no natriuretic activity.

<u>Conclusions</u>: RSW is common, cerebral salt wasting should be changed to renal salt wasting. Hpr-WSP may be the NF that causes C-RSW, can serve as a biomarker to differentiate RSW from SIADH on first encounter, need to develop inhibitor to HPR-WSP, introduces a new syndrome of RSW in AD and can effectively treat congestive heart failure when combined with distal diuretic.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Systemic Immunosuppression Does Not Affect Revascularization Outcomes in Patients with Chronic Limb-Threatening Ischemia

Andy Lee

Harvard Medical School, USA

Abstract:

Objective: Many patients with chronic limb-threatening ischemia (CLTI) have additional comorbidities requiring systemic immunosuppression. Few studies have analyzed whether these medications may inhibit graft integration and effectiveness, or conversely, whether they may prevent inflammation and/or restenosis. Therefore, our study aim was to examine the effect of systemic immunosuppression vs no immunosuppression on outcomes after any first-time lower extremity revascularization for CLTI.

Methods: We identified all patients undergoing first-time infrainguinal bypass graft (BPG) or percutaneous transluminal angioplasty with or without stenting (PTA/S) for CLTI at our institution between 2005 and 2014. Patients were stratified by procedure type and immunosuppression status, defined as ≥6 weeks of any systemic immunosuppression therapy ongoing at the time of intervention. Immunosuppression vs non immunosuppression were the primary comparison groups in our analyses. Primary outcomes included perioperative complications, reintervention, primary patency, and limb salvage, with Kaplan-Meier and Cox proportional hazard models used for univariate and multivariate analyses, respectively.

<u>Results:</u> Among 1312 patients, 667 (51%) underwent BPG and 651 (49%) underwent PTA/S, of whom 65 (10%) and 95 (15%) were on systemic immunosuppression therapy, respectively. Whether assessing BPG or PTA/S patients, there were no differences noted in perioperative outcomes, including perioperative mortality, myocardial infarction, stroke, hematoma, or surgical site infection (P > .05). For BPG patients, Kaplan-Meier analysis and log-rank testing demonstrated no significant difference in three-year reintervention (37% vs 33% [control]; P = .75), major amputation (27% vs 15%; P = .64), or primary patency (72% vs 66%; P = .35) rates.

Conclusions: Our findings demonstrate that patients with chronic systemic immunosuppression, as compared with those who are not immunosuppressed, does not have a significant effect on late outcomes after lower extremity revascularization, as measured by primary patency, reintervention, or major amputation.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS



Title: Primary Prevention of Sports-Related Sudden Cardiac Death in Older Persons with Low-Dose Aspirin

Arthur J Siegel

McLean Hospital, USA

Abstract:

Division of General Internal Medicine I, Massachusetts General Hospital, Boston, MA,

Department of Internal Medicine 2, McLean Hospital, Belmont, MA, Harvard Medical School 3,

Boston, MA, USA





FEATURED TALKS

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JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Complexity AF Score as a Novel Marker of Atrial Fibrillation Instability

Tolkacheva Elena G

University of Minnesota, USA

Abstract:

Atrial Fibrillation (AF) is the most common cardiac arrhythmia. It is associated with an increased risk of stroke, heart failure, and sudden cardiac death. It is essential to diagnose AF at the earliest possible stage. Various new AF burden (AFB) metrics were developed for measuring AF complexity, and to determine AF management approaches. However, there are limitations in the AF burden metrics since AF treatment outcomes are still sub-optimal. Specifically, any intrinsic complexity of the cardiac electrical signals is not taken into account in current AF burden metrics. Therefore, the goal of this study is to introduce the concept of electrical burden (EB) as the measure of the intrinsic complexity of the electrical signals during AF, and to demonstrate that EB is an important metric, in addition to standard AFB. We also developed a Complexity AF score by combining AFB and EB to assess the severity of AF.

Electrocardiogram (ECG) traces of fifty AF patients (23.87±1.56 hours, median 24 hours) taken from the Long-term AF Physio net database were analyzed to calculate EB using several metrics. EB was then combined with AFB to calculate Complexity AF score for each patient. Our results demonstrated that AFB and EB were not correlated, describing different aspects of AF complexity. High AFB and EB identified patients at high-risk, emphasizing the superiority of the combined AF score compared to AFB or EB alone. Complexity AF score effectively assessed AF complexity and severity, distinguishing between the paroxysmal AF group (1.88±1.02, 17 patients) and the persistent group (2.52±0.61, 33 patients).

This study emphasizes the importance of EB as an indicator of electrical complexity of AF signals. It highlights the utility of the Complexity AF score in accurately characterizing and stratifying AF risk for improved management.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Food, Gut Barrier Dysfunction, and Related Diseases: A New Target for Future Individualized Disease Prevention and Management

Linda Liang

University of Southern California, USA

Abstract:

Dysfunction of gut barrier is known as "leaky gut" or increased intestinal permeability. Numerous recent scientific evidence showed the association between gut dysfunction and multiple gastrointestinal tract (GI) and non-GI diseases. Research also demonstrated that food plays a crucial role to cause or remedy gut dysfunction related to diseases. We reviewed recent articles from electronic databases, mainly PubMed. The data were based on animal models, cell models, and human research in vivo and in vitro models. In this comprehensive review, our aim focused on the relationship between dietary factors, intestinal permeability dysfunction, and related diseases. This review synthesizes currently available literature and is discussed in three parts: (a) the mechanism of gut barrier and function, (b) food and dietary supplements that may promote gut health, and food or medication that may alter gut function, and (c) a table that organizes the synthesized information by general mechanisms for diseases related to leaky gut/intestinal permeability and associated dietary influences. With future research, dietary intervention could be a new target for individualized disease prevention and management.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Inflammatory Arthritis after Covid-19 Infection: A Case Series

Siddhant Yadav

Mayo Clinic, USA

Abstract:

Objective: A portion of patients who have recovered from acute infection with coronavirus 19 (COVID-19) develop persistent symptoms that have been termed post COVID. This may affect the musculoskeletal system with arthralgias and myalgias being common. Current medical opinion is rapidly establishing the paradigm that Post COVID syndrome is an immune mediated condition, and thus may predispose to autoimmune diseases. Based on previous data related to viral infections, COVID-19 has been proposed as a risk factor for development of rheumatoid arthritis (RA) and reactive arthritis. In this case series, we aim to describe patients who developed inflammatory arthritis (both reactive arthritis and RA) after recovering from COVID-19 infection.

<u>Methods</u>: We present a case series of 5 patients who developed joint pain several weeks after recovery from acute COVID-19 infection. These patients were seen in our Post COVID Clinic and came from all regions of the United States.

<u>Results</u>: All 5 patients were female, with their age of diagnosis for COVID-19 being between 19-61 years (mean 37.8 years). All presented with joint pain as the primary complaint to the Post COVID Clinic. Abnormal joint imaging was present in 5 of 5 patients. Treatments were varied and included NSAIDs, acetaminophen, corticosteroids, immunomodulators (golimumab), methotrexate, leflunomide, and hydroxychloroquine (Table 1).

Conclusions: COVID-19 is a potential cause of inflammatory arthritis, with both RA and reactive arthritis demonstrated in our patient population. It is thus important to diagnose this condition promptly and institute the appropriate treatment.





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Title: Delayed Migration due to Shortening of the Lower Part of AFX Endograft's Main Body in Angled Fusiform Abdominal Aortic Aneurysm

Katsuhiko Oda

Iwate Prefectural Central Hospital, Japan

Abstract:

The Endologix® AFX® (Endologix, Inc., Irvine, CA, USA) endovascular abdominal aortic aneurysm (AAA) graft systems have a unique unibody structure suitable for narrow aortic bifurcations in AAAs.1 However, since 2017, the Food and Drug Administration has issued several safety warnings against its routine use for AAA treatment due to type III endoleaks (last updated: May 17, 2023). We encountered two fusiform abdominal aortic aneurysm cases with delayed AFX® endograft migration over 4 years after placement. These cases showed shortening and slight angulation of the main body in the anterior-posterior direction. We speculate that the potential mechanism relates to the AFX® portion that is easily shortened at the bifurcation of its stent structure. This portion may contribute to delayed migration following slight angulation of the main body. Preoperative three-dimensional-computed tomography should be performed from both the anterior-posterior and lateral views. Although the AFX® is useful for narrow bifurcations, its indications should consider the patient's anatomy.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Coronary Microcirculatory Dysfunction can be Assessed by Characteristics of Resting Pd Waveform

Satoshi Hashimoto

Suwa Central Hospital, Japan

Abstract:

Background and aim: As coronary stenosis progresses, arterioles in the related myocardial region dilate in proportion to ischemia, resulting in a decrease in resting distal coronary pressure/aortic pressure (Pd/Pa). However, we find some high-remaining resting Pd/Pa values with a large diremption from fractional flow reserve (FFR) in the severely stenotic coronary artery. This study aims to characterize and diagnose those lesions using coffee loading just before coronary angiography (CAG).

