PEERS ALLEY MEDIA

INTERNATIONAL CONGRESS ON ADVANCED CARDIOLOGY AND CARDIOVASCULAR RESEARCH

2
DAYS WITH MORE THAN 45 SESSIONS, KEYNOTES & TALKS

12+
INNOVATIVE FEATURED SPEAKERS

20+
HOURS OF NETWORKING EVENTS

60+
INTERNATIONAL SPEAKERS

125+
EDUCATIONAL SESSIONS

MARCH 30-31, 2022

PARIS, FRANCE

Theme " The Future of Cardiology: Promoting Cardiovascular Health through Leading Medical Technologies "

ADV. CARDIOLOGY 2022

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Academic Faculty | Hospitals | Scientists | World-Class Professors | Researchers & Industry Professionals | Educationalists | Cardiologists | Cardiac Surgeons | Non-Invasive Cardiologist | Non-Interventional Cardiologist | Interventional Cardiologist | Electrophysiologists | Healthcare Professionals | Cardiothoracic Surgeons | Cardiology Physicians | Nurse Practitioners | Cardiovascular Researchers | Cardiovascular Doctors | Cardiovascular Scientists | Electrophysiologists | Cardiac Sonographers | Medical Students | Ph.D. Fellows

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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.

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.

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.

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.

SCIENTIFIC TRACKS/ SESSIONS

Cardiology | Clinical Cardiology | Heart diseases | Hypertension | Electrocardiography | Cardio-Oncology | Interventional Cardiology | Nuclear Cardiology | Cardiac Nursing | Pediatric Cardiology | Stroke | Cardiac Surgery | Thombosis | Heart Arrhythmia | Valvular Heart Disease | Pulmonology and Cardiology | Atherosclerosis | Sports Cardiology | Cardiac Imaging | Vascular Biology | Cardiology Case Reports | Geriatric Cardiology | Cardiovascular Pharmacology | Robotic Cardiac Surgery | Cardiac Regeneration | Dyslipidemia | Cardiovascular Disease | Congestive Heart Failure | Acute Coronary Syndrome

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COMBO B (REGISTRATION + 3 NIGHT ACCOMMODATION)
DELEGATE REGISTRATION

TYPES OF BUSINESS REGISTRATIONS
SPEAKER REGISTRATION
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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

"TIME TO CONNECT WITH YOUR PEERS"

CONCURRENT EDUCATIONAL SESSIONS

WEDNESDAY
MARCH 30
2022

CARDIOLOGIST

- General clinical cardiologists
- Electro physiologist
- Nuclear cardiologists
- MR/CT cardiologists
- Pediatric cardiologists
- Heart failure & transplant cardiologist
- Preventive cardiologists
- Vascular medicine specialists
- Cardiovascular investigators
- Cardiac anesthesiologists

CLINICAL CARDIOLOGY

- Cardiovascular medicine
- Preventive medicine
- Sleep medicine
- Percutaneous coronary intervention (PCI)
- Modern practices in cardiovascular therapy

HEART DISEASES

- Coronary artery diseases
- Atrial fibrillation
- Angina|Heart attack
- Ischemia heart disease
- Cerebrovascular disease
- Inflammatory heart disease

HYPERTENSION

- Hypertension
- Pulmonary Hypertension
- Pediatric Hypertension
- Gestational Hypertension
- Resistant Hypertension
- Sexual dysfunction in Hypertensive patients
- Hypertension in diabetes patients
- Renal hypertension
- Hypertensive heart diseases

GROUP PHOTO | COFFEE BREAK

ELECTROCARDIOGRAPHY

- Holter (Ambulatory) monitoring
- Event/loop recording
- Cardiopulmonary exercise test (CPET)
- Signal-averaged electrocardiogram
- Heart rate monitor
- Pacemaker monitoring
- Electric axis of the heart
- Medical therapies and procedures

CARDIO-ONCOLOGY

- Advanced cancer therapy
- Heart malignancy
- Intra-cardiac tumor
- Cardiomyopathy
- HER2-directed therapy
- Vascular toxicities
- Chemotherapy-related cardiac dysfunctions
- Cardio-oncology programs

INTERVENTIONAL CARDIOLOGY

- Cardiac catheterization
- Angioplasty
- Coronary stents
- Embolic protection
- Percutaneous valve repair
- Balloon valvuloplasty
- Atherectomy

NUCLEAR CARDIOLOGY

- Modern practices in cardiovascular therapy
- Vasodilators
- Percutaneous Coronary Intervention (PCI)| Heart Transplant
- Application of cardiac progenitor cells
- Imaging
- Computed Tomography
- Cardiac Magnetic Resonance
- Nuclear Imaging

LUNCH BREAK

CARDIAC NURSING

- Cardiac Diseases
- Cardiac Surgery
- Cardiac Nursing
- Heart Diagnosis
- Hypertension and Obesity
- Stroke
- Coronary artery disease
- Cardiologists
- Heart Regeneration
- Angiography
- Interventional Cardiology
- Clinical Cardiology & Diabetes

PEDIATRIC CARDIOLOGY

- Pediatrics
- Clinical Pediatrics
- Pediatric Cardiology
- Pediatric Congenital Heart Disease
- Pediatric Heart Murmurs
- Cardiac Stroke
- Fetal Cardiology
- Pediatric Cardiac Tumors
- Pediatric Kawasaki Disease
- Pediatric Atherosclerosis
- Tetralogy of Fallot In Infants
- Pediatric Pericarditis

STROKE

- Assessment of Stroke Patients
- Stroke Etiology
- Acute Stroke Imaging
- Management of Stroke Patients
- Stroke in Consultation
- Prevention of First and Recurrent Stroke

CARDIAC SURGERY

- Perioperative Management
- Surgery for ischemic Heart Disease
- Surgery for Valvular Heart Disease
- Surgery for Heart Failure
- Thoracic Aortic Disease
- Surgery for Cardiac Rhythm Disorders and Tumors
- Surgery for Congenital Heart Disease

COFFEE BREAK

THROMBOSIS

- Hemostasis and Thrombosis
- Coagulation and Its Regulation
- Fibrinolysis and Its Regulation
- Platelet Structure and Function
- Thrombohemorrhagic Disorders
- Therapy, New Directions and Complications in Thrombohemorrhagic Disorders

HEART ARRHYTHMIA

- Sinus node: Normal and Abnormal Rhythms
- Bradyarrhythmias
- Ectopic Complexes and Rhythms
- Tachycardia
- Supraventricular Tachyarrhythmias
- Ventricular Tachyarrhythmias
- Cardiac Pacing and Pacemaker Rhythms
- Implantable Cardioverter Defibrillators
- Athletes and Arrhythmias
- Drug Effects and Electrolyte Disorders

VALVULAR HEART DISEASE

- Epidemiology of Valvular Heart Disease
- Cellular and Molecular Basis of Calcific Aortic Valve Disease
- Clinical and Genetic Risk Factors for Calcific Valve Disease
- Evaluation of Valvular Heart Disease by Cardiac Magnetic Resonance and Computed Tomography
- Aortic Stenosis
- Aortic Regurgitation
- Aortic Valve Implantation
- Surgical Approach to Diseases of the Aortic Valve

CONCURRENT EDUCATIONAL SESSIONS

WEDNESDAY
MARCH 31
2022

ATHEROSCLEROSIS

- Pathogenesis of Atherosclerosis
- Chemokines and Atherosclerosis: A critical Assessment of Therapeutic Targets
- Adhesion Molecules and Atherosclerosis
- Cytokines and Atherosclerosis
- Toll-Like Receptors in Atherosclerosis
- PPAR-Based Therapies for the Management of Atherosclerosis

SPORTS CARDIOLOGY

- Athlete's Heart
- Electrocardiography in athletes
- Radionuclide Scintigraphy in athletes
- Athlete's bradycardia
- Exercise in healthy subjects
- Exercise in cardiovascular disease
- Sports and Hypertension
- Exercise and sports in congenital heart disease
- Sports and cardiovascular disease
- Sudden cardiac death in sports
- Accurate diagnosis and treatment plans

CARDIAC IMAGING

- Ischemic Heart Disease
- Heart Failure
- Acquired Valvular Heart Diseases
- Cardiomyopthy
- Cadiovascular Computed Tomography
- Cadiovascular Magnetic Resonance
- Great Vessel Abnormalities
- Congenital Heart Disease
- Coronary Artery Variant and Anomalies
- Coronary Artery Disease
- Myocardial Disease-Ischemia and Infraction
- Myocardial Disease- Cardiomyopathy

VASCULAR BIOLOGY

- Physiology of Blood vessels
- Immunology of the vessel wall
- Biology of thee vasculature
- The endothelial cell
- Vascular smooth muscle cells
- Arteriogenesis Vs Angiogenesis
- The lymphatic system
- Pathogenesis of atherosclerosis
- Atherosclerosis
- Molecular Mechanisms
- Pathophysiology of other cardiovascular diseases
- Valvular heart diseases

GROUP PHOTO | COFFEE BREAK

CARDIOLOGY CASE REPORTS

- Case Reports on Heart Disease & Failure
- Case Reports on Vascular Heart Disease
- Case Reports on Myocardial and Pericardial Disease
- Case Reports on Pediatric Cardiology
- Case Reports on Arrhythmias
- Case Reports on Atherosclerosis
- Case Reports on Hypertension and Healthcare
- Case Reports on Heart Regeneration
- Case Reports on Cardiac and Cardiovascular Research
- Case Reports on Heart Diagnosis
- Case Reports on Heart Devices

CARDIOVASCULAR PHARMACOLOGY

- The Cardiovascular Physiology and Pharmacology of Endothelin-I
- Vascular Pharmacology of Epoxyeicosatrienoic Acids
- Prostaglandins in Action
- TP Receptors and Oxidative Stress
- Regulation of Endothelial Cell Tetrahydrobiopterin
- Polyphenol-Induced Endothelium-Dependent Relaxations
- Organic Nitrates and Nitrate Tolerance
- Vascular Actions of Adipokines

ROBOTIC CARDIAC SURGERY

- Anesthesia for Robotic Cardiac Surgery
- Robotic Mitral Valve Surgery
- Robotic Coronary Bypass Graft on Beating Heart
- Robotic Surgery in Congenital Heart Disease
- Intraoperative Transesophageal Echocardiography
- Hybrid coronary revascularization
- Robotic Left Ventricular Epicardial Lead Implantation

