

6th International Conference on Cardiology

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Scientific Tracks & Abstracts



Sessions

Cardiovascular Disease | Echocardiography | Coronary Artery Disease

Session Chair: Angela Munoz Navarro

Bedford Medical Centre | Ireland

Session Introduction

Title: A paradigm shift in ECG interpretation method - Application of cardiac vector theory

T Rajini Samuel | Shri Sathya Sai Medical College and Research Institute | India

Title: ABO blood groups and its association with patients presenting with acute coronary syndrome, tertiary center experience.

Jassim Shah | Consultant Cardiologist and Heart failure | Qatar

Title: Resolution of obesity cardiomyopathy following treatment with weight reduction and medical management

Niladri Dutta | BM Birla Research Centre | India

Title: Electrocardiographic findings and cardiovascular risk profile in paralympic athletes

Javad Norouzi | National Olympic and Paralympic Committee | Iran

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A paradigm shift in ECG interpretation method - Application of cardiac vector theory

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COVID-19 can cause heart and vascular damage and affect overall cardiovascular health. Coronary heart disease likely to remain number one killer disease of the world indefinitely due to long-term COVID-19 impact. Electrocardiogram (ECG) is one of the oldest and most important diagnostic tool for diagnosis of coronary artery disease in medicine yet its interpretation remains an arduous task. A lot of advancements had come in the ECG machine, yet the basic physics principle of ECG is not clearly understood. The concept of Einthoven triangle and the cardiac vector describing the electrical activity of the heart was first described by Einthoven even before a century but he never published a complete detailed description of the same. After many decades, the complete Heart-Lead vector relationship and Einthoven's equilateral triangle hypotheses was published by the current author in previous research articles. Cardiac vector hypothesis states that voltage (scalar quantity measured in volt) recorded in a particular lead is the result of dot product between cardiac vector (electrical field vector of dimension volt/metre) and lead vector (measured in metre). The lead vector denotes the orientation of the electrode position. The magnitude and orientation of heart vector with lead vector will cause deflections in the ECG voltage in the vertical axis resulting in the formation of ECG waves. The velocity of Cardiac Vector is related with time in the horizontal axis of ECG.

In the hex-axial reference system of ECG, plot the net voltages of bipolar limb leads and connect them. Similarly, plot the net voltages of unipolar limb leads and connect them. Each forms equilateral triangles. The voltage recorded by the electrodes (Lead I, II, III, aVR, aVL and aVF denoting right arm, left arm and left leg) are the vertices of an electrical equilateral triangle. The equilateral triangle can be converted into a circle. Each circle has same origin, same orientation, but different radii because bipolar and unipolar limb leads have different resistance. Multiply each unipolar limb lead voltages by correction factor 1.154 and then plot. The two equilateral triangles are on the same circle. Thus heart is situated in the center of the electric field which it generates. The two upper limbs and the left lower limb are the extensions of its electrical field. Each cardiac wave (P, QRS, T) can be represented in the form of circles. All circles (see the diameter) should be formed in the left lower quadrant except QRS which can go up to -30 degree. When the angle between the 'QRS' and 'T' circles widens it usually denotes ischemia. Larger the size of a circle, higher will be the voltage. No circle should be formed during ST-segment since it is an iso-electric period. Formation of circle and its magnitude during the ST-segment indicate the amount of myocardial injury. Thus by observing the size and location of the circles in the hex-axial reference system, interpretation can be done easily. The present study summarizes the clinical applications of cardiac vector theory to be applied at the bed side for ECG interpretation. The better understanding of vector physics principle and its application in each ECG tracing helps to overcome the arduous task of pattern memorization method of ECG interpretation. The combination of the 12-lead ECG with this Novel Perspective ECG translation (resultant cardiac vector represented by circle in the hex-axial reference system) provides the optimum approach to ECG interpretation. The early diagnosis can reduce the morbidity and mortality so quicker and proper interpretation of ECG report will result in saving millions of cardiac patients.