Patients and methods: We enrolled 120 patients who underwent FFR measurement at diagnostic CAG. Sixty patients took a canned coffee containing 222mg of caffeine just before CAG (coffee group), and sixty did not (non-coffee group). We estimated a positive dicrotic wave and the highest pressure after inflection point including dicrotic notch on the Pd waveform at resting Pd/Pa. Amplitude index was calculated as [(the highest pressure after inflection point – minimal diastolic pressure)/pulse pressure] (Fig1).

<u>Results</u>: There were several high-remaining resting Pd/Pa values with a positive dicrotic wave in the severely stenotic lesions of coffee group (Fig2, FFR <0.75). Amplitude index on the Pd waveform at resting Pd/Pa was significantly higher in the lesions with a positive dicrotic wave than in those without (0.41±0.10 and 0.28±0.19, respectively, p=0.029).

Conclusions: A high-remaining resting Pd/Pa with a high amplitude index or a positive dicrotic wave on the resting Pd waveform suggests microcirculatory dysfunction such as insufficient arteriolar dilation reactive to myocardial ischemia or arteriolar constriction. A positive dicrotic wave and a high amplitude index on the Pd waveform at resting Pd/Pa are characteristics of arteriolar constriction in those coronary lesions, and can be simple and useful indicators to suggest coronary microcirculatory dysfunction without FFR assessment.



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FEATURED TALKS

Title: Effect of Yogurt Intake Frequency on Blood Pressure: A Cross-Sectional Study

Xin Xue

The Second Hospital of Jilin University, China

Abstract:

Objectives: Yogurt intake has been shown to have key importance in reducing hypertension and preventing cardiovascular disease. Although increasing evidence has emerged regarding the potential benefits of probiotics in hypertension, there is a lack of large, cross-sectional studies assessing the association between yogurt intake and blood pressure parameters. We aimed to evaluate the association between yogurt intake frequency and blood pressure. A cross-sectional study was designed using data from the National Health and Nutrition Examination Survey (NHANES) from 2003–2004 and 2005–2006.

<u>Methods</u>: We included 3,068 adults with blood pressure data and yogurt intake data. We categorized participants into low-frequency and high-frequency groups according to the frequency of yogurt intake.

<u>Results</u>: Multivariable regression analyses revealed significant inverse associations between yogurt and SBP (P < 0.05), DBP (P < 0.05), and MAP (P < 0.05) in non-hypertensive (n = 1,822) but not hypertensive participants (n = 1,246).

<u>Conclusions</u>: Furthermore, a high frequency of yogurt intake prevented hypertension; however, no additional antihypertensive effects were observed in patients already diagnosed with hypertension.





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Title: Ageing Vasculature, Ageing Brain and the Cause of Dementias, Including Alzheimer's

Jonathan Stone

University of Sydney, Australia

Abstract:

Dementia is experienced as the failing of the brain in an otherwise healthy body; its cause is still debated. In this talk I bring together evidence that several dementias (pugilistica, chronic traumatic encephalopathy, traumatic brain injury, Alzheimer's) share the common feature of widespread capillary haemorrhage, senile plagues forming – in late stage in huge numbers – at the sites of these small (~ 100µm dia) bleeds. These microhaemorrhages occur with increasing frequency with age, because hardening of the great arteries increases pulse pressure, and the rate of their occurrence is increased by external trauma to the head (in boxers, footballers, combat veterans, skeleton sledders), causing the dementia to appear earlier in life. Conversely, the onset of dementia is delayed by exercise, saunas, a Mediterranean diet, weight control – anything that is good for the vasculature. When a microhaemorrhage occurs, four factors kill brain cells – hypoxia; the neurotoxicity of haemoglobin and its breakdown products, the excitotoxicity of glutamate entering the neuropil and immune-mediated cytotoxicity evoked by opportunistic microbes entering that patch of brain, and infecting brain cells, which are then attacked by killer T-cells. In this view, the hypoxia-inducible molecules haptoglobin, haemopexin and Aß are expressed at sites of microhaemorrhage as 'first-responders' to mitigate the toxicities mentioned above. This view, if accepted, changes understanding of the role of Aβ in the ageing brain; implies that dementia is a fate for each of us (but deferrable), not a curable disease; and adds the suppression of chronic pathogens (like H. zoster) and acquired resilience to the list of ways to defer dementia.





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Title: Value of Adding Bioelectrical Impedance Analysis to Anthropometric Indices in the Diagnosis of Metabolic Syndrome in 10–16 Years Old Schoolgirls

Rawan Ghaleb Muhanna

King Saud University, Saudi Arabia

Abstract:

The use of bioelectrical impedance analysis (BIA) in clinical settings is common. However, the value of BIA-based parameters in diagnosing metabolic syndrome (MetS) in children is under-investigated. Herein, we aimed to study the usefulness of BIA-indices in the diagnoses of MetS in 6–10-year-old girls. Therefore, a diagnostic accuracy case-control study was conducted, which included 75 girls aged 10–16 years, divided into three age-matched groups (normal, None-MetS, and MetS). Anthropometric indices, BIA parameters (including fat-free mass (FFM), body fat percent (BFP), and total body water (TBW)), blood pressure (BP), and blood samples were collected. Our main findings show that for girls in None-MetS and MetS groups, the waist circumference (WC) correlated positively with waist-hip ratio and mid-arm circumference (r = 0.58, 0.47, respectively), but not with BFP based on skinfold thickness (SFT), or mid-arm muscle area. WC was positively correlated with FFM and TBW, while high-density lipoprotein was inversely correlated with FFM. However, fasting blood glucose, triglycerides and BP showed no association with anthropometric measurements and BIA components. WC was the best indicator of MetS (AUC = 0.88, cut-off = 81.5 cm), followed by BMI (AUC = 0.84, cut-off = 26.9 kg/m2), while BFP based on SFT was the least sensitive (62.5%). In conclusion, apart from the FM index, anthropometric parameters such as WC are more valuable in diagnosing MetS in young adolescent girls.







JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Relationship between Disease Knowledge and Self-care Adherence among Heart Failure Patients at King Abdulaziz University Hospital

Salha Hamad Alrefaei

Ministry of health, Saudi Arabia

Abstract:

Backgrounds: Heart failure (HF) is a progressive syndrome characterized by complicated therapeutic regimens and repeated hospitalizations. HF has turned into a global epidemic demonstrating serious mortality and morbidity. This study aimed to assess the relationship between disease knowledge and self-care adherence among adult HF patients at King Abdulaziz University Hospital (KAUH).

Methods: A cross-sectional descriptive correlational design was utilized. Patients were recruited from outpatient clinic at KAUH in Jeddah, Saudi Arabia. A convenience sample of 208 HF patients. The Dutch Heart Failure Knowledge Scale (DHFS) and the European Heart Failure Self-Care Behavior Scale (EHFSCBs) were used to measure the main study outcomes. Participants were recruited from heart failure outpatient clinics at KAUH from January 31 – May 17, 2021.

<u>Results:</u> 63.9% of participants were male, 49% were over 61 years old, and 30.8% of the participants were not educated. 55.8% of the participants had an adequate level of knowledge about HF disease and 57.2% had a good level of self-care adherence. The mean total HF knowledge score DHFS was 8.58±3.08 out of 15 and the self-care adherence score EHFSCBs was 28.97 ±5.61out of 60. A significant positive moderate correlation existed between disease knowledge and self-care adherence. Conclusion: Disease knowledge was adequate in more than half of the participants, and self-care adherence was good. This study has shown a relationship between disease knowledge and self-care adherence, which means that a high level of HF knowledge was associated with improved self-care adherence.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Regulation of mi-RNAs Target Cancer Genes Between Exercise and Non-exercise in Rat Rheumatoid Arthritis

Vimolmas Tansathitaya

Mahidol University, Thailand

Abstract:

Introduction: Rheumatoid arthritis (RA) is classified as an autoimmune inflammatory condition characterized by pain, swelling, and inflammation of the joints, along with stiffness which can reduce function and impair the overall quality of life. Rheumatoid arthritis initiated from chronic inflammatory disorder that can affect not only just the joints but it also damages a wide variety of body systems, including the skin, eyes, lungs, heart and blood vessels. Some patient cases in post- rheumatoid arthritis diagnosis develop cancer later. Moreover, a total of 138 cases of lung and prostate solid tumors were recorded within 12 months of RA diagnosis. Furthermore, those patients diagnosed with RA experienced cancer of greater severity than was the case for patients who did not have RA. Exercise may represent a novel means of mitigating the suffering of RA and cancer patients. A number of studies have sought to examine the application of exercise as a means of inhibiting tumorigenesis.

<u>Methods</u>: The effects of exercise interventions on serum microRNAs were investigated in pristaneinduced arthritis (PIA) rat models. Twelve Sprague-Dawley male rats were divided into 4 groups including non-exercise without PIA (N-EX), non-exercise with PIA (N-EX + PIA), exercise without PIA (EX) and exercise with PIA (EX + PIA). Blood samples were collected at the end of the study period to analyze miRNA biomarkers and target cancer gene predictions.