CARDIAC REGENERATION

- Cell Based Heart Repair
- Progenitor Cells from the Adult Heart
- Human Pluripotent Stem Cell-Derived Cardiomyocytes
- Direct Cardiac Reprogramming
- Cardiomyocyte Transplantation
- Tissue Engineered Heart repair
- Imaging Cardiac Stem Cell Therapy
- Stem Cell Transplant Immunology
- Tissue graft cardiac cell

LUNCH BREAK

DYSLIPIDEMIA

- LDL Cholesterol
- HDL Cholesterol
- NON-HDL Cholesterol
- High Sensitivity C-Reactive Protein for Risk Assessment
- Stratification of Dyslipidemia Risk
- Advanced Lipoprotein Testing
- Drugs for Treatment of Blood Lipoprotein Abnormalities

CARDIOVASCULAR DISEASE

- Endocrine Functions and Metabolic Interactions
- Endothelial dysfunction and clinical syndromes
- Aging and Cognitive Function
- Lipoproteins
- Kidney and Hypertension
- Atherosclerosis and colonary artery disease
- Life style choices, Risk Factors
- Diet and Homocysteinemia
- Contribution of pollutants and Environmental Chemicals

CONGESTIVE HEART FAILURE

- Epidemiology & pathophysiology of heart failure
- Differential Diagnosis of Congestive heart failure
- Pharmacologic theraphy of Heart Failure
- Clinical approach to acute heart failure
- Clinical approach to chronic heart failure
- The diagnosis and management of Congestive heart failure

ACUTE CORONARY SYNDROMES

- Reduction of Atherothrombosis for Continued Heath
- Pathogenesis: Acute Coronary Syndrome
- Molecular Mechanisms: Acute Coronary Syndrome
- Immune System in Acute Coronary Syndrome
- Myocardial Cell Death and Regeneration
- Pharmacogenomics
- Acute Ischemic Heart Disease

COFFEE BREAK

GERIATRIC CARDIOLOGY

- Cardiology
- Geriatrics
- Elderly care
- Heart diseases
- Atherosclerosi
- Peripheral arterial disease

PULMONOLOGY AND CARDIOLOGY

- Allergic bronchopulmonary aspergillosis
- Asthma
- Chronic obstructive pulmonary disease
- Chronic bronchitis
- Emphysema
- Cystic fibrosis
- Lung cancer diagnosis
- Pneumoconiosis
- Pneumonia
- Pneumothorax
- Psittacosis
- Pulmonary embolism

Biography

Professor Attila Kardos is a consultant cardiologist at Milton Keynes University Hospital and has a Honorary Chair in the University of Buckingham. He is also a Hon Senior Lecturer to the Division of Cardiovascular Medicine, Radcliffe Department of Medicine Oxford University. He is a clinical lead in multimodality Cardiovascular Imaging and a Vice Chair of Research and Development and is the lead of the Cardiovascular Research Unit. His research interest includes advanced imaging based recognition or cardiovascular pathologies utilizing Cardiac MRI, Cardiac CTA, and advanced echocardiography. In addition, he is a principle investigator in a clinical trial incorporating wearable devices in the hospital setting. His earlier research encompasses exercise physiology and the influence of the autonomic nervous system on exercise performance. Prof. Kardos is a local PI in several commercial and non-commercial clinical trials. He is also a member of several Editorial boards of a variety of scientific journals.

Attila Kardos

Milton Keynes University Hospital, University of Buckingham, UK

The role of stress echocardiography in contemporary cardiology - Ischaemia detection – viability - Structural heart disease

This lecture is going to highlight and discuss the current indications of stress echocardiography and to highlight its role in ischaemia detection and structural heart disease with emphasis in valvular heart disease, hypertrophic cardiomyopathy, and in HFpEF patients. The talk is going to incorporate the UK-NICE and the ESC latest guideline. Emphasis is going to be given on how to perform and interpret the findings to guide management of these patients.

This lecture is recommended to all who are involved in managing patients with chest pain and valvular and structural heart disease.

Biography

1Cardiology Department, Beijing Hospital, National Center of Gerontology; Institute of Geriatric Medicine, Chinese Academy of Medical Sciences, China

BING LIU

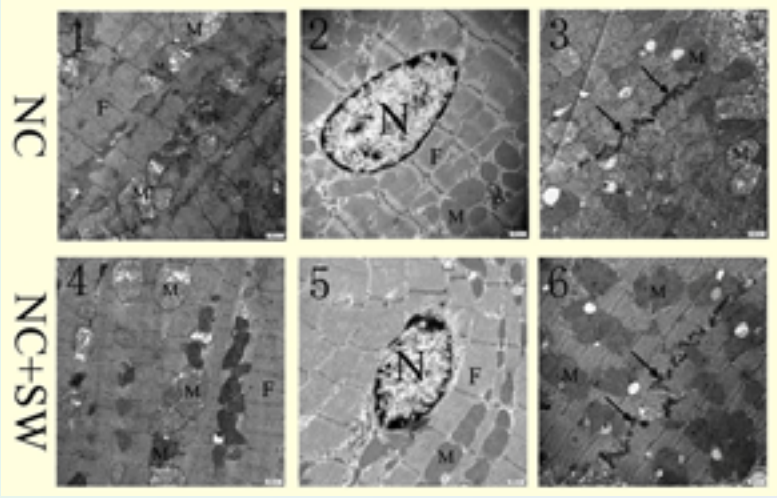
1Cardiology Department, Beijing Hospital, National Center of Gerontology; Institute of Geriatric Medicine, Chinese Academy of Medical Sciences, China

The safety of extracorporeal cardiac shock wave therapy: Observation of the ultrastructures in myocardial cells by transmission electron microscopy

Extracorporeal cardiac shock wave therapy (CSWT) has been used to treat patients suffered from severe coronary heart disease and refractory angina pectoris with good results; however, the safety of the therapies is still controversial. Although the safety in clinical setting and on microstructures has been confirmed, but the influence of shock wave on the ultra-structures of cardiomyocyte is not clear.

In our study, 12 Sprague-Dawley rats were randomly divided into two groups: normal control group(NC) and CSWT group (NC+SW). The heart rate, blood pressure, serum troponin I (TNI), and cardiac ultrasound were observed, the myocardial inflammatory responses and fibration were compared by immunohistochemical analysis between two groups. The ultrastructure changes of cardiomyocyte were further studied by transmission electron microscopy. The CSWT had no significant influence on rat hemodynamics indices and serum TNI, did not affect left ventricular function, and did not cause myocardial inflammatory response and fibrosis changes. The scores of myocardial ultrastructure damage in the NC and NC+SW groups were 1.39±0.982 and 2.42±1.009, respectively (P=0.103).

The CSWT did not cause significant additional damage to myocardial ultrastructures. The safety of CSWT has been preliminarily proved at the clinical, microstructure, and ultrastructure levels, but its long-term safety needs further exploration.



Note: Ultrastructure changes in NC and NC+SW groups. Rat myocardial ultra-structures were observed by transmission electron microscopy (TEM). (2) Normal morphology of the mitochondria in the NC group;(1, 3) occasional swelling; (4)abnormal phenomenon, such as swollen mitochondria and disappearance of ridge structures, in the NC+SW group; (1, 2, 4, 5) normal myofibril structure of the 2 groups; (2, 5) normal morphological structure of myocardial cell nucleus. The morphologies in most of the NC+SW group and the intercalated discs between myocardial cells in the NC group were normal (arrow). NC indicates normal control; NC+SW, normal control with shock wave group.

Biography

Daniel Lichtenstein is medical intensivist working at Ambroise-Paré Hospital (Paris-West university, France) since 1989. Main developments: use of critical ultrasound since 1985, defined in 1991 (Intensive Care Med 19:353-355) as a discipline associating ultrasound diagnoses and immediate therapies, with adjunct uses (venous canulation, thoracentesis..). Main publications: a textbook (1992, 2002, 2005, 2010, 2011, 2016 editions, Springer-Verlag), two dozens of original articles, mostly focused on lung and venous ultrasound, including: BLUE-protocol (acute respiratory failure), FALLS-protocol (lung ultrasound for management of acute circulatory failure), SESAME-protocol (cardiac arrest), lung ultrasound in critically ill neonates. President of CEURF, personnalized training center at the bedside in the I.C.U., where critical ultrasound is taught as a holistic approach, favoring simple equipment (without Doppler), one universal probe for whole body, emphasis on lung, adapted venous ultrasound, simple cardiac sonography (and others), extrapolable to multiple disciplines (pediatry, pulmonology...), settings (ICU, austere areas...), patients (from bariatric to neonates).

D Lichtenstein

Hôpital Ambroise Paré, France

The BLUE-protocol: Lung ultrasound for diagnosing hemodynamic pulmonary edema

Critical ultrasound was defined in our 1993 publication as "ultrasound for the critically ill, by the critical care physician, whole body ultrasound". This definition considers the lung, providing a new definition of ultrasound (a visual medicine, an etymological stethoscope).

The BLUE-protocol is a fast protocol allowing immediate diagnosis of acute respiratory failure, combining signs with locations. We use a simple 1992, gray-scale unit, and a microconvex probe. The BLUE-protocol analyzes ten signs: bat sign (pleural line), lung sliding, A-lines (horizontal artifacts arising from pleural line), quad sign and sinusoid sign indicating pleural effusion, fractal sign and lung sign indicating lung consolidation, B-lines (particular comet-tail artifacts arising from the pleural line among seven criteria), and lung rockets (multiple B-lines, indicating interstitial syndrome), abolished lung sliding with stratosphere sign, suggesting pneumothorax, lung point indicating pneumothorax. Pulmonary edema, pneumothorax, and also pulmonary embolism, pneumonia, COPD, asthma, were assessed using CT (gold standard) with sensitivity and specificity ranging from 90 to 100%1.

The B-profile is the name given to the association of lung-rockets with lung-sliding, symmetrical at the anterior chest wall. The B-profile is 97% sensitive and 95% specific to hemodynamic pulmonary edema1. The A-line indicates non elevated PAOP2. The BLUE-protocol is a holistic protocol, because it allows estimation of the left heart function in numerous settings (critically ill to ambulatory patient, neonates to seniors, wealthy to scarse-resource areas).

Shortly, two derived products. The FALLS-protocol2 uses, in acute circulatory failure, in its third step, the B-lines as direct parameters of clinical volemia and the endpoint for fluid therapy. The (SESAME-protocol2 (cardiac arrest) assesses the lung first, part

of four reversible causes, detected in < one minute using the one probe philosophy: pneumothorax, pulmonary embolism (analysis of a specific venous area), internal haemorrhage, pericardial tamponade.