Recent Publications:

1. Rajini Samuel T What to the world Einthoven talking about? Journal Of Pharmaceutical And Biomedical Sciences JPBMS, 2012, 23 (17)
2. Rajini Samuel Formulation And Clinical Application Of Cardiac Vector Hypotheses In ECG Interpretation Using Vector Physics Principle EJPMR, 2018,5(11),523-536

3. Rajini Samuel. Application of Cardiac Vector Theory In ECG Interpretation, PARIPEX - Indian Journal of Research. 2021;10(10): 1-3.
4. Rajini Samuel T, BalajiRajagopalan, Uma Maheshwari. A novel contemporary perspective teaching method for interpretation of various acid base disorders citing with examples. International Journal of Contemporary Medical Research 2019;6(3):C10-C14.
5. Rajini Samuel T "Revised Graphical Tool for ABG Interpretation using Modified Bicarbonate/Standard Bicarbonate Ratio". International Journal of Clinical Chemistry and Laboratory Medicine (IJCCLM), 2019 5(3) : 19-29

Biography

T Rajini Samuel is presently working as an Associate Professor of Biochemistry in Shri Sathya Sai Medical College and Research Institute, Chennai, India. His academic qualifications are MBBS (2004–2010) at Chengalpattu Government Medical College located at Chengalpattu, Tamil Nadu, India and M.D in Biochemistry (2012-2015) at Sree Balaji Medical College and Hospitals, Chennai. He had proposed Cardiac Vector Hypothesis and developed a Novel Perspective ECG Interpretation Method. He then focused his research on Arterial Blood Gas (ABG) analysis. He had developed a Novel ABG Interpretation method and constructed a Novel Four Quadrant Graphical Tool for ABG interpretation. He then focussed his research during COVID times on Ventilator Graphics Interpretation. He had derived Novel Equations of Motion for mechanical ventilation and published 3 research articles on Ventilator Graphics Interpretation in 2021. He had published 36 research articles, 3 books and one chapter. He received High Flyers 50 Global Achievers Awards 2022 for the Best Medical Science Researcher, Atmanirbhar Bharath Award 2022 and Indian Achievers Award 2021 for Excellence in Innovation awarded by the Indian Achievers Forum.

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ABO blood groups and its association with patients presenting with acute coronary syndrome, tertiary center experience

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Introduction: The ABO blood groups have a profound influence on hemostasis, and there is a close relationship between venous thromboembolism (VTE) and non-O blood type. There has been some conflicting evidence about the association between various blood grouping and coronary artery disease. Residents in Qatar presenting with significant coronary artery disease (atherosclerotic and thrombotic) at much younger age group than other parts of the world.

Objective:

1. To study the presence of coronary angiographic atherosclerosis vs thrombus in patients with various ABO blood groups and
2. To study the MACE (Major Adverse Cardiac Events) in various ABO blood groups, during the index admission and 30 days following for acute coronary syndrome (ACS).

Materials and Methods: This retrospective study was conducted at Heart Hospital, a tertiary Hospital from January 2013 to December 2018 in patients presenting with ACS. The information was collected from electronic record (CERNER) of Percutaneous Coronary Intervention (PCI) database. All consecutive patients of both genders with more than 18 years of age admitted with acute coronary syndrome were included in whom ABO blood groups were available. The data was analyzed with a statistical package for social sciences SPSS version 20 for windows.