<u>Results:</u> Four significant Rattus norvegicus (rno-microRNAs) may purpose as tumor suppressors were identified as potential target cancer gene candidate expressions within the 4 comparative interventional exercise groups. One rno-microRNA and target cancer gene candidate were up-regulated and 3 rno-microRNAs and their target cancer genes were downregulated.

<u>Conclusions</u>: Exercise interventions affected rno-miRNAs regulated target cancer gene candidates ITPR3, SOCS6, ITGA6, and NKX2-1 as biomarkers for cancer prognosis in rheumatoid arthritis diagnosis.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Thrombosis Prophylaxis in Hospitalized Patients: Systematic Review of Clinical Practice Guidelines

Ana Paula Callejo de Souza

University of Sao Paulo, Brazil

Abstract:

Venous thromboembolism is a complex multifactorial disease considered the most common cause of preventable deaths in hospitalized patients. Recommendations about pharmacological venous thromboembolism prophylaxis in adult hospitalized patients are available in clinical practice guidelines for optimization of healthcare delivery and improvement patient outcomes. Venous thromboembolism prophylaxis is well established in worldwide guidelines however 50% of at-risk patients do not receive adequate prophylaxis. The aim of this study is to extract and produce a list of synthesized recommendations for pharmacological venous thromboembolism prophylaxis in hospitalized patients from high-quality clinical practice guidelines. We conducted a systematic review of clinical practice guidelines using ADAPTE to synthesize recommendations of the high-quality clinical practice guidelines assessed by the Appraisal of Guidelines for Research and Evaluation (AGREE II). Scores with a 60% or more cut-off for domains 3 (development rigor) and 6 (editorial independence) at the AGREE II were used to identify high-quality clinical practice guidelines in this study. The domain 3 indicates minimal risk of bias and development of guidelines, based on the process description of evidence and formulation of recommendations; and domain 6 indicates the relevance of the authors' conflict of interest, a potential source of risk in formulation of recommendations. Recommendations were extracted and synthesized from seven clinical practice guidelines considered of high guality after assessment by AGREE II instrument. Direct oral anticoagulants were recommended for the primary prevention of thromboembolism in medical and surgical patients and are considered the first choice in patients undergoing hip and knee arthroplasty. Low molecular weight heparin remains as the first choice in medical, hip fracture surgery, and non-orthopedic surgery patients. Aspirin is recommended for extended prophylaxis in hip and knee arthroplasty patients after low-weight heparin.



JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

FEATURED TALKS

Title: Beyond Fluid Responsiveness: Fluid Tolerance at Bedside and its Importance

Rafael Hortencio Melo

Adult Intensive Care Unit, Brazil

Abstract:

The presentation aims to present the concept of fluid tolerance, emphasize the importance of its assessment and present methods for evaluating this parameter at the bedside.







JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Cardiological Modifications and Sports Performance in Transgender Population During Hormone Therapy: Insights from Scientific Research

Leonardo Azevedo Mobilia Alvares

Centro Universitario Sao Camilo, Brazil

Abstract:

Introduction: Concerns arise regarding the sports performance of transgender women (TW) undergoing estrogen therapy.

<u>Objectives</u>: To examine the effects of hormonal therapy on cardiac chambers and VO2peak of well-trained TW.

<u>Methods</u>: A longitudinal study was carried out with 7 TW amateur volleyball players (age 30.7±3.2; median age at GAHT initiation was 22.5±7.6 years) with up to 12 months of follow-up. Following age, BMI, and physical activity level matching, 8 cisgender women (CW) and 10 cisgender men (CM) were assessed. Participants performed a maximal incremental exercise test to exhaustion on a treadmill to determine VO2peak (assessed by K5, COSMED, Rome, Italy). A standard transthoracic doppler echocardiogram was performed.

<u>Results:</u> This a partial cross-sectional analysis of data. The medium value of VO2 peak (L/min) of TW (2.8±0.4) was similar to the CW (2.6±0.3) group (p>0.05) and both lower than CM (3.6±0.7) (TWvsCM p<0.05; CWvsCM p<0.05). The hearts of TW exhibited a conformation similar to that of CW in all measures of myocardial thickness and cardiac chamber volumes. The septum (mm) in diastole: TW 8.1±0.3, CW 7.7±0.4, and CM 9.1±1.1 (TW vs. CW, p>0.05); Posterior wall (mm) of left ventricle (VE): TW 7.8±0.6, 7.7±0.4 in CW, and 9.1±0.9 in CM (TW vs. CW, p>0.05); The left atrium (LA) dimension (mm) was 32.1±1.3 in TW, 33.4±3.1 in CW, and 35.7±2.2 in CM (TW vs. CW, p>0.05). The left ventricular diastolic diameter (mm) was 48.8 ±3.7 in TW, 49.5±4.7 in CW, and 51.8±2.3in CM (TW vs. CW, p>0.05), and systolic diameter (mm) was 31.4 ± 3.6 in TW, 32.2 ± 3.4 in CW, and 33.1 ± 3.4 in CM (TW vs. CW, p>0.05). The ejection fraction (%) was 60.1 ± 0.09 in TW, 64.7 ± 0.02 in CW, and 65.1 ± 0.06 in CM (TW vs. CW, p>0.05).

Discussion: The peak VO2 of transgender women (TW) was within values comparable to CW and both lower than CM. This finding contrasts with studies involving non-athlete TW. Our results revealed a reduction in cardiac thickness in TW due to hormone therapy.

Conclusion: Longitudinal studies are warranted to analyze in-depth cardiologic changes.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Relationship Between Temporal Intervals of Left Ventricular Contractile Activity, Biomarkers of Myocardial Damage, And Coronary Artery Atherosclerosis in Patients with Non-St-Segment Elevation Acute Coronary Syndrome

Feruza Bekmetova

Republican Specialized Scientific-Practical Medical Center of Cardiology, Uzbekistan

Abstract:

Introduction: This study aimed to assess the correlation between parameters of left ventricular contractile activity, biomarkers of myocardial damage, and the presence of atherosclerosis in coronary arteries in patients with non-ST-segment elevation acute coronary syndrome (NSTE-ACS), utilizing echocardiography and tissue Doppler imaging (TDI).

Methods: In this research conducted using the GE Vivid T8 Pro apparatus, measurements of left ventricular parameters, including ejection fraction (LVEF), were taken in the analysis of 98 patients categorized into groups with positive (TnI+) and negative (TnI-) troponin. The analysis revealed no significant differences in demographic characteristics between the groups, except for the Syntax score (p=0.01).

Results: Echocardiographic measurements did not show statistically significant differences between the groups. However, tissue Doppler imaging revealed slight variations in the E/e' parameter (p=0.05) with higher values in the group with negative troponin (TnI-). Moreover, statistically significant differences were found in isovolumetric relaxation time (IVRT), the ratio of IVCT/ET, IVRT/ET (p=0.001), and myocardial performance index (MPI) (p=0.005) between the groups. These findings indicate a more pronounced myocardial injury in patients with positive troponin (TnI+).

Conclusion: In conclusion, it is emphasized that parameters of tissue Doppler imaging, particularly IVRT, IVCT/ET, and MPI, serve as indicators of myocardial damage in NSTE-ACS patients. The presence of atherosclerosis in coronary arteries is negatively correlated with specific tissue Doppler imaging parameters, indicating compromised blood supply to the heart. These results may play a crucial role in risk stratification and the development of treatment strategies for patients with this condition.



FEATURED

TALKS

3rd Global Conclave on ADVANCED CARDIOLOGY AND CARDIOVASCULAR INNOVATIONS

JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Awake VA-ECMO in Cardiogenic Shock, Single Centre Experiences

Dang Viet Duc

108 Military Central Hospital, Vietnam

Abstract:

"Awake" V-A ECMO when the patient is fully awake, breathing spontaneously, without deep sedation. Advantages of awake VA-ECMO include reduced sedative side effects, early active movements, reduced muscle mass loss, increased interaction with the family and medical staff, description of their symptoms, and more exact information than sedative patients so that early detection of complications. At the conference, I will present a series of 15 patients with cardiogenic shock support by awake VA-ECMO, techniques, parameters, complications, and treatment results.



FEATURED TALKS

3rd Global Conclave on ADVANCED CARDIOLOGY AND CARDIOVASCULAR INNOVATIONS

JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Calcium Plunger Extraction with the Penumbra System in Typo 5 Infartation

Bayardo Antonio Ordonez Salazar

U.M.A.E. Cardiology Hospital of the National Medical Center Siglo XXI, Mexico

Abstract:

62-year-old male, Mestizo, public health worker with a history of high blood pressure (HTN), sedentary lifestyle, obesity. He presents a history of functional class deterioration secondary to dyspnea from moderate to mild exertion, an echocardiogram was protocolized, which reported severe aortic stenosis with a velocity of 4.65 m/sec, Gmx: 89 mmHg, mean G: 56 mmHg, valve área by planimetry of 0.63 cm, left ventricular hypertrophy, without mobility disorders, LVEF 58%. Electrocardiogram without data of injury, ischemia or necrosis. Previous diagnostic coronary angiography without evidence of coronary artery disease. Accepted for successful aortic valve replacement surgery with number 19 double disc mechanical valve implantation.