CEURF trains since 1989 at the bedside in our ICU.

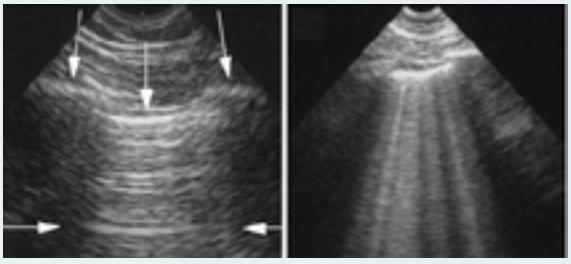


Figure 1: Left: A-lines (horizontal arrows) arising from the pleural line (vertical arrows: ribs and pleural line). Right: lung rockets (multiple B-lines)

Is baseline cerebral oximetry a better predictor than carotid scan for postoperative delirium in cardiac surgery?

Biography

Dr. Fayaz Mohammed Khazi is a Consultant Cardiothoracic Anesthetist from Dubai Hospital, United Arab Emirates with an extensive research experience from UK. Currently, he is involved in various educational, quality improvement projects and actively involved in the implementation of Extracorporeal Membrane Oxygenation (ECMO) program in Dubai. Dr Fayaz is also a European board Accredited perioperative echocardiographer who frequently presents his work in international meetings and supervisor for candidates appearing for accreditation of European/UK TEE exams. His primary interest is in postoperative neurocognitive dysfunction, blood conservation and perioperative echocardiography in cardiac surgery. As per his portfolio from international research network, he is an editor and reviewer for three international journals and has several publications in well reputed peer reviewed international journals to his credit.

Fayaz Mohammed Khazi
Dubai Hospital, Dubai Health Authority, United Arab Emirates

Postoperative delirium can occur up to one in three elderly patients following complex cardiac surgery. Low cerebral oximetry values have been associated with postoperative cognitive dysfunction, peri-operative stroke, increased incidence of major organ morbidity and mortality after cardiac surgery. Studies have shown that the higher baseline regional cerebral oxygen saturation and body mass index were protective against this postoperative delirium. The etiology of delirium is unclear It is important to recognize the preventive strategies that might include the peri-operative use of near-infrared reflectance spectroscopy, which measures regional cerebral oxygen saturation ($rScO_2$) and detects real-time cerebral ischemia. Interventions designed to minimize peri-operative reductions in $rScO_2$ may improve overall outcomes. Although the debate about whether all cardiac surgical patients should have intra-operative cerebral oxygenation monitoring is ongoing. Currently, the International recommendations do not include cerebral oximetry monitoring as a standard of care during intraoperative period. Studies have shown that the pre-operative regional cerebral oxygen saturation ≤ 50% was associated with increased postoperative delirium rates in elderly patients following cardiac surgery. Guidelines recommend Doppler scan, as opposed to cerebral oximetry (rSO_2), as a routine test to detect carotid stenosis prior to cardiac surgery. We describe a 41-year-old woman who presented with a normal carotid scan and unexpectedly low baseline cerebral oximetry levels. She had delayed postoperative recovery and discharge from hospital following her coronary-artery bypass surgery. This case study reiterates the prognostic significance of cerebral oximetry in the preoperative checkup and the association of low intraoperative values to postoperative cerebral impairment. It can also be identified as a comparatively better tool for preventing cognitive disturbances after cardiac surgery. However, no studies have shown any correlation or superiority for Doppler scanning vs cerebral oximetry as a predictor for postoperative cognitive dysfunction. The current case study addresses the dilemma as to which one among these two to be considered best to predict the postoperative delirium following cardiac surgery. The current lecture also highlights briefly the other indications and limitations of the use of cerebral oximetry in Cardiovascular medicine and surgical practice.

Insights into mitochondrial genetics of atherosclerosis

I Sobenin
National Medical Research Center of Cardiology, Russia

Background: Epidemiological studies suggest that genetic factors may explain up to 15% variability of atherosclerotic diseases. In recent years, considerable attention has been paid to the role of mitochondrial DNA (mtDNA) damage in the pathogenesis of atherosclerosis. The hypothetical mechanism of atherogenic effect of mtDNA mutations may be due to the enhanced production of reactive oxygen species, an increase in oxidative stress, the development of mitochondrial dysfunction and inflammatory reaction, and cell death.

Aim: The set of several basic and clinical studies was performed to get the evidence of association of mtDNA mutations with atherosclerosis.

Results: At least 10 mutations in 8 mitochondrial genes encoding the 12S subunit of ribosomal RNA, leucine t-RNA, cytochrome B, and NADH dehydrogenase subunits were significantly associated with atherosclerotic lesions. The associations of the same mutations with the extent of subclinical carotid atherosclerosis assessed by carotid intima-media thickness have been revealed. The mtDNA next generation sequencing have demonstrated significant correlation of mtDNA mutations with CHD and myocardial infarction. The most common proatherogenic and antiatherogenic haplotypes of mtDNA mutations were identified. A panel of several mtDNA variants associated with atherosclerosis was obtained. The ongoing research is aimed to the studies of precise mechanisms whereby mtDNA mutations can lead to atherosclerosis development at the cellular level. The methodological approaches are based on creation of cytoplasmic hybrids, and on the direct editing of mtDNA, in order to reproduce the pathogenic mitochondrial genotype. The most recent non-disclosed results are to be reported.

Conclusion: We consider mtDNA mutations as the mechanistic biomarkers of atherosclerotic disease. We need precise cellular models created by the means of mtDNA editing to study pathogenic role of deterious mtDNA mutations, and to find plausible molecular targets for prevention and treatment of atherosclerotic pathology. The study was supported by Russian Science Foundation, Grant 19-15-00297.

Biography

Prof. Sobenin has got his M.D. degree in therapy in 1986, Ph.D. degree in endocrinology in 1991, and D.Sc. degree in pathophysiology and biochemistry in 2006. In the course of his research career he has published over 260 papers in international peer-reviewed journals. His research activity is in a field of molecular and cellular mechanisms of atherosclerosis and atherogenesis, including genetic and phenotypic markers of susceptibility; clinical, epidemiological and population studies in the field of chronic diseases with a special emphasis on atherosclerosis and its clinical manifestations. Prof. Sobenin's current position is the Chief Researcher, Head of Laboratory of Medical Genetics at the Institute of Experimental Cardiology, National Medical Research Center of Cardiology (Moscow, Russia).

The role of OX40L and ICAM-1 in the stability of coronary atherosclerotic plaques and their relationship with sudden coronary death

Biography

Jiawen Wang, Ph.D., is an Associate Professor of Forensic Medicine, Master's Supervisor. The research direction is sudden cardiac death and the mechanism of craniocerebral injury. At present, his 4 relevant SCI articles have been published, and 2 national and provincial scientific research projects have been undertaken as project hosts. The provincial third prize and the first prize for municipal scientific and technological progress have been obtained. He has been invited to review manuscripts for SCI journals several times. He has been engaged in forensic pathology teaching, scientific research and forensic case identification for more than ten years.

Jiawen Wang, Changwu Wan, Yu Wang, Xiaoyu Sun, Bing Xia, Cuiyun Le, Zhu Li, Jie Wang and **Jiang Huang**
Guizhou Medical University, China

Background: Coronary heart disease is related to sudden death caused by multi-factors and a major threat tohuman health.This study explores the role of OX40L and ICAM-1 in the stability of coronary plaques and their relationship with sudden coronary death.

Methods: A total of 118 human coronary arteries with different degrees of atherosclerosis and/or sudden coronary death comprised the experimental group and 28 healthy subjects constituted the control group were isolated from patients. The experimental group was subdivided based on whether the cause of death was sudden coronary death and whether it was accompanied by thrombosis, plaque rupture, plaque outflow and other secondary changes: group I: patients with coronary atherosclerosis but not sudden coronary death, group II: sudden coronary death without any of the secondary changes mentioned above, group III: sudden coronary death with coronary artery atherosclerotic lesions accompanied by either of the above secondary changes. The histological structure of the coronary artery was observed under a light microscope after routine HE staining, and the related indexes of atherosclerotic plaque lesions were assessed by image analysis software. The expressions of OX40L and ICAM-1 were detected by real-time quantitative PCR (RT-PCR), immunohistochemistry (IHC) and Western blotting, and the correlations between the expressions and the stability of coronary atherosclerotic plaque and sudden coronary death were analyzed.

Results: (1) The expression of OX40L protein in the control group and the three experimental groups showed an increasing trend, and the difference between groups was statistically significant ($P < 0.05$). (2) The expression of the ICAM-1 protein in the control group and the three experimental groups showed a statistically significant ($P < 0.05$) increasing trend. (3) The expression of OX40L and ICAM-1 mRNAs increased in the control and the three experimental groups and the difference was statistically significant ($P < 0.05$).

Conclusion: The expression of OX40L and ICAM-1 proteins and mRNAs is positively correlated with the stability of coronary atherosclerotic plaque and sudden coronary death.

Immediate and short-term effects of transcatheter device closure of large atrial septal defect in senior people

Jiyu. Zhang[1] and **Shihai. Wang**[2]
[1]Dali University, China
[2]Central Hospital of Panzhihua City, China

Biography

Jiyu. Zhang is a board-certified cardiologist and a NSFC funded researcher. Jiyu. Zhang primarily study atherosclerosis, focusing on exosome, endothelial progenitor cell (EPC)-mediated vascular repair, in the contexts of biological aging, smoking. Jiyu. Zhang and his team has dedicated on several projects relating to epigenetic regulation of endothelial cells and vascular smooth muscle cells in the genesis of atherosclerosis. And he is well trained to participate in intervention on coronary heart disease, congenital heart disease and arrhythmia.

Objectives: We sought to evaluate the safety and efficacy in improving cardiac function and functional capacity with device closure of large atrial septal defects (ASD) in senior adults.

Background: Atrial septal defect accounts for about 10% of all congenital heart disease. It still remains unclear whether large ASD closure in senior people should be performed or not. Hence we aim to prospectively assess the safety and clinical status of senior patients after transcatheter closure in large ASD.

Patients and interventions: This was a prospective study of all patients aged over 50 years who underwent device closure of a secundum large ASD between January 2013 and January 2018. Investigations including brain natriuretic peptide level, electrocardiography, chest X-ray, transthoracic echocardiogram, transesophageal echocardiogram, and 6-minute walk test were performed before and at 2 days and 4 weeks and 6 months after the procedure.