Results: A total of 3738 patients underwent coronary angiogram and PCI procedure at Heart Hospital Cath lab during this period. 3040 patients were eligible for the study. The mean age of study population was 49.5±10.45 years. 2900(95.4%) were male. Diabetes mellitus was observed in 1184(38.9%) patients. 1072(35.3%) patients were hypertensive. Smoking was seen in 1485(48.8%) patients while 392(12.9%) patients were dyslipidemic. At the time of presentation 1584(52.1%) patients had anterior wall MI, 1350(44.4%) had inferior wall MI, 74(2.4%) lateral wall MI and 32(1.1%) had posterior wall MI. Among the study population blood group O was observed in maximum number of patients 1006(33.1%), {O positive 947(31.2%), O negative 59(1.9%)}, followed by blood group B, 952(31.3%), { B positive 907(29.8%), B negative 45(1.5%)}, then group A, 866(28.5%), { A positive 817(26.9%), A negative 19(1.6%)}, and lastly AB, 216(7.1%), {AB positive 200(6.6%) and AB negative 16(0.5%)}. On analysis of the type of occlusion, thrombotic coronary occlusion was observed in 1961(64.5%) and atherosclerotic was seen in 942(31%) patients. In order to study the association of ABO blood groups with thrombotic or atherosclerotic coronary occlusion Chi Square test was applied. Thrombotic occlusion was observed in 531(67.2%) A positive, 34(72.3%) A negative, 579(66.7%) B positive, 32(80%) B negative, 610(66.8%) O positive, 38(65.5%) O negative, 124(64.9%) AB positive and 13(81.3%) AB negative with a nonsignificant association, p value (p=0.584). Atherosclerotic occlusion was observed in 255(32.3%) A positive, 12(25.5%) A negative, 286(32.9%) B positive, 8(0%) B negative, 294(32.2%) O positive, 20(34.5%) O negative, 64(33.5%) AB positive and 3(18.8%) AB negative with a p value (p=0.597)

Conclusion: Majority of patients presenting with acute coronary syndrome have O blood group. There was a nonsignificant association among ABO blood groups and thrombotic or atherosclerotic coronary occlusion..

Biography

Jassim Shah is a consultant cardiologist and Heart failure, trained in Advanced heart failure, transplant and mechanical circulatory support, his main interest is improving care and quality of life of patients with heart failure.

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Resolution of obesity cardiomyopathy following treatment with weight reduction and medical management

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Obesity cardiomyopathy, a concerning cardiovascular condition associated with obesity, has become increasingly prevalent worldwide. We present an intriguing case of a 55-year-old non-diabetic patient with Class I Obesity who developed acute-on-chronic systolic heart failure. This case report highlights the remarkable resolution of obesity cardiomyopathy following a comprehensive treatment approach involving weight reduction, medical management, and lifestyle modifications. The patient underwent an eight-month regimen of exercise, diet control, and pharmacotherapy, resulting in a significant reduction in body weight (from 95 kg to 64 kg) and BMI (from 34.1 kg/m² to 22.9 kg/m²). Subsequent reassessment demonstrated normal left ventricular cavity size, improved left ventricular systolic function (ejection fraction increased from 25% to 62%), and notable reductions in mitral regurgitation and diastolic dysfunction. This case emphasizes the potential benefits of weight loss and lifestyle modifications in reversing obesity-related cardiac abnormalities, challenging the prevailing notion of an "obesity survival paradox" in heart failure management. Prospective studies are warranted to further explore the optimal management strategies for obese patients with concurrent heart failure, shedding light on this intriguing therapeutic approach.

Recent publications:

1. Misra, Anoop, and Usha Shrivastava. "Obesity and dyslipidemia in South Asians." *Nutrients* vol. 5,7 2708-33. 16 Jul. 2013, doi:10.3390/nu5072708
2. Guo, Fangjian et al. "The progression of cardiometabolic disease: validation of a new cardiometabolic disease staging system applicable to obesity." *Obesity (Silver Spring, Md.)* vol. 22,1 (2014): 110-8. doi:10.1002/oby.20585
3. Kenchaiah, Satish et al. "Obesity and the risk of heart failure." *The New England journal of medicine* vol. 347,5 (2002): 305-13. doi:10.1056/NEJMoa020245
4. Alpert MA, Fraley MA, Birchem JA, Senkottaiyan N. Management of obesity cardiomyopathy. *Expert Rev Cardiovasc Ther.* 2005 Mar;3(2):225-30. doi: 10.1586/14779072.3.2.225. PMID: 15853596.
5. Wong C, Marwick TH. Obesity cardiomyopathy: diagnosis and therapeutic implications. *Nat Clin Pract Cardiovasc Med.* 2007 Sep;4(9):480-90. doi: 10.1038/ncpcardio0964. PMID: 17712361.