During the first 1 postoperative hour, he presented a decrease in blood pressure figures with a higher requirement for mines, a control EKG was performed with evidence of ST-segment elevation > 0.5 mm in the antero-septal face, echocardiogram with basal and mid-anterior hypokinesia, basal antero-septal and a half, Left Ventricular Ejection Fraction (LVEF) 43% with aortic valve with normal velocities and gradients.

Presented urgently to the hemodynamics service and underwent coronary angiography immediately, acute total obstruction of the distal segment of the LAD artery was found, Battle Guide coronary guide is advanced, which presents difficulty in crossing the site of obstruction, so the guide with greater support (Floppy) is advanced, which manages to pass the stenosis site, positioning itself in the distal segment of the LAD, Mechanical Thromboaspiration with a vacuum pump is performed, performing three runs with aspiration of multiple calcium spicules, it presents slow flow and vasospasm so vasodilator drugs are administered with adequate final flow.

Intracoronary ultrasound (IVUS) was performed without evidence of plaque at the site of stenosis, control angiography with adequate luminal gain and flow, so no stent was implanted.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Physical Activity Improves Health-Related Quality of Life, 6MWT, and VO2 Peak Before and During COVID-19 in Patients with Heart Failure: A Meta-Analysis

Denny Maurits Ruku

Klabat University, Indonesia

Abstract:

Objective: To compare the effects of physical activity on improving health-related quality of life (HRQOL), six minutes walking test (6MWT), and oxygen consumption (VO2) peak before and during Coronavirus disease (COVID-19) in patients with heart failure.

<u>Methods</u>: Following PRISMA guidelines, we searched for relevant articles from five databases, including Embase, MEDLINE, CINAHL, PEDro, Cochrane, and additional resources. Study quality was assessed using Joanna Briggs Institution (JBI). RevMan 5.3 software was used to perform the meta-analysis.

<u>Result:</u> Fifteen randomized controlled trial studies met the criteria. Analysis of the subgroup before COVID-19 showed that PA had a significant effect on HRQOL, as measured by MLHFQ (SDM: -0.27, 95% CI: -0.47 to -0.07, n = 590), KCCQ (SDM: 2.10, 95% CI: 0.74 to 3.46, n = 53), 6MWT (SMD: 1.63, 95% CI: 0.80 to 2.46, n = 284), and VO2 peak (SMD: 0.97, 95% CI: 0.00 to 1.93, n = 106). Analysis of the subgroup during COVID-19 showed that PA resulted in a significant effect on HRQOL, MLHFQ (SDM: -0.62, 95% CI: -1.32 to 0.09, n = 221), KCCQ (SDM: 0.33, 95% CI: 0.15 to 0.50, n = 486), 6MWT (SMD: 0.47, 95% CI: 0.22 to 0.73, n = 493), and VO2 peak (SMD: 0.35, 95% CI: 0.10 to 0.60, n = 325).

<u>Conclusion</u>: The PA could increase HRQOL, 6MWT, and VO2 peak before and during COVID-19, and therefore should be considered as part of daily activities for patients with HF.







JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Percentage Weight Loss and World Health Organization-Five Wellbeing Index (WHO-5) in Patients Having Bariatric Surgery

Heshma R Alruwaily

University College Dublin, Ireland

Abstract:

The association between bariatric surgery outcomes and depression remains controversial. Many patients with depression are not offered bariatric surgery due to concerns that they may have suboptimal outcomes. The aim of this study was to investigate the relationship between baseline World Health

<u>Materials and Methods</u>: Organization-Five Wellbeing Index (WHO-5) and percentage total weight loss (%TWL) in patients after bariatric surgery.

All patients were routinely reviewed by the psychologist and screened with WHO-5. The consultation occurred 3.5 ± 1.6 months before bariatric surgery. Body weight was recorded before and 1 year after surgery. A total of 45 out of 71 (63.3%) patients with complete WHO-5 data were included in the study. Data analysis was carried out with IBM SPSS Statistics (version 27) to determine the correlation between baseline WHO-5 and %TWL in patients having bariatric surgery.

<u>Results</u>: Overall, 11 males and 34 females were involved with mean age of 47.5 ± 11.5 and BMI of 46.2 ± 5.5 kg/m2. The %TWL between pre- and 1-year post-surgery was $30.0 \pm 8.3\%$ and the WHO-5 Wellbeing Index mean score was 56.5 ± 16.8 . We found no correlation between %TWL and the WHO-5 Wellbeing Index (r = 0.032, p = 0.83).

Conclusion: There was no correlation between the baseline WHO-5 Wellbeing Index and %TWL 1-year post-bariatric surgery. Patients with low mood or depression need to be assessed and offered appropriate treatment but should not be excluded from bariatric surgery only based on their mood.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Clinical Anatomy of the Coronary Arteries in the Chilean Population from Angiographies. Normality and Variability

Francisco Javier Perez Rojas

Univerisdad Catolica del Maule, Chile

Abstract:

Three studies related to the anatomy and conditions of the coronary arteries in patients undergoing coronary angiography were performed. The first study evaluated the diameter, length, and anatomical distribution of coronary arteries in Chilean subjects without apparent angiographic lesions. Differences in diameters and lengths were observed according to sex, age and arterial dominance. In addition, cases of arterial tortuosity were found in some subjects.

In the second study, a case of a 68-year-old man with a left coronary artery of atypical origin was reported, raising suspicion of coronary heart disease. The atypical origin and the intraarterial course were confirmed by coronary angiography and computed tomography. Findings such as a separated ostium and stenosis in the left main coronary artery were observed.

In the third study, deep learning and convolutional neural networks were used to classify coronary artery tortuosity on angiograms. The developed model showed satisfactory performance, with an accuracy of 87% and an area under the curve of 0.96 in the detection of arterial tortuosity. It was concluded that convolutional neural networks are comparable to expert radiologists in the detection of arterial tortuosity.

These studies highlight the importance of detailed knowledge of the anatomy and conditions of the coronary arteries in the diagnosis and treatment of heart disease, as well as the potential of artificial intelligence techniques in the automatic detection of conditions such as arterial tortuosity.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

FEATURED TALKS

Title: Graphic Presentations of Heart Sound Signals - Auscultation Assistant Diagnosis Tool

Bozo Tomas

University of Mostar

Abstract:

The oldest, basic and primary cardiac diagnosis method is technique of listening of heart sound – auscultation. Unfortunately, heart sound interpretation by auscultations is very limited to human ear competence and depends highly on the skills and experience of the listener. Due to limited opportunities of heart auscultation, it is necessary to help the human ear and make a graphic display of the heart sound. Despite numerous heart sound graphic representations, vast majority physicians do not really use them. One of the most common graphic representations of heart sound signals is phonocardiogram (PCG) (the time display of heart sound amplitudes). Other display of heart sound signals is the heart sound spectrogram which allows better heart sound interpretation, but it is hardly precepted or used by physicians.

With this purpose is introduced a one solution for graphic display of heart sounds called HSLs (Heart Sound Lines). The idea is to show events in PCG signals with graphic lines. Graphic display of heart sound signals like this could be a useful tool for the heart sounds interpretation and can assist physicians for a more precise diagnosis of innocent and pathologic murmurs (auscultation-visual diagnosis). The advantage of HSLs graphical display over other methods is in its easier interpretation by their parameters: murmurs color line, numerical value of murmurs index and lines shape.