Results: Twenty patients (median age 68 years, 10 women) had transcatheter device closure of large ASD successfully. Median ASD size was 32 mm (range 30-39 mm). Median pulmonary artery pressure was 58 mm Hg (range 47-67 mm Hg). At 6 months, there was a significant change in right atrium size ($P < .001$) and right ventricle size ($P < .01$) and left ventricle size ($P < .001$) and also pulmonary artery pressure ($P < .0001$), New York Heart Association functional class improved ($P = .03$) in 19 patients and also significant improvement in 6-minute walk test distance ($P < .001$). There were no major complications.

Conclusions: Our data showed that large ASD closure at senior people results in satisfactory cardiac remodeling and cardiac function improvement.

PEERS ALLEY MEDIA

INTERNATIONAL CONGRESS ON ADVANCED CARDIOLOGY AND CARDIOVASCULAR RESEARCH
March 30-31, 2022 | Paris, France

Arterial pulse synchronized contractions

Biography

Kate Lothman is a Manager of Medical Writing, Editing and Design Services at RTI-HS, where she leads a team of writers and editors who collaborate with researchers on the development of publications and posters. She has 13 years of experience in medical communications. Ms. Lothman was 2013-2014 president of the American Medical Writers Association (AMWA) Carolinas Chapter and is an active member of the International Society for Medical Publication Professionals (ISMPP).

Katherine A. Lothman and **Allen W. Mangel**
RTI Health Solutions, USA

Objectives: For more than a century, the Windkessel Hypothesis has prevailed in describing the behavior of the smooth muscle wall of large arteries, positing that large arterial walls do not undergo rhythmic contractions in synchrony with the heartbeat but, instead, behave as passive elastic tubes distended by pulsatile pressure waves. We describe evidence that large arteries undergo rhythmic smooth muscle activation in synchrony with the cardiac cycle.

Results: Several lines of research have demonstrated that the smooth muscle walls of the aorta and other large arteries undergo contractions at the rate of the heartbeat in vivo. In bypassed segments of rabbit aorta (Figure 1A), rhythmic tension changes, or pulse synchronized contractions (PSCs), were observed with a 1:1 correspondence to the pulse wave (Figure 1B). Rhythmic activity continued in bled animals, establishing that PSCs are not a movement artifact from the pulse wave. Excision of the right, but not the left, atrial appendage eliminated PSCs, while direct electrical stimulation of the right atrium resulted in PSCs that were locked in frequency to the stimulation rate (Figure 1C). Both of these observations support the pacemaker for PSCs residing in the right atrium. PSCs are neurally mediated, sensitive to the nerve blocker tetrodotoxin (TTX) (Figure 1D). To date, PSCs have been observed in canines (coronary, femoral, and carotid arteries), rabbits (aorta), felines (pulmonary artery), rats (aorta), and in human brachial artery.

Conclusion: The aortic smooth muscle wall undergoes neurally mediated rhythmic contractile activity in synchrony with the heartbeat. The PSC represents a modified platform for understanding cardiovascular physiology and may inform the development of novel therapeutic targets.

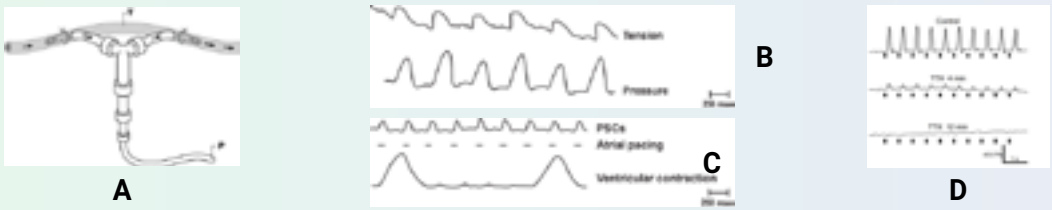


Figure 1. (A) Measurement of contractile activity in the in vivo rabbit aorta. Blood flow was bypassed in a segment of aorta. Tension (T) was recorded from the bypassed segment, and pulse pressure changes (P) were recorded from the non-bypassed segment. (B) Rhythmic tension changes, or PSCs, were recorded with a 1:1 correspondence to the pulse wave. (C) Right atrial pacing in a bled rabbit. PSCs followed the pacing rate. This experiment supports both the pacemaker for PSCs residing in the right atrium and that PSCs are not secondary to a movement artifact from the pulse wave or heart. (D) Local application of tetrodotoxin (TTX) on electrically stimulated aortic contractions. Electrical stimulation of the rat aorta in vivo produced contractions similar to PSCs. As PSCs are neurally mediated, these contractions were eliminated by the neural blocker TTX. Black bars represent timing of stimulation.

Significance of early postoperative arterial lactic acid, inferior vena cava variability and central venous pressure in hypovolemic shock

Long Huang and **Songchang Shi**

Department of Critical Care Medicine, Shengli Clinical Medical College of Fujian Medical University, Fujian Provincial Hospital South Branch, China

Biography

Long Huang, male, 31 years old, attending physician, graduated from Fujian Medical University with a medical master's degree, is currently working in the First Department of Critical Care Medicine, Fujian Provincial Hospital South Branch, a national-level critical care center that treats thousands of critically ill patients every year. He has got 5 years of clinical work experience in critical care medicine, specializing in fluid resuscitation, clinical hemodynamic therapy, bedside cardiac function assessment and treatment in critically ill patients, and have carried out a large number of studies. He has published several domestic articles.

Introduction: Up to one-third of patients admitted to the ICU are in circulatory shock , early recognition of the condition is vital if subsequent tissue injuries are to be avoided. We would like to know what role the arterial lactic acid, Inferior vena cava diameter variability and CVP(central venous pressure) play in the early stages of shock.

Methods: This is a retrospective study of patients who underwent surgical resuscitation in the Department of Critical Care Medicine . We use the ROC curve to evaluate the significance of each indicator in the diagnosis. For correlation analysis between groups, first use Linear regression to process and then analyze with Correlation.

Results: The ROC curve analysis showed that the AUC of the lactic acid group was 0.9272, the AUC of the inferior vena cava variability group was 0.8652, the AUC of the CVP group was 0.633. Correlation analysis shows that the inferior vena cava variability and arterial lactic acid Persion r =0.2863. CVP and arterial lactic acid Persion r= 0.0729.

Conclusion: The diagnostic value of arterial lactate is still very high, and can still be used as an early warning indicator to help clinicians be alert to the microcirculatory disorders that have emerged quietly. The degree of inferior vena cava variability is linearly related to arterial lactic acid, and can also be used as a reference indicator for early evaluation of shock . The diagnostic value of CVP is obviously lower.

About the controversies of the cardio-protective effect of n-3 polyunsaturated fatty acids (PUFAs) between animal studies and clinical meta-analyses: A review with several strategies to enhance the beneficial effects of n-3 PUFAs

Biography

L. Demaison enrolled at the French National Institute of Agronomical Research (INRAE) in 1987 in Dijon, France, he always dealt with Nutrition and cardiovascular diseases. One of his main nutritional interests was the effects of n-3 polyunsaturated fatty acids on cardiac function in different situations (ischemia/reperfusion, obesity, diabetes and sepsis). However, he also worked on the influence of dietary oxysterol on coronary vessels, impact of alcohol in ischemia/reperfusion and effects of different pharmacological agents in cardiac pathologies. After 17 years in Dijon, he worked in an INSERM laboratory in Grenoble, France, for 10 years and then he came back to an INRAE unit in Clermont-Ferrand, France, in 2013. He will be retired during spring 2021.

L. Demaison[1], T. Leger[1], C. Vergely[2], L. Rochette[2] and **K. Azarnoush[3]**

[1]Université Clermont Auvergne, INRAE, France

[2]University of Bourgogne Franche-Comté, UFR des Sciences de Santé, France

[3]Service de Chirurgie Cardiaque, Hôpital nord, CHU de Saint-Etienne, France

Several meta-analyses describing the effect of n-3 polyunsaturated fatty acids on the survival rate of the victims of an acute coronary event do not clearly support a beneficial impact of these fatty acids. Yet, animal studies consistently show n-3 PUFAs-induced protection against ischemia-reperfusion induced myocardial injuries. The impact on reperfusion arrhythmias of these PUFAs is more controversial. The literature shows the anti-arrhythmic properties of circulating n-3 PUFAs. However, when these fatty acids are incorporated in the cardiac membrane, they protect the myocardial tissue vis a vis cellular damage but they can be either pro- or anti-arrhythmic during reperfusion, depending on the severity of tissue injuries. The latter elements can explain the lack of beneficial effect observed in the meta-analyses, but a proper use of n-3 PUFAs may provide advantages in terms of survival rate. This review discusses the different results obtained in humans and animals and presents several strategies to enhance the beneficial effects of n-3 PUFAs.

High-definition blood flow imaging in the assessment of left ventricular function: Comparison with contrast echocardiography

Biography

Dr.Masood Ahmad received his medical degree from Kashmir Medical College in Kashmir, India. He completed his residency in Internal Medicine at Long Island Jewish/Queens Hospital Center in New York and his fellowship in cardiology at Southwestern Medical School in Dallas, Texas. He is board certified in Internal Medicine/cardiovascular disease. He is a Fellow of the Royal college of Physicians and Surgeons of Canada. Dr. Ahmad is a tenured Professor of Medicine and holds the Edward D. and Sally M. Futch Endowed Professorship in Cardiology. He is also the Director of the Echocardiography Laboratory. Dr. Ahmad's research interests are in non-invasive Cardiovascular imaging and he has expertise in 3D echocardiography. In addition, Dr. Ahmad serves on the editorial board of Echocardiography, a journal of Cardiovascular ultrasound and Allied techniques.

Masood Ahmad
Division of Cardiology, Department of Internal Medicine, University of Texas Medical Branch, USA

Objectives: We evaluated the accuracy and reproducibility of the high definition blood flow imaging (HD-Flow) in evaluation of left ventricular (LV) function and compared the results to contrast echocardiography.

Background: LV HD-Flow imaging enhances blood flow signal in the LV and could possibly be used for improving endocardial border definition without contrast agents.

Methods: Eighty patients with technically limited baseline transthoracic echocardiograms had HD-Flow and contrast echocardiography performed sequentially. LV endocardial visualization, image acquisition time, LV wall motion, LV volumes, and LV ejection fraction (EF) LV stroke volume (SV), and stroke volume index (SVI) were compared. Inter and intra observer agreements were examined in randomly selected subgroups.