Biography

Niladri Dutta is a dedicated healthcare professional with a strong passion for Cardiology. He successfully completed his MBBS degree from a renowned Medical University in India in 2021, and over the past two years, he has gained experience in diagnosing and treating cardiovascular conditions at a tertiary care hospital in India, collaborating with cardiologists to deliver comprehensive care. Currently, Dr. Dutta serves as a Trust doctor in Emergency Medicine at the National Health Service (NHS). This role has enhanced his clinical skills, allowing him to make critical decisions under pressure while ensuring patient safety. His ultimate goal is to contribute to advancements in patient care and research to improve outcomes and enhance quality of life. He has a strong commitment to excellence and a solid foundation in cardiology, and he is now working towards his goal of achieving a rewarding career in cardiology.

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Electrocardiographic findings and cardiovascular risk profile in paralympic athletes

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Paralympic athletes are a special group of elite athletes with unique cardiovascular issues. However, there are limited data regarding cardiovascular screening in Paralympic athletes. From April 2019 to July 2021, male Paralympic athletes, underwent cardiac screening including history, physical examination, 12-leads electrocardiogram (ECG), echocardiography and blood test. Athletes were classified according to the sports disciplines into three groups: 1) skill (archery, shooting, taekwondo, judo); 2) power (powerlifting, discus throwing, shot putting, javelin throwing) and 3) mixed (sitting volleyball, wheelchair basketball, rowing), as well as divided base on the type of disability into two groups: 1) athletes with spinal cord injury (SCI), and 2) athletes with non-spinal cord injuries (NSCI). Among 82 Paralympic athletes, there were 19 in skill, 25 in power, and 38 in mixed sports disciplines and 24 had SCI and 58 had NSCI. There were no abnormalities observed in echocardiography. Normal ECG findings were seen in 28 athletes (34.1%) with a higher prevalence in athletes with NSCI (41.3%) and participated in mixed (47.3%) sports ($p < 0.001$). Borderline ECG findings were detected in 6 (7.3%) with more frequent in athletes with SCI (12.5%) and participated in power (16%) sports ($p < 0.001$). The prevalence of abnormal ECG findings were 3.6%. Cardiac risk factors including hypertension was detected in 8 (9.7%); triglycerides > 200 mg/dl in 21 (25.6%), total cholesterol > 200 mg/dl in 15 (18.2%), 25-hydroxyvitamin D3 < 30 ng/ml in 35 (42.6%), low-density lipoprotein cholesterol > 130 mg/dl in 8 (9.7%), very low-density lipoprotein cholesterol ≥ 50 mg/dl in 15 (18.2%) and high-density lipoprotein cholesterol < 40 mg/dl in 7 (8.5%); that were significantly more frequent in athletes with SCI and athletes participated in power sports disciplines ($p < 0.001$). This study emphasizes that Paralympic athletes especially those with SCI and participating in power sports disciplines are not immune from cardiovascular risk factors and requires more medical care attention.

Recent Publications:

1. Norouzi J, Papadakis M, Akbarnejad A, Anvari M (2022) The role of pre-participation cardiac evaluation in the management of an athlete with premature ventricular contraction-induced cardiomyopathy: a case report. *European Heart Journal - Case Reports* 6:5.
2. Sabouri M, Norouzi J, Zarei Y, Hassani Sangani M, Hooshmand Moghadam B (2020) Comparing high-intensity interval training (hiit) and continuous training on apelin, APJ, NO, and cardiotrophin-1 in cardiac tissue of diabetic rats. *Journal of Diabetes Research* 2020
3. Eskandari M, Pournemati P, Hooshmand Moghadam B, Norouzi J (2019) The Interactive Effect of Aerobic Exercise and Supplementation of Blue-Algae (Spirulina) on Anthropometric Indexes and Cardiovascular Risk Factors in Diabetic Men. *Sadra Medical Journal* 8:1
4. Eskandari M, Norouzi J (2019) Evaluation of the Effect of short-term Barberry Juice Supplementation on humoral immune response in active girls following exhaustive exercise activity: A randomized double-blind clinical trial. *Razi Journal of Medical Sciences* 26:2.