Visual representations of heart sound signals can help physicians to better understand, determine and evaluate heart sound cycle events. Today's technology allows us different representations of heart sound event. Physicians determine medical diagnosis of patients by interpretation of audio and graphic visual displays of heart sounds. Graphic representations of heart sounds can be a reliable assistance tool for heart diagnosis. Graphic representations of heart sound signals enable visual murmur displays and their visual classification. Thus, physicians who cannot clearly hear a sound of a heart, with the help of the visual display, will be able to see a sound and then make a diagnosis.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Decoding the Heart's Musical Perception: A Machine Learning Approach to Unravelling Valence Judgments

Ennio Idrobo Avila

Universidad del Valle

Abstract:

This study explores the intricate relationship between musical sounds and the human heart, investigating the impact of different sounds on heart signal features when individuals assess them as positive or negative. By tapping into the autonomic nervous system's (para) sympathetic control over the heart, we aim to unveil information about the subconscious processing of sound stimuli. Leveraging AI and machine learning techniques, we analyze the signals derived from heart rate variability (HRV), a parameter reflecting the interplay between the sympathetic and parasympathetic nervous systems. HRV, traditionally a diagnostic tool, plays a crucial role in clinical and research settings. Previous studies have examined its response to sound and music, revealing that exciting music elicits higher heart rates compared to tranquilizing music, accompanied by changes in HRV's low-frequency and high-frequency power. However, the specific musical elements driving these changes remain elusive. Our research delves into the effects of harmonic intervals and noise stimuli on heart responses, utilizing machine learning for a comprehensive analysis. Our findings demonstrate distinctive alterations in heart activity in response to harmonic intervals and noise, such as an increased ratio between the axes of the ellipse fitted in the Poincare plot with harmonic intervals compared to noise exposure. Additionally, the frequency content of stimuli induces varied heart responses, emphasizing the unique impact of harmonic intervals and noise. Notably, our study unveils the influence of consonance quality on heart responses to harmonic intervals, shedding light on the intricate relationship between music perception and the cardiovascular system. This research contributes to a deeper understanding of the physiological underpinnings of musical valence judgments, offering valuable insights into the intersection of music, emotion, and the human heart.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Late Post-TAVI Endocarditis Requiring Aortic Valve Replacement by Sternotomy: A Challenging Case

Paola Stephany Gonzalez Ausique

Hospital Militar Central

Abstract:

Percutaneous aortic valve implantation represents an alternative for the treatment of patients with aortic stenosis. This is an option in patients with high surgical risk or contraindication for intervention by conventional sternotomy; with good results in the short and medium term. However it is a procedure associated with complications such as endocarditis, which may require an urgent intervention in these patients with an increase in morbidity and mortality given the history and condition at the time of surgery. We present a clinical case of a nonagenarian patient with post-percutaneous aortic valve implantation endocarditis due to Enterococcus faecalis who presented 8 months after percutaneous aortic valve implantation in our center and required surgical management with excellent results.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: HDL Subclasses and the Distribution of Paraoxonase 1 Activity in Patients with ST-Elevation Acute Myocardial Infarction

Saska Djekic

Public Health Institution "Health Center"

Abstract:

Background and aims: The aim of this multicentric study was to assess the impact of oxidative stress, inflammation and the presence of small, dense, low-density lipoprotein (sdLDL) on the antioxidative function of high-density lipoprotein (HDL) subclasses and the distribution of paraoxonase 1 (PON1) activity within HDL in patients with ST-elevation acute myocardial infarction (STEMI).

<u>Materials and methods</u>: In 69 STEMI patients and 67 healthy control subjects, lipoproteins' subclasses were separated by polyacrylamide gradient (3-31%) gel electrophoresis. The relative proportion of sdLDL and each HDL subclass was evaluated by measuring the areas under the peaks of densitometric scans. The distribution of the relative proportion of PON1 activity within HDL subclasses (pPON1 within HDL) was estimated by the zymogram method. Malondyaldehide (MDA) concentration was determined using the method described by Girotti et al. The immunoturbidimetric method was used to obtain the concentration of highly sensitive C-reactive protein (hsCRP).

<u>Results:</u> STEMI patients had significantly lower proportions of HDL2a and total HDL2 subclasses (p<0.001 and p<0.001, respectively), as well as higher proportions of HDL3b, HDL3c and total HDL3 subclasses than controls (p=0.001, p<0.001 and p<0.001 respectively). Regarding pPON1 within HDL subclasses, only significantly lower pPON1 within HDL3b was found in STEMI group (p=0.036) compared controls. Independent positive associations between sdLDL and pPON1 within HDL3a and between malondialdehyde (MDA) and pPON1 within HDL2b were shown in the STEMI group.

Conclusions: The increased oxidative stress, acute inflammation and increased proportion of sdLDL in STEMI are closely related to the compromised antioxidative function of small HDL3 particles and the altered pPON1 within HDL.



FEATURED

TALKS



JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: The Combination of Three Exercise Modalities Aerobic Interval, Inspiratory and Resistance Trainings Improve Cardiac, Respiratory and Skeletal Function in Heart Failure

Wiam Ramadan

Lebanese International University (LIU)

Abstract:

Objectives: Chronic heart failure (CHF) is a public health problem in which exercise intolerance and dyspnea are the major symptoms. There are various reports of the success aerobic interval training (AIT) and inspiratory muscle training (IMT) in the management of CHF patients. The aim of this study is to evaluate the effect of a combined program of two or three modalities: (AIT), (IMT), and resistance training (RT), on cardiac function, exercise capacity, skeletal muscle function, inspiratory muscle function, dyspnoea and quality of life in CHF patients.

Methods: 60 patients with HF, left ventricle ejection fraction (LVEF) < 45% and inspiratory muscle weakness, were randomly assigned to one of the following groups (n=10/group): Control, AIT, IMT, RT, AIT+IMT and CT (AIT+IMT+RT). Trainings were performed 3 times per week for 12 weeks. Control group had no training.

<u>Results:</u> No changes were detected in the control group. All trained groups showed significant positive effects on almost all the parameters. The AIT+ IMT and CT groups were the most powerful modalities. The combined group resulted in significant improvement in maximal inspiratory training and exercise time. Significant amelioration was proved in functional capacity and dyspnoea after all types of training but was performed at 18% higher in 6 minutes' walk test and 43% lower in dyspnoea for the combined group. LVEF was improved significantly with a high percentage of amelioration (17%, p<0.042) in CT group.

Conclusion: The combination of AIT, IMT and RT resulted in additional benefits in respiratory muscle function, exercise performance, and quality of life in CHF patients. Thus, the combination of three exercise training could be the recommended protocol in cardiac rehabilitation programs. This combination has optimized exercise training benefits in reversing the cardiac remodeling process and improving skeletal muscle function, functional capacity and dyspnoea in patients with CHF.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Heart Pathology in Tick-Borne Borrelioses in Kazakhstan

Andrey Mikhailovich Dmitrovskiy

Kazakh-Russian Medical University, Almaty, Kazakhstan

Abstract:

By the term Tick-Borne Borrelioses (TBB), we mean a group of borrelioses that are transmitted through tick bites. In Kazakhstan, TBB diagnosis is rare, thus, the purpose of this work was to identify the TBB spread, the causes of their chronization and heart pathology development.

We tested 265 feverish patients and 512 individuals bitten by ticks in dynamics in ELISA. 1,500 ticks were examined in PCR. 64 TBB patients were identified. The percentage of infected ticks ranged from 5.3 to 40.6 in regions. We developed TBB standard case definition, clinical - pathogenetic classification and risk indicators for heart pathology development.

Heart pathology appears at 1st week of disease, - muffled tones (72.5%), accent of the II tone above the aorta and systolic noise at heart apex (6.5%). On the ECG, toxic-dystrophic changes are detected, with adequate etiotropic treatment they disappear with the syndrome of infectious intoxication. Heart pathology may develop in this group during a chronic course.

We distinguish a secondary focal carditic form, manifested by myocarditis with atrioventricular blockade, less often - pericarditis, pan carditis, myo cardiodystrophy development. In the case of inadequate antibiotic therapy or its absence, at 4th-5th week of disease, heart pain, tachycardia, less often bradycardia, heart size increasing, muffling of heart tones appear. ECG shows atrioventricular block, intraventricular conduction disorders, and rhythm disturbances. Sometimes diffuse heart lesions myopericarditis, myocardiopathy or pan carditis develop.

Unfortunately, such patients often remain without etiological diagnosis and, accordingly, without adequate antibiotic therapy, and, as a rule, with an unfavorable outcome, up to fatal. Thus, in our opinion, all febrile patients who meet the TBB definition should be tested for this infection and complex antibiotic treatment should be carried out, which gives a significant reduction in the number of chronic cases, heart pathology and adverse outcomes.



FEATURED

3rd Global Conclave on ADVANCED CARDIOLOGY AND CARDIOVASCULAR INNOVATIONS

JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: A Unique Phenomenon in the Heart and the Promising Future of the Unique Translational Tool to Man-age Cardiac Self-Renewal and Regeneration

Sergey Suchkov

Moscow State University of Medicine and Dentistry

Abstract:

TALKS

Stem cell (SC)-based therapy has been considered as a promising option in the treatment of is-chemic heart disease. The formation of new cardiomyocytes within the injured myocardium has not been conclusively demonstrated. Consequently, the focus of research in the field has since shifted to SC-derived paracrine factors, including cytokines, growth factors, mRNA, and miR-NA. Notably, both mRNA and miRNA can enter into the extracellular space either in soluble form or packed into membrane vesicles. SC-derived paracrine factors have been shown to sup-press inflammation and apoptosis, stimulate angiogenesis, and amplify the proliferation and differentiation of resident cardiac SCs (CSCs). Such features have led to exosomes being considered as potential drug candidates affording myocardial regeneration. The search for chemical signals capable of stimulating cardio myogenesis is ongoing despite continuous debates regarding the ability of mature cardiomyocytes to divide or dedifferentiate, trans differentiation of other cells into cardiomyocytes, and the ability of CSCs to differentiate into cardiomyocytes. The observation that CSCs can under-go intracellular development with the formation of "cell-in-cell structure" and subsequent re-lease of transitory amplifying cells with the capacity to differentiate into cardiomyocytes may provide clues for stimulating regenerative cardio myogenesis.