Results: Both HD-Flow and contrast significantly improved the percentage of the well-defined endocardial border segments (71% at baseline vs 94.1% by HD-Flow vs 94.9% by contrast, X2=401, P < 0.001). The acquisition time for HD-Flow imaging was significantly less when compared to contrast imaging (2.13±1.18 min vs 10.96±3.51 min, P < 0.001). LV end diastolic volume (EDV), end systolic volume (ESV), and LVEF measured by the two methods correlated well (EDV r=0.97, ESV r=0.98, EF r=0.90, SV=0.78, SVI=0.74, P < 0.001).

Table: LV volumes and EF (mean ± SD) by contrast and HD-Flow echocardiography (n=80)

Parameters	HD-Flow Echo	Contrast Echo	P Value
EDV, ml	134 ± 73	139 ± 73	0.003
ESV, ml	74 ± 64	80 ± 68	0.001
LVEF, %	49 ± 15	50 ± 16	0.163
SV, ml	59 ± 21	58 ± 19	0.673
SVI, ml/m²	28 ± 9	28 ± 9	0.739

EDV - end diastolic volume; ESV- end systolic volume; LVEF- left ventricular ejection fraction; SV – Stroke Volume; SVI – stroke volume index. (Reproduced from Echocardiography 2019 Mar;36(3):546-557)

Conclusions: HD-Flow imaging enhances LV endocardial definition. This technique appears useful in both qualitative and quantitative assessment of LV function.

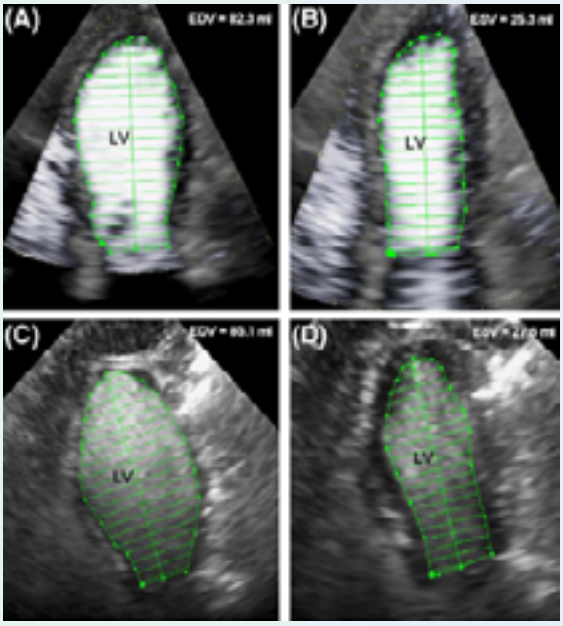


Figure: Left ventricular (LV) end-diastolic volume (EDV) and end-systolic volume (ESV) images in the apical four-chamber view showing LV HD-Flow (A and B), and LV contrast (C and D) in a patient with normal systolic function. (Reproduced from Echocardiography 2019 Mar;36(3):546-557)

The implementation of the nursing process in lower-income countries: An integrative review

Biography

Dr.Masood Ahmad received his medical degree from Kashmir Medical College in Kashmir, India. He completed his residency in Internal Medicine at Long Island Jewish/Queens Hospital Center in New York and his fellowship in cardiology at Southwestern Medical School in Dallas, Texas. He is board certified in Internal Medicine/cardiovascular disease. He is a Fellow of the Royal college of Physicians and Surgeons of Canada. Dr. Ahmad is a tenured Professor of Medicine and holds the Edward D. and Sally M. Futch Endowed Professorship in Cardiology. He is also the Director of the Echocardiography Laboratory. Dr. Ahmad's research interests are in non-invasive Cardiovascular imaging and he has expertise in 3D echocardiography. In addition, Dr. Ahmad serves on the editorial board of Echocardiography, a journal of Cardiovascular ultrasound and Allied techniques.

Mohammad Khajehgoodari, Mojgan Lotfi, Vahid Zamanzadeh, Leila Valizadeh, Mehdi Ebrahimpour rezaei and **Mohammad Amin Khalilzad**

Tabriz University of Medical Sciences, Iran

Objectives: This review study aimed to investigate the strategies for implementing the nursing process (NP) in the clinical practice and the assessment of the implementation rate of this process in clinical settings of lower-income countries.

Scope: An integrative review

Methods used: The search was conducted of EMBASE, MEDLINE, CINAHL, Scopus, and ISI databases from 1975 to July 2018. Following the formation of the research team, two researchers independently selected the eligible studies, finally, 39 articles were approved by the research team for this study.

Conclusion of your work: The researchers identified three themes: Effects of implementing the NP in clinical settings, Development and application of electronic software's in the NP, and Factors affecting the implementation of the NP. This review revealed that nurses and nursing managers in hospitals are interested in implementing the nursing process in the form of widely and continuously. But the necessary infrastructure, such as manpower, electronically or manually tools, has not yet been provided and the implementation of the nursing process is done either imperfectly or not done. The nursing process is not implemented nursing in Iran, Ethiopia, Kenya, Taiwan, and generally in lower-income countries, for the following three reasons:

- Inadequate knowledge of nursing faculty members from the nursing process
- Lack of necessary infrastructures in hospitals
- Lack of support from nursing institutions (Nursing Organization and The Nursing Board)

Echocardiography, The Next Generation

Biography

Olaf T. von Ramm was born in Posen, Poland, on August 16, 1943. He received the B.A.Sc. and M.A.Sc. degrees in electrical engineering from the University of Toronto, Toronto, Ontario, Canada, in 1968 and 1970, respectively, and the Ph.D. degree in biomedical engineering from Duke University in Durham, NC, in 1973. Dr. von Ramm joined the faculty of Duke University in 1974 and currently is the Thomas Lord Professor of Engineering, Professor of Biomedical Engineering, and Associate Professor of Medicine. He was also the Director of the National Science Foundation-sponsored Center for Emerging Cardiovascular Technologies. He has served a variety of administrative roles at Duke University, including Director of Undergraduate Studies, Director of Graduate Studies, and Department Representative to the University's Academic Council. His research interests include diagnostic ultrasound imaging systems, IR imaging, and medical instrumentation and their new applications. He is a 1998 Computerworld Smithsonian Research Collection Awardee.

Olaf T. von Ramm
Duke University, USA

Progress in technology and an improved understanding in the interaction of ultrasound with tissue have vastly improved the diagnostic efficacy of echocardiograms. Recent in vivo and patient studies using advanced, very rapid echo data acquisitons show significant ultrasound changes associated with myocardial electrical events. Limited studies with high frame rate ultrasound have identified the location of onset of contraction as timed with the ECG. The supportive technology now exists to extend high frame rate imaging to real time imaging in three dimensions at rates of 500 to 1000 volumes per second to noninvasively characterize contraction patterns with millisecond resolution. Since ultrasound changes have been shown to be closely associated with depolarization events, echocardiography may become a noninvasive method for electrophysiological measurements. Initial findings using 2D high frame rate ultrasound will be shown and the concepts for the extension to high frame rate 3D imaging will be discussed.

Balloon Assisted Translocation of the Mitral Anterior leaflet to prevent left ventricular outflow obstruction (BATMAN): A novel technique for patients undergoing transcatheter mitral valve replacement

Biography

Dr. Tarek Helmy is an interventional cardiologist, the Harlene & Marvin Wool Endowed Professor in Cardiology, and Director of the Cardiac Catheterization Laboratory at SSM Saint Louis University Hospital. He is also the Director of the Cardiovascular Diseases Fellowship Program. Dr. Helmy earned his medical degree from the University of Cairo-Egypt, did his residency and cardiology fellowship at the University of Texas Medical School at San Antonio and interventional fellowship at New England Medical Center Tufts University, Boston. His publications include >80 peer reviewed articles. He is a fellow of the American College of Cardiology and the Society of Coronary Angiography and Intervention and is on the Editorial Board of the Journal of Invasive Cardiology and Journal of the American College of Cardiology Interventions. Research interests include new innovations in the treatment of coronary artery disease and management options in acute coronary events. He has been voted one of St. Louis' Top Doctors for the last five years.

Helmy T, Hui D, Smart S, Lim M and **Lee R.**
Saint Louis University School of Medicine
3635 Vista Avenue, Saint Louis, Missouri 63110

Introduction: Transcatheter mitral valve replacement (TMVR) is an option for patients at high risk for mitral valve replacement or repair via sternotomy or left thoracotomy approach. TMVR carries up to 22% risk of left ventricular outflow tract (LVOT) obstruction. Severe LVOT obstruction can have devastating hemodynamic and clinical consequences.

Hypothesis: We previously presented a novel technique to prevent LVOT obstruction during transapical retrograde mitral valve replacement, by penetrating and ballooning the anterior mitral leaflet (AML), resulting in creation of a "hole" and posterior translocation of AML, then deploying the valve.

Methods: Three patients underwent TMVR at Saint Louis University for severe mitral regurgitation after being deemed too high risk for surgery, and not candidates for a Mitra-clip procedure. These patients were deemed to be at risk for LVOT obstruction based on the preprocedural evaluation. Via transapical approach, a needle was advanced "through," perforating the AML and wire was placed in the left atrium. Over the wire, an 20-mm valvuloplasty balloon was positioned "within" the anterior leaflet and inflated leading to translocation of the AMVL. Then the valve was deployed.

Results: This novel technique has been performed on three patients at our institution. Sapien S3 transcatheter valves were used in all three patients, with 100% procedural success rate. Intraoperative TEE demonstrated no significant LVOT obstruction, cardiopulmonary bypass time was 42-44 min.

Conclusion: The balloon assisted translocation of the mitral anterior leaflet to prevent left ventricular outflow obstruction technique described here may offer the option of transcatheter mitral valve implantation in patients at high risk of LVOT obstruction. A variation of this technique to allow application in cases with transseptal approach is under investigation.

No Cybersecurity please – I am a doctor!

Biography

Prof SH (Basie) von Solms is a Research Professor in the Academy for Computer Science and Software Engineering and the Director of the Centre for Cyber Security at the University of Johannesburg in South Africa. He is also an Associate Director of the Global Cybersecurity Capacity Centre of the University of Oxford in the UK. Basie was a member of the World Economic Forum's Global Future Council for Cyber Security. He is a Fellow of the BCS, The Chartered Institute for IT Professionals in the United Kingdom, and the Institute for IT Professionals in South Africa.