Biography

Javad Norouzi is a cardiovascular exercise physiologist and member of sports cardiology department of the national Olympic committee of Iran with expertise in cardiac assessment of athletes. During obtaining his PhD degree at the University of Tehran/ Iran, he spent training course in sports cardiology at the institution of sports medicine and science of the national committee of Italy under direct supervision of Prof. Antonio Pelliccia. He is the director of Oxygen sports cardiology center. His research focused on the development of innovative strategies for preventing and predicting of cardiac disease in elite athletes and young people.

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Sessions

Clinical Cardiology | Surgical Techniques | General Medicine | Case Reports

Session Chair: Angela Munoz Navarro

Bedford Medical Centre | Ireland

Session Introduction

Title: Optimal duration of dual antiplatelet therapy after angioplasty and the DAPT score

Aparajita Kumar | Medanta Hospital Gurgaon | India

Title: Utilizing artificial intelligence to enhance the diagnosis and management of cardiovascular disease: A review of current and emerging techniques

N John Camm | Klinikum Nurenborg Hospital | Germany

Title: Sgarbossa criteria in left bundle branch block in a hypertensive emergency-A case report

Yasser Mohammed Hassanain Elsayed | Egyptian Ministry of Health | Egypt

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Optimal duration of dual antiplatelet therapy after angioplasty and the DAPT score

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Background: The benefits of dual antiplatelet therapy with aspirin and a P2Y₁₂ receptor antagonist (DAPT) in Acute coronary Syndrome and those undergoing percutaneous coronary interventions has been clearly established as a standard of care. However, the duration of use of dual antiplatelet therapy after Percutaneous coronary intervention is evidence based, and the optimal duration is often arbitrary and unclear. The ACC/AHA and the European Society of Cardiology guidelines published between 2011 and 2014 recommend a minimal 12 month of dual antiplatelet therapy in most patients with DES implantation. Prolongation of dual antiplatelet therapy beyond one year of Percutaneous Coronary Intervention may be beneficial by way of decreased incidence of atherothrombotic events including recurrent Myocardial infarction or stent thrombosis, but at the cost of increased risk of major or minor bleeding. The PEGASUS TIMI 54 trial showed that addition of the P2Y₁₂ antagonist ticagrelor to low dose aspirin in patients 1 to 3 years after a myocardial infarction significantly reduced rate of major adverse cardiovascular outcomes. Aspirin monotherapy alone has at best modest antiaggregatory activity on platelets, especially in the acute phase in high risk patients to prevent ischaemic events; since it only inhibits the cyclooxygenase pathway whilst having no effect on the adenosine diphosphate P2Y₁₂ receptor. Combination therapy results in more robust inhibition of platelet aggregation. This was established by the CHARISMA trial, which demonstrated significant benefit in reduction of myocardial infarction, stroke, repeat revascularisation, and death in patients at high risk of ischemic events / established vascular disease who received clopidogrel along with aspirin. Continual of dual antiplatelet therapy beyond one year after index PCI is common despite the dilemma of benefit/risk ratio to the patient. The PARIS registry showed that in a cohort of 5031 patients, 43% of patients with ACS and 57% of those undergoing elective PCI remained on DAPT at the end of 2 year followup. It has been proposed that DAPT score can aid in individualising antiplatelet therapy, and identify those who actually benefit from prolonged regimen of dual antiplatelets.

Objective: To evaluate the rationale for continual of Dual antiplatelet therapy beyond one year after index PCI, and to correlate it with the DAPT score.