Indeed, human SC-based therapy derivatives are extremely attractive for therapeutic development because they have direct pharmacologic utility in clinical applications, unlike any other adult cells. The human SC as a special entity is emerging as a new type of potential therapeutic agent of cellular entity in cell-based regenerative medicine, because human SC-based therapy derivatives have the potential for human tissue and function restoration that the conventional drug of molecular entity lacks.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Acoustic Studies of Changes in the Characteristics of Breathing and Pulse during Alternation of Mental Activity with Relaxation

Gerus Andrei

Kotelnikov Institute of Radio Engineering and Electronics (Fryazino Branch)

Abstract:

Acoustic signals recorded from the temples and parietal region of the subjects' heads during a change in mental activity were investigated. In this case, a minute-by-minute change in the mental calculation of the multiplication table for relaxation was used. A total of 18 people of both sexes, aged from 23 to 88 years, took part in the tests. From these signals, pulse signals and breathing signals were isolated. The signals were recorded using piezoelectric sensors mounted in the same housing with a low-noise amplifier. The sensors were installed in areas close to points T3 and Cz.

Changes in the nature of pulse signals and breathing signals were detected, varying for different subjects. In addition, a special signal processing procedure was developed that makes it possible to quickly distinguish mental activity from relaxation for almost all subjects. In Fig. shows the result of signal processing for one of the subjects. It can be seen that the values of parameter A in odd minutes in which the counting was carried out are noticeably smaller than the values in even minutes during relaxation.

Comparison of the results obtained using this procedure with the time course of various characteristics of pulse and respiratory signals showed that the main reason for the observed differences in the values of A in different phases of mental activity is a change in the breathing period. A useful and unique property was that in order to determine mental activity, it was sufficient to process signals in a given period of time, without being tied to measurements in another phase of mental activity. In a certain sense, such a measurement is absolute. Let us add that the acoustic method of recording breathing differs from other known methods (spirometry and tensometry) in that it does not interfere with the breathing process itself and its measurements.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Vasorelaxant Effect of Moroccan Cannabis Sativa Threshing Residues on Rat Mesenteric Arterial Bed is Endothelium and Muscarinic Receptors Dependent

Rachid Bencheikh

Sidi Mohamed Ben Abdellah University

Abstract:

Introduction: Ethanolic fraction of Moroccan Cannabis sativa threshing residues (EFCS) has been tested for an eventual vasorelaxant activity. The current work aims to identify the active metabolites in the ethanolic fraction of the EFCS and illustrate their possible vascular mechanism of action.

<u>Methods</u>: Free radical scavenging capacity of EFCS was assessed using DPPH method. The EFCS vasodilation activities in phenylephrine-pre-contracted isolated rat mesenteric arterial beds were investigated in presence of L-NAME (nitric oxide synthase inhibitor), indomethacin (cyclooxygenase inhibitor), potassium channels blockers namely (Tetraethylammonium, Barium chloride and glibenclamide) and atropine. NO vascular release was measured by electron paramagnetic resonance (EPR) using a spin trap in rat aortic rings.

<u>Results:</u> EFCS induced dose-dependent vasorelaxation on mesenteric vascular bed. Incubation of the preparations with L-NAME, ODQ (a soluble guanylyl cyclase inhibitor) or potassium channels blockers, reduced the fall of perfusion pressure ca\ used by EFCS. Endothelial denudation or atropine abolished the EFCS's vasorelaxant effect, suggesting the activation of muscarinic receptors and involvement of endothelium relaxing factors. The extract induced nitric oxide release in aortic rings in a similar manner as acetylcholine suggesting an effect of EFCS on the muscarinic receptor and the arteries conductance. Chemical investigation of EFCS identified potential active components namely apigenin and derivatives of luteolin skeleton and also additional components such as neophytadiene, squalene, β -sitosterol.

In conclusion, the vasorelaxant effect of EFCS on rat mesenteric arterial bed, which is dependent of muscarinic receptor activation, nitric oxide and EDHF, can account for potential therapeutic use against high blood pressure related cardiovascular diseases.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Use of Pre-Operative Hemoglobin A1c to Predict Early Post-Operative Renal Failure and Infection Risks in Patients Who are not Diabetics and Undergoing Elective off Pump Coronary Artery Bypass Graft Surgery

Madhu Mahadeva

Sri Sathya Sai Sanjeevani Centre for Child Heart Care

Abstract:

Background: Recent studies have indicated that patients, both with and without diabetes with an increased HbA1c, have a higher rate of adverse outcomes following cardiac surgeries. Our study is focused on to evaluate the prognostic impact of admission value of HbA1c in non-diabetic patients for postoperative renal failure and infections.

<u>Materials and Methods</u>: Plasma HbA1c levels were collected from two hundred consecutive non diabetic patients who got admitted for elective off pump coronary artery bypass graft (CABG) procedure over a two years period under two groups, Group A whose HbA1c was < 6% at admission and Group B whose HbA1c was \geq 6% and \leq 6.4% at admission. After surgery, patients were followed up to see if they have got infection or renal failure as postoperative complication. Student's unpaired 't' test was used to test the significance of difference between the quantitative variables, Yate's and Fisher's chi square tests were used for qualitative variables.

<u>Results</u>: We found early postoperative renal failure in 14 (3/96 in Group A and 11/104 in Group B) out of 200 patients (7%) and infection in 21 (8/96 in Group A and 13/104 in Group B) out of 200 patients (10.5%).

After data analysis it was noted that there is a positive correlation between HbA1c and postoperative renal failure (P=0.0213) whereas no association was found between HbA1c and postoperative infections (P=0.175) in patients undergoing off-pump CABG surgery.

Conclusion: We found that in patients without diabetes, a plasma HbA1c \geq 6% was a significant independent predictor for early post-operative renal failure. HbA1c may act as an independent screening tool to identify high risk non-diabetic cardiac surgery patients for early post-operative renal failure than merely using HbA1c for diagnosis of diabetes. Also, prospective intervention studies are required to evaluate whether improving HbA1c levels to < 6% decreases postoperative renal failure and infection complications.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

FEATURED TALKS

Title: Effects of Cardiac Pacemakers on Left Ventricular Volumes & Biventricular Functions and Predictors of Pacing-Induced Left Ventricular Dysfunction & Cardiomyopathy Assessment: By 3D Echocardiography and Global Longitudinal Strain

Sanjeev Kumar

SMS Medical College

Abstract:

Introduction: The detrimental outcomes of right ventricular pacing on left ventricular electromechanical function ultimately result in heart failure, a phenomenon termed pacemaker-induced cardiomyopathy (PICMP).

Our study aimed to assess the Effects of cardiac pacemakers on left ventricular volumes, biventricular functions, and predictors of pacing-induced left ventricular dysfunction (PIVD).

<u>Materials and methodology</u>: This was a prospective, non-randomized, and single-arm study of 75 consecutive patients without structural heart disease presented for permanent pacing. Left ventricular volumes and biventricular function were assessed with 2D & Full-volume 3D echocardiography done before pacemaker implantation, at 7 days, and 6 months together with GLS. Patients were followed to detect the incidence of PIVD and PICMP with their predictors and risk factors.

<u>Result</u>: A total of 75 patients were enrolled. Out of them, 20 patients have a decline in LVEF while 55 have no decline in LVEF. There was a significant difference shown in EDV, SV, HR, COP, EF, and GLS in pre vs post pacing 7 days. While only ESV, SV, COP, and EF have significantly changed in post-pacing 6 months compared to 7 days. All the parameters were significantly changed in 6 months compared to the baseline.

Twenty patients (26.67%) developed LV systolic dysfunction; of these, 15 (20%) developed PIVD and 5 (6.67%) developed PICMP. Right ventricular functions like TAPSE (tricuspid annular plane systolic excursion), FAC (fractional area change), and S' velocity (Tissue Doppler systolic velocity) were significantly different during the 6-months compared to baseline but not at post-pacing 7days. Pre-implantation GLS was significantly lower in the 5 patients who subsequently developed PICMP, as compared to those who developed PIVD and the preserved EF group ((mean GLS -17.02 vs. - 19.27; p<0.05). A reduction of baseline GLS by 15% or more in 1 week was associated with the development of PIVD and PICMP (p = < 0.05). A wider native QRS complex, pre-implantation GLS, and VP% were associated with PIVD and PICMP (p<0.05).

Conclusion: The negative effects of pacing after implantation may occur shortly after and are more common than previously reported, due to sensitive tools like 3D echocardiography. RV pacing led to a significant drop in LV COP, EF, and GLS over the short and long-term duration. While RV function parameters like TAPSE, S' velocity & FAC decreased over a long-term duration (6 months). Pre-implantation GLS, QRS complex width, and VP% can predict the development of PICMP and PIVD.



JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

FEATURED TALKS

Title: Impact of COVID-19 Outbreak on the Mental Health in Sports: A Review

Deepak Kumar Dogra

Banaras Hindu University

Abstract:

Background: Global pandemic, lockdown restrictions, and COVID-19 compulsory social isolation guidelines have raised unprecedented mental health in the sports community. The COVID-19 pandemic is found to affect the mental health of the population. In critical situations, health authorities and sports communities must identify their priorities and make plans to maintain athletes' health and athletic activities. Several aspects play an important role in prioritization and strategic planning, e.g., physical and mental health, distribution of resources, and short to long-term environmental considerations.

<u>Purpose</u>: To identify the psychological health of sportspeople and athletes due to the outbreak of COVID-19 has been reviewed in this research. This review article also analyses the impact of COVID-19 on health mental in databases.

Methodology: From the accessible sources, 80 research articles were selected and examined for this purpose such as Research Gate, PubMed, Google Scholar, Springer, Scopus, and Web of Science and based on the involvement for this study 14 research articles were accessed. This research has an intention on mental health issues in athletes due to the Pandemic.

Outcome: This report outlines the mental, emotional and behavioral consequences of COVID-19 home confinement. Further, research literature reported that due to the lack of required training, physical activity, practice sessions, and collaboration with teammates and coaching staff are the prime causes of mental health issues in athletes. The discussions also reviewed several pieces of literature which examined the impacts on sports and athletes, impacts on various countries, fundamental issues of mental health and the diagnosis for the sports person and athletes, and the afterlife of the COVID-19 pandemic for them. Because of the compulsory restrictions and guidelines of this COVID-19 eruption, the athletes of different sports and geographical regions are suffering from fewer psychological issues which were identified in this paper.

Conclusion: Accordingly, the COVID-19 pandemic appears to negatively affect the mental health of the athletes with the prevalence and levels of anxiety and stress increasing, and depression symptoms remaining unaltered. Addressing and mitigating the negative effect of COVID-19 on the mental health of this population identified from this review.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Antiplatelet and Thrombolytic Activity of Phenolic-Insistent Fractions of New-Fangled Stem Buds Ficus Religiosa L.

Muhammad Arif

Integral University

Abstract:

Different parts of Ficus religiosa are the common components of various traditional formulations for the treatment of several blood disorders. The new-fangled stem buds of plants are a good source of bioactive metabolites of various pharmacological events. The powdered plant material was extracted with 80% ethanol and successively fractionated by chloroform and methanol. The chloroform and methanol fractions (CFFR & MFFR) were tested for anti-platelet, anti-thrombotic, thrombolytic, and anti-oxidant activity in ex vivo mode and MFFR was particularly investigated for GC-MS and toxicity study. The antiplatelet activity of CFFR, MFFR, and standard drug Aspirin at 50 µg/mL was 54.32, 86.61, and 87.57%, and a significant delay in clot formation was noted in the different concentrations of MFFR. The antiplatelet activity of CFFR, MFFR, and standard drug Aspirin at 50 µg/mL was 54.32, 86.61, and 87.57%, and a significant delay in clot formation was noted whereas CFFR at different concentrations did not show a significant effect on the delay of clot formation, antiplatelet activity. The CFFR, MFFR and standard drug at a dose of 300 µg/mL showed a maximum of 12.43, 78.1, and 96.4 % inhibition of free radical with IC50 value of the MFFR and Ascorbic acid was 147.28 ± 0.57 and 98.14 ± 0.66 µg/mL. The most possible marker com-pounds for the antiplatelet and anti-oxidant activity identified by GC-MS in MFFR are Salicylate derivatives aromatic compounds like Benzene acetaldehyde; Phenyl malonic acid; and Salicylic acid; Benzamides derivatives like Carbobenzyloxy-dl-norvaline; 3-Acetoxy-2(1H)-pyridone and 3-Benzylhexahydropyrrolo[1,2-a] pyrazine-1,4-dione. A toxicity study of the MFFR did not show any physical symbols of toxicity and mortality up to 1500 mg/kg body weight and nontoxic up to 1000 mg/kg which will be promising in the pharmaceutical sector utilized in the treatment of Atherothrombotic diseases.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Tissue Factor (TF) and Vascular Endogenous Growth Factor (VEGF) in Detecting Thromboembolic Complications in Diabetic Atherosclerotic Patients

Tijen Alkan Bozkaya

Koc University Hospital

Abstract:

Objectives: Atherosclerosis, which is one of the leading causes of death all over the world, can create major or minor thromboembolic complications with the exponentially increasing diabetic status. Despite all the studies, the mechanism by which endothelial damage in atherosclerosis is triggered with diabetic setting is still not fully understood.

Patients and Methods: In this study, tissue factor (TF), which is thought to act together in the formation of VEGF and coagulopathy in diabetic atherosclerotic patients, may be an important indicator in this regard, a total of 100 cases who were undergone OPCAB (off-pump coronary artery bypass) which were at same risk group examined by dividing into diabetes status. Early postoperative process and biochemical parameters analyzed in terms of TF and VEGF-A levels measured before and after the operation.

<u>Results</u>: TF and VEGF expression of the T1DM group were statistically high compared to non-diabetics. Significantly longer hospital stays with changes in TF and VEGF were found in patients in the diabetic group compared to pre- and postoperatively, respectively; TF (95% CI: 0.879-0.992; p=0.025), VEGF (95% CI: 0.964-0.991; p=0.001) and hospital stay (95% CI: 2.24-10.491; p=0.0001).

Preoperatively measured CT (carotid intima-media thickness) was higher in diabetics and was significantly associated with AF (r = 0.873).

Surgical team and protocols were common and OPCAB procedures were routinely applied to all patients in our clinic. No minor or major events were observed in any of the cases.

Conclusion: TF and VEGF values in patients with diabetic atherosclerosis may be important in the early detection of thromboembolic complications.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Enhancing X-ray Visibility of Biodegradable Stents through Radioopaque Microparticle Reinforcement

Omer Burak Istanbullu

Eskisehir Osmangazi University

Abstract:

Intravascular stents play a critical role in the treatment of occluded vessels. The stents are transported through the vessels and placed to the target region by a guide catheter precisely utilizing an X-ray based imaging device. Conventional metallic stents and drug-eluting stents are capable of accurate placement due to their inherent radio-opaque properties. However, concerns about corrosion and in-stent restenosis associated with permanent metallic stents, as well as the thrombosis risks tied to drug-eluting stents, have prompted the development of biodegradable stents recently. Nevertheless, since biodegradable stents are predominantly composed of polymer-based materials, achieving precise positioning and placement using medical imaging devices poses a significant challenge.

This study employs computational analysis to demonstrate that the incorporation of radioopaque microparticle reinforcement into biodegradable polymer-based stents can enhance their visibility through X-ray angiography devices and improve their distinguishability from surrounding biological tissues. The solid models of biodegradable intravascular stents and their radio-opaque microparticle-reinforced forms were designed. These stents were placed within a vascular pathway, including the blood flow and plaque layer within the vessel wall.



JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

FEATURED TALKS

Title: How are Troponins Affected by Preanalytical Variations?

Pinar Eker

Maltepe University

Abstract:

The purpose of the presentation is to evaluate the relationship of preanalytical variables with troponin measurements. Today, troponin test methods are constantly being renewed, and algorithms and reference limits used are changing. The highest density of laboratory errors (60-70%) is observed in the preanalytical process. It has been shown in publications that preanalytical variables are effective in hscTn tests, as in all other test methodologies. The effects of preanalytical process variables were investigated in terms of different methods and different generations of hs-cTn tests of different companies. These variables are sample type; centrifuge conditions; effects of long and short-term storage conditions; Hemolysis, lipemia, biotin effect, and icterus. In addition, interferences caused by macro complexes can also affect hs-cTn tests and cause incorrect results. Guiding tables for preanalytical variations are presented through studies examining the hs-cTn tests of the currently used main devices. While evaluating hs-cTn test results by the clinic and the laboratory, algorithms and all steps to be followed in terms of preanalytical variables have been defined. The Academy of the American Association for Clinical Chemistry and the Task Force on Clinical Applications of Cardiac Bio-Markers of the International Federation of Clinical Chemistry and Laboratory Medicine are organizations that prioritize the necessity of communication between laboratories and clinics regarding the effects of preanalytical variables on hs-cTn tests. Clinically, hs-cTn test levels will cause the patient to be included in different algorithms and risk classifications. Creating accurate and reliable hs-cTn test results is related to the correct management of preanalytical variables. Procedures for managing preanalytical factors should be defined and used as standard in collaboration with the clinic and laboratory. Clinical branches should be informed about the effects of preanalytical variables on hs-cTn methods. It would be useful to develop common evaluation protocols by discussing the cases.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: The Prevalence, Angiographic Profile and Clinical Features, Management, and Outcomes of Coronary Artery Perforation Secondary to Percutaneous Coronary Interventions in Pakistan: A Retrospective Cohort Study

Rubia Ali

Liaquat National Medical College

Abstract:

Introduction: Coronary artery perforation (CAP) is a rare entity that is often fatal. The mortality rates reported as high as up to 21% hence prompt diagnosis, intervention, and treatment are paramount to survival for such patients. Several factors may predispose a patient to coronary artery intervention including chronic total occlusion, severe calcification and tortuosity, aggressive use of oversized balloons and stents, and use of athero-ablative devices. Therefore, it is significant to have an insight related to it as despite being rare, it is one of the most feared complications of percutaneous coronary intervention (PCI).