Prof Basie von Solms
Centre for Cyber Security, University of Johannesburg, South Africa

So you think Cyberspace and Cybersecurity do not really concern you – it is only for the manufacturers of devices, the IT technicians and maybe the hospital administration – big mistake!

Surely, Cyberspace and Cybersecurity today, and tomorrow as we move into the Fourth Industrial Revolution, have a very big technical component, but it has a much bigger human, social and end user component. After all, all computers, devices, smart phones and more are used by me and you, as end users. Cybercriminals realize that, and therefore cyberattacks are primarily targeting the end user – that is us! A lack of the awareness of Cybersecurity risks in our normal daily working environment provides the hunting ground for the cybercriminals. Today it is essential that every user of a computer type of device must have a basic level of Cybersecurity awareness.

The purpose of this (informal and non-technical) presentation will be to take delegates through a 'walk' through Cyberspace, and highlight the cyber risks and dangers, and the types of cyberattacks they are exposed to every day in their working environment, These risks and attacks will include a brief discussion of types of attacks like Electronic Identity Theft, Ransomware, Malware infection, hacking and more. In each case we will indicate what (simple) countermeasures can be taken to lower one's risk to such attacks.

Examples of how such attacks work and the basic countermeasure to take, will be tailored to make them applicable and understandable in a medical practitioner's environment, ensuring that the delegates can personally associate with the material presented in the talk.

Novel minimally invasive convergent hybrid ablation therapy for longstanding persistent atrial fibrillation

R.A. Kaba, A. Ashry, P. Gukop, A. Elbadri, Z. Zuberi, A. Li, M. Sohal, A. Bajpai, M. Saba, R. Sharma, V. Chandrasekaran, M. Gallagher and **A. Momin**
St George's University Hospital NHS Foundation Trust, UK

Biography

R.A. Kaba is a consultant in cardiac electrophysiology and an honorary senior lecturer in London, UK. Exclinical co-director of regional Clinical Research Network. His research activities include novel management of atrial fibrillation, detection of atrial dysrhythmias, remote monitoring, novel VDI ICD systems, multi-polar lead positioning & resynchronisation therapy in scarred myocardium.

Introduction: Although catheter ablation therapy is a well-established treatment for cardiac dysrhythmias, the success rates for longstanding, persistent AF remain unsatisfactory. The minimally invasive Convergent hybrid technology is a novel form of therapy.

Methods: A prospective, single-center UK study to evaluate the Convergent hybrid technique for patients with longstanding (>1 year) persistent AF. Stage 1 was a minimally invasive epicardial approach for ablation of the posterior wall of left atrium (LA) and pulmonary veins (PVs) using the AtriCure radiofrequency system. Stage 2 was a transcatheter approach via the femoral veins to isolate the endocardial aspect of the PVs +/- posterior wall.

Results: Forty-one patients were suitable for the study. Mean age was 67 years and the mean BMI was 32. Males constituted 68.3 % of the study cohort. Mean LA size and left ventricular ejection fraction (LVEF) were 46mm and 52.9 %, respectively. Mean follow-up was 22 months, with a range of up to 4 years. 87.8% of patients remained in sinus rhythm (SR), whereas 12.2% had redeveloped persistent AF. Major complications during stage 1 ablation were low, with IVC injury in 1 patient and a mild stroke in 1 patient. Median LOS was 1 day (1-4 days) and there was no 30-day mortality after stage 1.

Conclusions: The novel Convergent hybrid ablation therapy has a conversion rate from longstanding persistent AF to SR of 87.8% at a mean follow-up of 22 months, without repeat ablation. LOS was short, there were very few complications and there was no peri-operative mortality. These outcomes appear to be very encouraging for a condition with otherwise low success rates by conventional techniques.

Cavotricuspid isthmus ablation using ablation index in typical right atrial flutter

Biography
Department of Cardiology, Beijing Anzhen Hospital Affliated to Capital Medical University, China

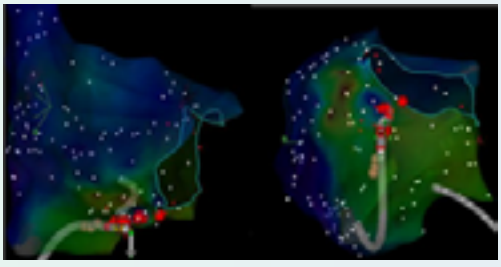
Tao Zhang, Yunlong Wang, Zhihong Han, Hua Zhao, Zhuo Liang, Ye Wang, Yongquan Wu and **Xuejun Ren**
Department of Cardiology, Beijing Anzhen Hospital Affliated to Capital Medical University, China

Background: Ablation index (AI) has been evaluated as guidance quality marker for pulmonary vein isolation but not for linear ablation of the cavotricuspid isthmus (CTI) for typical right atrial flutter (AFL). We thus studied the feasibility and effectiveness of AI-guided CTI for AFL.

Methods: Procedural and 6-month outcomes of ablation for AFL were retrospectively compared between consecutive patients undergoing either AI-guided ablation of CTI (n=43; AI target of 500 for anterior 2/3 segments and 400 for posterior 1/3 segments) or CF-guided ablation (n=42) at a single center. Each Visitag dataset from the all patients in each group were analyzed.

Results: AI guidance vs. CF guidance was associated with: higher first-pass conduction block of CTI (93.0% vs. 76.2%, P=0.03); similar acute spontaneous CTI reconnection 2.3% vs. 9.5%, P=0.343); shorter ablation time (665 ± 163 vs. 740 ± 220s, P=0.047); fewer radiofrequency applications (10.1 ± 2.8 vs. 11.5 ± 3.0, p=0.031) needed to achieve CTI directional block; significantly higher mean ablation time, impedance drop, FTI and AI and similar mean CF and power of each VisiTag point. One inguinal hematoma and one pseudoaneurysm developed in the AI and CF groups, respectively. Recurrent AFL was recorded in 2 (4.7 %) AI-group patients and 4 (9.5 %) CF-group patients (p=0.650).

Conclusion: AI-guided ablation of CTI line for AFL appears feasible and effective with shorter ablation time, fewer RF applications, a higher rate of first-pass conduction block and no additional complications.



Anatomical-physiological and mathematical justification of the new principle of the function of the cardiovascular system and the development of cardiovascular diseases

Biography

V. A. Mikhaylov M.D., Ph.D., Sci.D. In 1996 - was elected by the member International Advisory Board (1st Congress of the WALT in Jerusalem, Israel).1998 - was selected the Representative of the WALT in Russia and East Europe (the 2nd. Congress of WALT, USA). 1999 - was selected in Board of directors (EMLA), direction – oncology and angiology (Vienna, Austria). He is a member of editorial board of the "Laser Therapy". In 2018 – is selected as editorial board of the "Journal cardiovascular disease and Medicine". He has been recognized as an International Medical Laser Specialist at class: Hon-IMeLas, Congress ISLSM, WFSLMS, Tokyo, 2009. He was President of the VIIIth Congress of EMLA. He has received an Prof. Ming-Chien Kao AWARD (2016). Dr. Vladimir serves on Chairman, Invited speaker, the member of International Scientific Committee of multiple laser Conference and Congresses. He was Moderator on "Global Conference on Cardiology (May 13-14, 2019, Rome, Italy). He has published over 30 peer reviewed articles.

Vladimir A. Mikhaylov[1] and **Tatiana Y. Mikhaylova**[2]
[1]Eternity Medicine Institute, Dubai
[2]Bauman Moscow State Technical University

Anatomical features of the structure of the arteries and features of their functioning and mathematical research-allowed us to take a fresh look at the principle of the function of the cardiovascular system. The main role in transportation of blood to the capillary bed is played by the artery, the power of the heart is only 0,49-0,027 % of the power needed to transport blood to the capillary bed. Vascular pump is regulated by the frequency of contractions of the heart muscle and is tightly synchronized with the work of the heart.

The rapid spread of the pulse wave causes a suction effect. Following the reduction of the vessel wall, the blood is just drawn from the aorta and large arteries to the smaller vessels down to the capillary bed. Systematic irregularities in the vascular pump cause increased pressure in arteries located above the lesion and lead to the development of hypertension and can be a starting point in the development of various diseases of the cardiovascular system and other body systems. These illnesses may be both local and systemic, depending on the size and the location of pathological changes in the vascular wall.

The use of the intravenous laser blood irradiation (ILBI) of 630-640nm for the prevention of the appearance of vascular diseases and the increase of life expectancy

Vladimir A. Mikhaylov
Eternity Medicine Institute, Dubai

Biography

V. A. Mikhaylov M.D., Ph.D., Sci.D. In 1996 - was elected by the member International Advisory Board (1st Congress of the WALT in Jerusalem, Israel).1998 - was selected the Representative of the WALT in Russia and East Europe (the 2nd. Congress of WALT, USA). 1999 - was selected in Board of directors (EMLA), direction – oncology and angiology (Vienna, Austria). He is a member of editorial board of the "Laser Therapy". In 2018 – is selected as editorial board of the "Journal cardiovascular disease and Medicine". He has been recognized as an International Medical Laser Specialist at class: Hon-IMeLas, Congress ISLSM, WFSLMS, Tokyo, 2009. He was President of the VIIIth Congress of EMLA. He has received an Prof. Ming-Chien Kao AWARD (2016). Dr. Vladimir serves on Chairman, Invited speaker, the member of International Scientific Committee of multiple laser Conference and Congresses. He was Moderator on "Global Conference on Cardiology (May 13-14, 2019, Rome, Italy). He has published over 30 peer reviewed articles.

The mortality from the diseases due to the affection of vessels came out now on the first place. The use of the Intravenous laser blood irradiation (ILBI) within the last 30 years showed its high efficiency in a treatment of diseases of vessels and heart, and other system diseases. Therefore ILBI as the method of the system impact on the blood system, allows to lower the lethality and to increase the life expectancy.

The lasers used for treatment of various diseases, the waves having length of 630-640 nanometers are the most effective for the direct impact on the blood and the vascular wall. The energy of the waves of this length is absorbed by oxygen, improves the microcirculation in tissues, changes the viscosity of the blood and affects the wall of vessels.

Value of the Cough maneuver for detecting right-to-left shunt during contrast transthoracic echocardiography

Biography
The First People' Hospital of Xianyang City, China
The First Affiliated Hospital of Xi'an Medical College, China

Xiao-Yong Zhang[2] and **Ping Wang**[1], **Sha-Sha Chen**[2] and **Ying Li**[2]
[1]The First People' Hospital of Xianyang City, China
[2]The First Affiliated Hospital of Xi'an Medical College, China

Aim: To explore the value of cough maneuver (CM) in detecting right-to-left (RLS) during contrast transthoracic echocardiography (cTTE) and its mechanism.