Methods: 500 patients who underwent PCI at our centre with a final diagnosis of ST Elevation Myocardial Infarction, Non ST Elevation acute coronary syndrome, or stable ischemic heart disease, and were compliant with antiplatelets were evaluated and followed up for at least one year post PCI. The type of thienopyridines prescribed in addition to aspirin was noted for each patient; along with any concurrent oral Vitamin K antagonists/novel oral anticoagulants prescribed. Exclusion criteria remained those patients who were lost to followup, those who expired in hospital, and those who underwent only plain old balloon angioplasty and were not stented. The DAPT and HASBLED scores were used as risk stratification methods to assess ischaemic and bleeding risks. The indication for percutaneous intervention, size of stents used, and whether it was a drug eluting stent or bare metal stent was noted. History of restenosis or prior stenting or CABG was taken. Preexisting comorbidities such as diabetes, hypertension, hypercholesterolemia, prior myocardial infarction, prior cardiac surgery and previous cerebrovascular accident or transient ischaemic attack were taken into account. The primary endpoints were non fatal recurrent Myocardial infarction, stent thrombosis, non fatal ischemic CVA, repeat revascularisation or death. The primary safety endpoints included major and/or minor bleeding, and the need for blood transfusion.

Results: Of all the eligible patients receiving dual antiplatelets followed up, 292 (58.4%) were diabetic, 233 (46.6%) were hypertensive, 267 (53.4%) were dyslipidemic while 62 (12.4%) were smokers. 292 (58.4%) had presented as STEMI, 73 (14.6%) had NSTEMI, while 24 (4.8%) had restenosis, 1 patient had subacute stent thrombosis and remaining 47 (9.4%) had stable angina, 32 (6.4%) had Left Main Coronary Artery disease, 55 (11%) had bifurcation lesions, 16 (3.2%) underwent Saphenous Vein Graft stenting, 5 (1%) had chronic total occlusion; and 100 patients had stents longer than 28 mm. 103 (20.6%) had 2 or more stents. 41 (8.2%) were on aspirin monotherapy at the end of 1 year after PCI, 9 (1.8%) were on clopidogrel alone, 1 patient was on prasugrel monotherapy, while majority 212 (42.4%) were on a combination of aspirin and clopidogrel; 7 (1.4%) were on

aspirin and ticagrelor,14/2.8% were on aspirin plus prasugrel .Furthermore,3(0.6%) patients were on concurrent oral Vitamin K antagonists(warfarin/acenocoumarol) and 1 patient was on NOAC(dabigatran) for thromboprophylaxis of atrial fibrillation/ intracardiac thrombus/recurrent CVA/previous prosthetic valve.96(19.2%) had a HASBLED score of 3 or more,while 28/5.6% patients had HASBLED score higher than 4. 234/46.8% had a DAPT score greater than or equal to 2.35/7% had LV ejection fraction <45%,and 23/4.6% had prior history of CHF.60/12% had a prior myocardial infarction,10/2% had prior CVA,19/3.8% had recent MI. 12/2.4% had bleeding complications within one year.36(7.2%) had prior PTCA,15(3%) had undergone prior CABG. 96/ 19.2% had MACE, of which 46/9.6% underwent repeat PCI,27/5.4% had recurrent MI,7 patients (1.4%) had stent thrombosis,7/1.4% patients had ischemic CVA within one year of PCI,9/1.8% expired.6/1.2% had history of Subdural hematoma,8/1.6% patients had intracranial bleed,13/2.6% patients had GI bleeding;while 7/1.4% had non GI bleeding like epistaxis/hematuria.14/2.8% patients required blood transfusions .None of the patients had fatal bleed.23/4.6% had underwent emergency surgeries,and 24 patients underwent elective surgeries. Of the 41 patients on aspirin monotherapy,8(19.5%) had MACE,of which 26 underwent repeat PCI,and 3 expired,whilst 11/2.2% patients had bleeding;as opposed to 9 patients on clopidogrel alone,of which 2 had MACE(22.2%),including one death, and 5/7% patients had GI bleed.