Method: We conducted a retrospective study of the patients who have undergone PCI at our institution from January 2015 to December 2021. During this duration, all the patients who had developed CAP based on angiographic review during the PCI were selected.

The demographic, clinical, angiographic, procedure-related features, management of the CAP, and inhospital and follow-up outcomes were gathered.

<u>Result:</u> Thirty-five thousand fifty-nine patients underwent PCI among which, only 93 (0.26%) patients were complicated with (CAP. Fifty-eight (62.4%) patients were in the 50–70 years age range. The most common vessel involved was the left anterior descending (36.5%) followed by the right coronary artery (32.3%). The angiographic calcification was present in 51.6% of patients, significant tortuosity greater than 90° was seen in 48.4% of patients, chronic total occlusion was observed in 42% of patients and Instent restenosis was found in 8.6% patients. The highest mortality of four patients was seen in the CAP involving the right coronary artery.

Conclusion: Mostly the CAP involves large vessel perforations however both, the distal and large vessel perforations are related to the increased incidence of adverse clinical results which indicates the significance of the prevention and early identification and treatment of the perforation.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: Efficacy of Behavioural Intervention, Antipsychotics, and Alpha Agonists in the Treatment of Tics Disorder in Tourette's Syndrome

Muneeba Rizwan

Fatima Memorial Hospital College of Medicine and Dentistry

Abstract:

Tourette's Syndrome is a condition of nervous system in which patients have sudden, repeated movements called tics. The prevalence of Tourette's syndrome is three times more in males than in females. This can be very challenging for the people suffering from it. A variety of environmental and genetics factors are linked with tics in TS like first degree relatives suffering from it, and genes like SLITRK is strongly associated with TS. Factors like low birth weight, intrauterine growth retardation and various infections are also associated with TS. Comorbidities like ADHD, obsessive compulsive disorders and sleep disorders are linked with TS. The aetiology of TS is a damage in sensory and motor component of corticostriatal -thalamocortical circuit and the limbic system. Various pharmacological and nonpharmacological treatments are available for TS. Non-pharmacological options available for TS include various behavioural interventions, counselling, psychoeducation, Cognitive Behavioural interventions, exposure and response prevention, relaxation techniques, deep brain stimulation, and habit reversal training. These therapies have shown good efficacy according to Yale Global Tic Severity Scale score (YGTSS). The main pharmacological treatments available for TS include antipsychotics and alpha agonists. Typical (haloperidol, pimozide) or atypical (aripiprazole, risperidone, olanzapine) antipsychotics differ in their side effects, efficacy, and tolerance in different age groups of children. Typical antipsychotics have numerous harmful side effects and have limited their use only in severely disabled patients irresponsive to other therapies. The alpha agonists like clonidine, guanfacine and atomoxetine are being used. The most commonly used alpha agonist is clonidine which is also available in the form of adhesive patches. Guanfacine is also used for TS which produces less sedation and hypotension. Botulinum toxin and baclofen is also being used for Tourette's syndrome with other comorbidities.

Future researchers should be aware of the fact of how treatments available for TS affect the life span of people suffering from it and which treatments should be used with minimum harmful effects. Also, neurologists should apply different techniques for better compliance and treatments to reduce the chances of relapse of tics in TS.





JUNE 27-28, 2024 | AMSTERDAM, NETHERLANDS

Title: The Heart Rate Lowering Potential of Alprazolam in Anxious Individuals with Acute Coronary Syndrome (A-ACS-PK TRIAL)

Sohaib Ashraf

Shaikh Zayed Medical Complex

Abstract:

Acute coronary syndrome (ACS) is characterized by acute coronary artery obstruction, with the primary focus in management being the reduction of oxygen demand through lowering the heart rate (HR). Alprazolam is proposed to play a role in reducing heart rate by attenuating the acute sympathetic response. Troponin I positive ACS patients with moderate/severe anxiety (BAI score \geq 16) were randomly assigned in a 1:1 ratio to receive either alprazolam (0.5mg initially, followed by 0.25mg three times a day) in addition to standard care or a placebo (empty capsule). Outcomes assessed in the intention-to-treat population included the number of patients achieving optimal beta-blockade within 24 hours, along with mean heart rate (mHR) and C-reactive protein (mCRP) over the initial 3 days. A total of 105 patients (98% response rate) were randomized from September 30, 2021, to July 29, 2022. Control and experimental group patients had a median age of 46 and 50 years, respectively, with a predominantly female gender distribution. BAI scores were median 19 for both groups and diabetes mellitus and hypertension prevalence ranged from 40% to 60%. Baseline mHR and mCRP were 105 beats/min and 11.6 mg/L, respectively. Following alprazolam administration, the 6th-hour mHR was 75.08 ± 10.28 versus 80.07 ± 9.18 beats/min (p=0.0003), 24th-hour mHR was 67.42 ± 7.22 versus 74.5 ± 7.42 beats/min (p<0.0001), and 72nd-hour mHR was 63.44 ± 8.11 versus 75.2 ± 6.92 beats/min (p<0.0001) for alprazolam versus placebo. Optimal beta-blockade (heart rate 60 ± 5) was achieved by 26 patients with alprazolam compared to 8 patients with placebo (Odds ratio=0.1641, 95 % CI: 0.0645 to 0.4178, P value = 0.0002). Additionally, at the 72nd hour, mCRP was lower with alprazolam (5.03 ± 1.36 mg/L) compared to the control group (8.74 ± 3.65 mg/L) (p<0.0001). In ACS patients with moderate to high anxiety, the addition of alprazolam to the recommended protocol results in a lower heart rate compared to placebo alone. Furthermore, the alprazolam group exhibited lower C-reactive protein levels than the control group.



Amsterdam Royal Zoo



De Hoge Veluwe National Park, Otterlo



Art Collections at the Rijksmuseum



EYE Film Institute Netherlands



Dam Square



Great Art at the Van Gogh Museum

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DISCOVERING

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 Adv. Cardiology 2024 is scheduled in the Beautiful city "Amsterdam".



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NEMO Science Museum



Jordaan and Amsterdam's Canals



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Oude Kerk's Tower



SPEAKER'S TESTIMONIALS

ADV. CARDIOLOGY 2022

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Testimonials



Agata Nowak-Lis

Jerzy Kukuczka's Academy of Physical Education in Katowice, Poland

It was very valuable event with lots of interesting presentations from scientists from all over the world.

The quality of talks was at very high level. I would like to thank you very much for inviting me for the conference.



Joan van Rotterdam

University of Newcastle, Australia

I found the talks innovative and entertaining.

It gave me exposure and an opportunity to find out how others in my field are progressing. Peers Alley Media did an excellent job picking speakers.



Tarang Patel

All India Institute of Medical Sciences, India

The International Cardiology Conference was very informative and enjoyable. Many sessions were really helpful and related to my profession and will further guide me in my academic career. Peers Ally Media did a fantastic job indeed. Entire two day conference was smooth.

Looking forward to be part of future conferences.



Vincent Dangoisse CHAUR- CIUSSS-MCQ, Canada

The quality of the event was adequate.

Testimonials



Hamid Soraya

Urmia University of Medical Sciences, Iran

I have participated at virtual conference and i think most presentation's quality were good.

There was a good presentations in the field of cardiovascular medicine that i was enjoyed and also extended my knowledge and i am happy about that.

I think you selected good speakers for this conference.



Luisa Maria Camarozano Machado

Pontifical Catholic University of Paraná (PUC PR), Brazil

The quality was good, the participants were very professional and had great things to add to our knowledge.

The event was great for my professional development, because I was able to see more about the innovations in cardiology and now, I am able to focus on more important topics when it comes to my professional development.

The Peers Alley Media, Canada did an amazing job selecting the speakers. Most of the speakers gave great presentations with a rich content and the Peers Alley Media also did a great job administrating the day in the congress.



Abeer Mohamed Shawky Al-Azhar University, Egypt

I was so glad and enjoyed joining this International Congress on Advanced Cardiology and Cardiovascular research. I was proud to be with all those stars in cardiology. All the talks were of high quality. These talks helped in progressing my professional development. Peers Alley Media, Canada, did a good job.



Zhao-Yang Xing Guangyuan First People's Hospital, China

The quality of the speech is very high. Through this meeting, I learned more knowledge, which is very helpful to my research field, and I also made more friends. These participants made successful speeches, and the host worked hard! Sponsors Media Partners





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