Method: We enrolled 196 patients with a high level of clinical suspicion of RLS underwent cTTE for RLS detection. Valsalva maneuver (VM) (blowing into a face mask connected to a sphygmomanometer at 40 mmHg for 10 s) and CM were performed to provoke RLS respectively. A comparison of the two provocative maneuvers in terms of the RLS detection rate, the degree of RLS, the mobility of septum primum were done.

Results: The detection rates of RLS for CM was significantly higher than that for VM (38.3% versus 32.1%), (P<0.001). There was no significant difference between VM and CM in terms of detecting moderate- or severe-extent RLS (P>0.05), however CM was significantly better than VM in detecting mild-extent RLS (P=0.004). CM caused a greater mobility of septum primum than VM (20.1±0.2 mm vs 6.3±0.1 mm), (P<0.001).

Conclusion: CM had a higher detection rate for RLS than VM during cTTE, maybe due to its greater mobility of septum primum than VM caused.

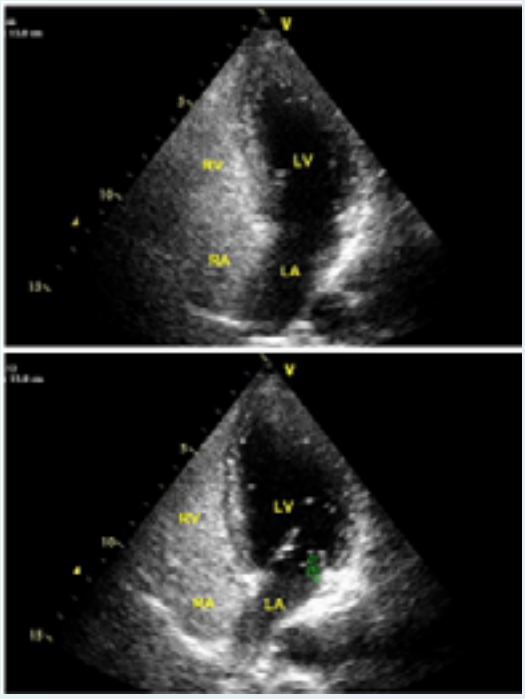
Table 1. Cross-tabulation of VM and CM for the detection of right-to-left shunt.

VM(n)	CM(n)	
	Positive	Negative
Positive	58	5
Negative	17	116

VM = Valsalva maneuver; CM = cough maneuver.

	VM	CM	Pearson's x2 t	P
No.(%) of detection cases	63(32.1)	75(38.3)	1.137	0.000
Mobility of primary septum (mm)	6.3±0.1	20.1±0.2	-65.585	0.000

VM = Valsalva maneuver; CM = cough maneuver.



PEERS ALLEY MEDIA

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March 30-31, 2022 | Paris, France

Diagnosis of anomalous origin of the left coronary artery from the pulmonary artery with echocardiography and digital subtraction angiography

Biography

Dr. Ji has her expertise in evaluation and passion in improving the health and wellbeing. She has been engaged in clinical, teaching and scientific research of pediatric and cardiovascular diseases in hospital and university. She is good at complex precordial echocardiography and transesophageal echocardiography in children.

Xiaojuan Ji[1,2,3,4,5] **Qiao Wang**[1,2,3,4,5] **Yi Tang**[1,2,3,4,5] and **Chun Wu**[1,2,3,4,5]

[1]Children's Hospital of Chongqing Medical University, China

[2]Ministry of Education Key Laboratory of Child Development and Disorders, China

[3]National Clinical Research Center for Child Health and Disorders, China

[4]China International Science and Technology Cooperation base of Child development and Critical Disorders, China

[5]Chongqing Key Laboratory of Pediatrics, China

ALCAPA is a rare congenital cardiovascular malformation in which the left coronary artery originates from the pulmonary artery (PA) instead of the left coronary sinus [1]. The incidence is 1 in 300,000 live births and accounts for 0.25% to 0.5% of congenital heart disease cases. ALCAPA results in mortality as high as 90% in the first year of life if the patient is not treated in a timely fashion [2]. This report describes an 8-year-old female who had cardiac murmur but with no clinical symptoms. Electrocardiogram (ECG) was normal. Echocardiography demonstrated ALCAPA, right coronary artery to right ventricular fistula, right coronary artery aneurysm, collateral coronary circulation formation severe mitral regurgitation (MR), left ventricular ejection fraction (LVEF) of 61%, and left ventricular fractional shortening (LVFS) of 33% . Digital subtraction angiography (DSA) with cardiac catheterization angiography (CAG) confirmed the diagnosis. The patient underwent direct reimplantation of the abnormal LCA into the aorta with general anesthesia under extracorporeal circulation through a median sternotomy. During the procedure, origin of the LCA from the PA trunk, a dilated and tortuous RCA from the RCC, extensive intercoronary collaterals, and anterior mitral valve prolapse were confirmed. Postoperative bedside echocardiography showed LCA connected to aorta sinus, bilateral coronary artery aneurysms, and moderate-to-severe MR with LVEF of 71%, LVFS of 39%. The chest was closed on postoperative day 2, and the patient was discharged on postoperative day 11 with an uneventful recovery. We followed the patient on the first month (bilateral coronary artery aneurysms and moderate MR with LVEF of 61%, LVFS of 32%), sixth month (right coronary artery aneurysms/dilated left coronary artery and mild-to-moderate MR with LVEF of 65%, LVFS of 35%), and first year (bilateral dilated coronary arteries and mild MR with LVEF of 67%, LVFS of 34%) after the surgery by echocardiography , and the patient showed good functional recovery

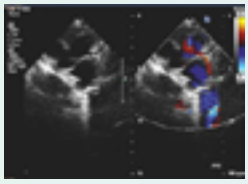

Figure 1: The left coronary artery (LCA) originating from the pulmonary artery.

Central but not general obesity is positively associated with the risk of hyperhomocysteinemia in middle-aged women

Biography

Ms. Yingying Wang is a Medical Master of the Department of Epidemiology, School of Public Health, Fudan University. She has studied in non-communicable diseases for many years and focoused on the risk factors of cardiovascular diseases(CVD) according to a community-based cohort. She has participated in many public-health-related programs including “Research on Chinese vaccine market access and management in the context of healthy China 2030” , “The association between childhood obesity and intestinal flora” and “Identification of high incidence of thyroid abnormalities in women, long-term effect study and iodine nutrition strategy based on the child cohort” et al.

Yingying Wang[1,2], Yonggen Jiang[3], Na Wang[1,2], Meiying Zhu[3], Xing Liu[1,2], Ruiping Wang[3], Feng Jiang[1,2], Yue Chen[4], Qi Zhao[1,2] and **Genming Zhao[1,2]**

[1]Department of Epidemiology, School of Public Health, Fudan University, China
[2]Key Laboratory of Public Health Safety of Ministry of Education, China
[3]Songjiang District Center for Disease Control and Prevention, China
[4]School of Epidemiology, Public Health and Preventive Medicine, University of Ottawa, Canada

Background: Obesity and homocysteine (Hcy) are two important risk factors for cardiovascular disease (CVD); however, there were conflicting results for the relationship between them. Our study is to explore the associations of general and central obesity with hyperhomocysteinemia (HHcy) in middle-aged women.

Methods: The current analysis was based on data from 11007 women aged 40-60 years. Height, weight, and waist circumference (WC) were measured and serum homocysteine was determined. Multiple logistic regression models were used to assess the associations of the risk of hyperhomocysteinemia (HHcy, Hcy>15μmol/L) with BMI and WC.

Results: 13.71% women had HHcy. The prevalences of BMI-based general obesity and WC-based central obesity were 11.17% and 22.88%, respectively. Compared with non-obese women, the mean serum Hcy concentration was significantly higher in WC-based central obese women (P=0.002), but not in BMI-based general obese women (P>0.05). In the multiple logistic regression models, central obesity was positively related to the risk of HHcy (OR=1.30, 95%CI=1.10 to 1.52), while general obesity was inversely related to the risk of HHcy (OR=0.82, 95%CI=0.72 to 0.93 and OR=0.71,95% CI=0.57 to 0.89).

Conclusions: Central obesity was positively, while general obesity was negatively related to the risk of HHcy. Menopause showed no effect modification on these associations.

Association of some etiopathogenetic non-lipid biomarkers of atherosclerosis with probability of presence of vulnerable atherosclerotic plaques in patients with coronary atherosclerosis

Yu. Ragino
Research Institute of Internal and Preventive Medicine, Branch of the Institute of Cytology and Genetics, Siberian Branch of Russian Academy of Sciences, Russia

Objective: The study was dedicated to investigation of some etiopathogenetic non-lipid factors, such as biomolecules of inflammation, chemotaxis, oxidation, destruction, hemostasis, endothelial dysfunction association with probability of presence of vulnerable atherosclerotic plaques in coronary arteries in men with coronary atherosclerosis.

Material and methods: Biochemical blood factors panels of inflammation (TNF-alpha, IL-1-beta, IL-6, IL-8, IL-18, hsCRP, MIP-1- alpha and other), chemotaxis (MCP-1, CXCL6, G-CSF, PDGF-AB, EMAP-II and other), oxidation (myeloperoxidase, oxystat, FORT, FORD and other), destruction (MMP-1, MMP-3, MMP-7, MMP-9 and other), hemostasis (prothrombin, factor VII, factor XII, antithrombin III and other) and endothelial function (endothelin 1, sCD40L, sVCAM, lipoprotein LP(a), homocysteine and other) were evaluated by ELISAs and multiplex methods in 148 men at the age 35-75 with coronary angiography documented coronary atherosclerosis, included 67 men with unstable atherosclerotic plaques in coronary arteries, according to histological analysis of endarteriaectomia material (intima/media) taken during coronary artery bypass graft surgery.

Results: Have been revealed correlation links between the blood levels of IL-6, IL-8, hsCRP, MCP-1, EMAP-II, FORT, MMP-7, MMP-9, factor II, factor XII and the presence of vulnerable atherosclerotic plaques in the coronary arteries. Results of logistic regression analysis showed that the relative risk of present of vulnerable atherosclerotic plaques in the coronary arteries is associated with an elevated blood level of IL-6, IL-8, hsCRP, MCP-1, FORT, MMP-9 and factor XII.