Discussion: Dual antiplatelet therapy in patients treated with coronary stent implantation reduces the risk of ischemic events and stent thrombosis in atherosclerotic cardiovascular disease.The current recommended period of dual antiplatelets based on observational data after DES implantation is 12 months;whilst after BMS implantation is 1 month. The PCI CURE analysis showed that dual antiplatelet therapy upto 12 months in patients with NSTEMI treated with BMS reduced ischemic events compared to aspirin monotherapy.The Dual Antiplatelet Therapy trial also demonstrated that patients who underwent stenting with DES who were treated on extended dual antiplatelet regimen had 0.7% absolute reduction in late stent thrombosis ,2 % absolute risk reduction in MI and 1.6% risk reduction in MACE after index PCI , with a fundamental tradeoff of 1.2% increased risk of moderate/severe bleeding. Furthermore,post hoc analyses from other studies implicated greater benefit with prolonged intensive antiplatelet therapy.A weighted risk-benefit analysis by the ERC of prior studies of patients revascularised with DES showed 6 lesser myocardial infarctions and 3 fewer stent thromboses,but 5 additional major bleeding per 1000 patients on prolonged DAPT annually.Prolonged DAPT regimen was defined as 18 to 36 months after DES implantation.The results of our analysis shows almost comparable rates of Major Adverse Cardiovascular outcomes in both arms of single and dual antiplatelet therapy,with greater incidence of bleeding observed on dual antiplatelet regimen.Lifelong DAPT in patients undergoing DES revascularisation is unwarranted, as the risks of bleeding and cost of prolonged treatment outweighs potential reduction in stent thrombotic events.Nevertheless,12 months of DAPT is reasonable after DES implantation, although treatment should be individualised based on presence of ischemic risk factors,the anatomical complexity of lesion,and the type of stent implanted. Abbreviated thienopyridine therapy may be considered in the event of significant bleeding risks;including concurrent oral vitamin K antagonist usage,and anticipated surgery.

Recent Publications:

1. Hector Bueno, Stuart Pocock, Nicolas Danchin, Lieven Annemans, John Gregson, Jesús Medina,Frans Van de Werf: International patterns of dual antiplatelet therapy duration after acute coronary syndromes
2. David E Kandzari,Dominick J Angiolillo, Mathew J Price,Paul S Tierstein: Identifying the Optimal duration of dual antiplatelet therapy after Drug Eluting Revascularisation
3. Laura Mauri,Dean J. Kereiakes, Robert W. Yeh, Priscilla Driscoll-Shempp, Donald E. Cutlip,,P. Gabriel Steg, M.D., Sharon-Lise T. Normand, Eugene Braunwald et al: Twelve or 30 Months of Dual Antiplatelet Therapy after Drug-Eluting Stents.

Biography

Aparajita is an Associate Consultant, Clinical & Preventive Cardiology at Medanta Medicity, Gurugram. Her expertise lies in all aspects of clinical and preventive cardiology, echocardiography and has a keen interest in cardiac research. She has worked as Senior Research Fellow at AIIMS Delhi, and has also worked as Consultant Non Invasive Cardiology at Columbia Asia Hospital, MS Ramaiah Narayana Hrudalaya as well as Max Hospital, Dehradun in the past. She has been an International Speaker at various Cardiology conferences, and is an AHA certified ACLS & BLS Instructor. She has completed Research To Publication course by UCMS California, and is also an International Associate, American College of Cardiology.

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Utilizing artificial intelligence to enhance the diagnosis and management of cardiovascular disease: a review of current and emerging techniques

N John Camm, Adnan Raufi, Maciej Banach, Armando Oterino, Zainab Dakhil, Fabrizio Ricci, Nayef Al-Asiri, David Purtell, Sara Zand, Jegan Shivlingam, Ido Ukpeh, Nader Zakaria, Ahmed Awad, Harnish Singh Bhatia, Marcus Larrea, Ahmed Adel, Robert Herman, Nestor Flores Buonomo and Naif Saad
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Artificial intelligence (AI) has the potential to revolutionize the diagnosis and management of cardiovascular disease (CVD). By analyzing large amounts of data from various sources, AI algorithms can identify patterns and make predictions that may not be apparent to the human eye. In the realm of CVD diagnosis, AI has been applied to a variety of modalities, including medical imaging, electrocardiography, and genetic data analysis. For example, deep learning algorithms have been trained to analyze CT scans and identify plaque build-up in the arteries, while machine learning models have been developed to predict the risk of CVD based on data from electronic health records and wearable devices. In addition to aiding in diagnosis, AI can also be used to predict the likelihood of future cardiovascular events and guide treatment decisions. For example, machine learning models have been developed to predict the likelihood of a patient experiencing a heart attack or stroke based on data from wearable fitness trackers and smartwatches. Additionally, AI-powered virtual assistants have been developed to assist patients in managing their CVD risk factors, such as by providing personalized recommendations for maintaining heart health. Overall, the use of AI in CVD diagnosis and management has the potential to improve patient outcomes and reduce healthcare costs. This article is aimed to fully realize the potential of these technologies and address.