Conclusion: Thus, elevated blood levels of IL-6, IL-8, hsCRP, MCP-1, FORT, MMP-9 and factor XII may be new potential biomarkers of probability of presence of vulnerable atherosclerotic plaques in patients with coronary atherosclerosis. The study was performed in the framework and with the financial support of RFBR Grant No. 19-015-00055a.

Biography

Ragino Yulia I., born 1970, PhD, MD, Professor, Corresponding Member of the Russian Academy of Sciences, Head of the Research Institute of Internal and Preventive Medicine – Branch of the Institute of Cytology and Genetics, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia Research interests: Cardiology, Pathophysiology, Biochemistry and Genetics. She has Publications in Web of Science Core Collection – 119, in Scopus – 99, patents - 11, books – 9. Head of the Leading Scientific School in Russia "Novosibirsk School for the Study of Atherosclerosis". Membership in leading scientific societies: European Atherosclerosis Society (EAS), International Atherosclerosis Society (IAS), European Society of Cardiology (ESC), Russian National Society of Atherosclerosis and Russian Society of Cardiology.

Create a biological pacemaker with stem cells

Biography

Chuansen Zhang, male, professor, graduated from clinic department, Military Medical University in 1979. He worked for Chengdou Military Medical School in 1979 and Department of Anatomy, Chengdou Medical College 1989-1995. He received the master's degree from Department of Anatomy, Third Military Medical University in 1989 and the doctor's degree from Department of Anatomy, Second Military Medical University in 1998. Since 2001, he became the director of Department of Anatomy, Second Military Medical University. From 1998-present, he has been working in Second Military Medical University. Most awards to him was for the science and technology success. He was selected as a director of Chinese Society of Biofabrication Engineering in 2005. In recent year he focused on the cardiovascular tissue engineering and got some important success.

ZHANG Chuan-Sen

Institute of Biomedical Engineering, Navy Military Medical University, China

A tissue engineering cardiac pacemaker (TECP) or conduction tract (TECT) can be fabricated by seeding pacemaking cells or conduction cells into appropriate scaffolds in vitro. The transplanting of TECP into hearts can establish a new pacemaker which has the characteristic similar to original sinus node and TECT can improve atrioventricular block.

We previously reported that cardiac progenitor cells (CPCs) derived from embryonic heart tubes could differentiate into cardiac pacemaking cells after being treated with endothelin-1. Whether TECP could be fabricated by applying the CPCs-derived pacemaking cells remains to be determined. In present study, TECP were created using CPCs in vitro and transplanted into animal hearts in an attempt to detect whether it could act as biological pacemakers. The results showed that after the CPCs-derived pacemaking cells were being seeded into the scaffolds, the spontaneous beating tissues were obtained. The cell-gel complexities, i.e. TECP, exhibited the best pacemaker phenotype at day 15 after the incubation in vitro. TECP can survive and form gap junctions with allogeneic myocardium after they were transplanted into animal hearts. ECG and subsequent epicardial MEA measurements confirmed that the source of the new ventricular ectopic rhythm was the site of transplantation. It is suggested that TECP fabricated with the CPCs-derived pacemaking cells have potential substitution therapy.

In addition, TECT were implanted in rat hearts to create an alternative AV conduction pathway. TECT were created by seeding cardiac progenitor cells on gelatin foam. They exhibited sustained electrical coupling through persistent expression of gap junction proteins and pacemaker genes. Cardiac progenitor cells in the constructs were shown to survive in the hearts and the coupling of grafted cells with host cardiomyocytes was shown. Our experiments suggest the possibility that engineered tissue constructs can function as an electrical conduit and, ultimately, may offer a substitute treatment to conventional pacing therapy.

The incremental value of global longitudinal strain in assessing left anterior descending coronary stenosis

Biography

A biography, or simply bio, is a detailed description of a person's life. It involves more than just the basic facts like education, work, relationships, and death; it portrays a person's experience of these life events. Unlike a profile or curriculum vitae (résumé), a biography presents a subject's life story, highlighting various aspects of his or her life, including intimate details of experience, and may include an analysis of the subject's personality.

Biographical works are usually non-fiction, but fiction can also be used to portray a person's life. One in-depth form of biographical coverage is called legacy writing. Works in diverse media, from literature to film, form the genre known as biography.

An authorized biography is written with the permission, cooperation, and at times, participation of a subject or a subject's heirs. An autobiography is written by the person himself or herself, sometimes with the assistance of a collaborator or ghostwriter.

Huolan Zhu, Zuowei Pei, Chenguang Yang, Yirong Ren, Xuyang Meng, Yi Li and **Fang Wang**
Department of Cardiology, Beijing Hospital, National Center of Gerontology; Institute of Geriatric Medicine, Chinese Academy of Medical Sciences; Peking Union Medical College, Chinese Academy of Medical Science, China

Aim: Coronary heart disease is a global disease sweeping the world. Diagnosis early is crucial for the disease control. However, there is still lack of safe, effective, and simple examination for coronary heart disease and evaluating the severity of the disease. Speckle tracking echocardiography(STE) is a novel technique to evaluate myocardial ischemia by myocardial deformation. This study aimed to investigate the value of global longitudinal strain in patients with stenosis in left anterior descending coronary.

Method: In our study, we enrolled suspected patients with coronary heart disease from 2019.1-2019.11. Patients underwent STE before the coronary angiography. 50% of vessel diameter reduction by stenosis in at least one major coronary artery or its main branch, was considered CAD. 50% of vessel diameter reduction by stenosis in left anterior descending coronary(LAD), was considered LAD stenosis. Global longitudinal peak strain(GLPS) and peak strain deviation(PSD) were obtained by software ECHOPAC versoin.201. We compared the parameters in the Non-CAD patients and patients with LAD stenosis.

Results: Finally, 243 patients with LAD stenosis and 276 Non-CAD patients were enrolled. The absolute value of GLPS decreased in patients with LAD stenosis significantly than in non-CAD patients. Multi-factor regression analysis results showed that mellitus diabetes, male and global longitudinal peak strain were independent risk factors for LAD stenosis. Diabetes odds ratio: 2.311 (1.508 – 3.542; P=0.000) per 1% increase. GLPS odds ratio: 1.286 (1.025 – 1.515; P=0.005) per 1% increase.

Conclusion: GLPS was impaired in patients with LAD stenosis significantly than in non-CAD patients. It is independent risk factors for LAD stenosis.

						OR 95%	
	B	**S.E.**	**Wald**	**P**	**OR**	**Lower**	**Upper**
male	1.038	0.275	4.189	0.000	2.822	1.645	4.843
age	0.008	0.011	0.549	0.459	1.008	0.987	1.030
hypertension	-0.359	0.228	2.491	0.115	0.698	0.447	1.091
diabetes	0.838	0.218	4.792	0.000	2.311	1.508	3.542
hyperlipidemia	0.205	0.234	0.764	0.382	1.227	0.775	1.943
smoke	0.403	0.258	2.444	0.118	1.497	0.903	2.482
GLPS	0.083	0.029	7.872	0.005	1.286	1.025	1.551
PSD	-0.003	0.005	0.319	0.572	0.997	0.988	1.007

GLPS indicates global longitudinal peak strain; PSD indicates peak strain deviation.

The effect of an early cardiac rehabilitation programme in elderly patients with acute heart failure

Biography

A biography, or simply bio, is a detailed description of a person's life. It involves more than just the basic facts like education, work, relationships, and death; it portrays a person's experience of these life events. Unlike a profile or curriculum vitae (résumé), a biography presents a subject's life story, highlighting various aspects of his or her life, including intimate details of experience, and may include an analysis of the subject's personality.

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Zuowei Pei, Huolan Zhu, Chenguang Yang, Yirong Ren, Xuyang Meng,Yi Li and **Fang Wang**
Beijing Hospital, China

Acute heart failure leads to a high morbidity and mortality, resulting in the significant impairments in quality of life and high healthcare costs. Successful cardiac rehabilitation is generally assessed by objective improvements in peak volumes of inhaled oxygen as measured by cardiopulmonary exercise test. However, improvements for elderly patients with acute systolic heart failure are not clear.

Our study examined 157 elderly patients one week after treatment for acute heart failure was performed. Patients participated in a 3-month physical exercise intervention, comprising aerobic, strength, and stretching exercises (3 times per week for durations based on the peak VO2). At baseline, 1week, one month and three months, we tested the functional capacity and cardiac function (echocardiography).

Exercise capacity as measured by peak VO2 and metabolic equivalent significantly improved after one week of cardiopulmonary exercise; no differences were observed between one week and three months. Cardiac functions, such as left ventricular ejection fraction and E/A, did not significantly improve.

After acute heart failure, one week of cardiopulmonary exercise was associated with significant improvements in exercise capacity parameters, but not in diastolic or systolic functions.

	0 week	1 week later	1month later	3months later
VO2 peak, ml/min/kg	730.9±58.8	1129.8±69.5*	1111.6±39.6*	1084.1±39.2*
VO2 kg	10.5±0.9	15.6±1.6*	14.6±1.1	15.1±1.2
MET max	3.1±0.2	4.9±0.2*	4.7±0.3*	4.8±0.4*
Power max	38.1±5.3	53.2±6.6	55.6±6.4	51.3±5.8
Baseline heart rate, bpm	66.8±5.3	67.4±7.1	71.2±5.1	73.2±5.3
Peak heart rate, bpm	94.6±4.7	103.7±5.8	107.7±4.8	111.6±4.9
LVEF(%)	38.1±2.2	44.7±2.6	50.1±4.1	51.7±3.1
LVIDD(cm)	5.9±0.4	5.8±0.4	5.9±0.3	6 ± 0.4
LVIDS(cm)	4.5±0.5	4.3±0.5	4.5±0.6	4.6±0.6

Table: Cardiopulmonary exercise test parameters after cardiac rehabilitation

Data are means ± SEM, * P<0.05 VS 0 week.

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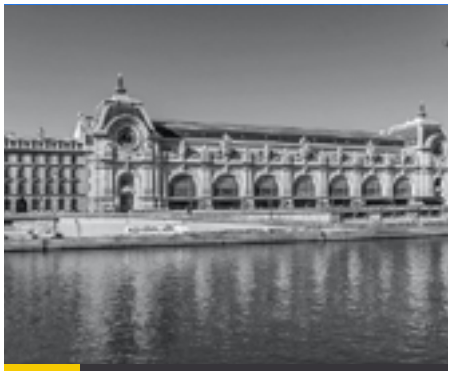

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