Biography

N John Camm completed MBBS and MD from India and MRCP (Member, Royal College of Physicians) from UK in 2001. He joined St. Georges Hospital, London, UK as an Interventional Cardiologist in 2002 and has received extensive training in Interventional Cardiology. He has been awarded membership of the British Heart Association. He was appointed Editor, Review Board, British Medical Journal. He completed fellowship from RFUMS, North Chicago, IL, USA in 2004, under Dr. Jeffrey B. Iakier in Complex Interventions and Harper Hospital, Michigan in Laser Coronary Interventions. He has also received training from Dr. Marie Claude Maurice on Bifurcation lesion. He came to India in January 2006 and set up Wockhardt Heart Centre, Hyderabad. He was appointed "review author" of the International Journal of Cardiology and has published several search papers in International Journals. He has performed more than 18,000 complex cardiovascular interventions including Left Major, TVDs, Branching, CTO and Primary Angioplasty using Laser Interventional Devices, IVL, Rotation, Orbital Ultrasound, Intravascular (IVUS), OCT and Remote Magnetic Navigation System (Robot Angioplasty). He has been associated with Klinikum Nurenbgr Hospital, Germany as Senior Interventional Cardiologist and Program Manager for the past 12 years.

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Sgarbossa criteria in left bundle branch block in a hypertensive emergency-A case report

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Rationale: Left bundle branch block and hypertensive emergency are very common conditions in clinical cardiovascular and emergency practice. Hypertensive emergency encompasses a spectrum of clinical presentations in which uncontrolled blood pressure leads to progressive end-organ dysfunction. Suspected acute myocardial infarction in the setting of a left bundle branch block presents a unique diagnostic and therapeutic challenge to the clinician. The diagnosis is especially difficult due to electrocardiographic changes caused by altered ventricular depolarization. However, reports on the use of Sgarbossa's criteria in the management of hypertensive emergencies are rare. Patient concerns: A middle-aged married heavy-smoker Egyptian male worker presented to the emergency department with a hypertensive emergency patient with acute chest pain and left bundle branch block. Sgarbossa's criteria were initially very weak and, over time, became highly suggestive of acute ST-segment elevation myocardial infarction. Interestingly, chest pain increased as Sgarbossa's diagnostic criteria were met. Thrombolytic therapy was strongly indicated because of a higher development of Sgarbossa criteria scoring. Intervention: Electrocardiography, oxygenation, streptokinase IVI, and echocardiography Diagnosis: Developing acute ST-segment elevation myocardial infarction in the presence of left bundle branch block post hypertensive emergency. Outcomes: The dramatic response to developing acute myocardial infarction in the left bundle branch block with hypertensive emergency to streptokinase. Lessons: The higher Sgarbossa criteria scoring in the case was the only indication for thrombolytic. Therefore, how did Sgarbossa's criteria develop during case management to indicate the need for thrombolytic therapy?

Recent publications:

1. Wavy Triple An Electrocardiographic Sign (Yasser Sign) in Hypocalcaemia-A Novel Diagnostic Sign; Retrospective Observational Study.
2. Graded Phenomenon (Yasser's Phenomenon); A Novel Electrocardiographic Phenomenon Change the Arrhythmia Directory; Retrospective-Observational Study.
3. Connected Aircraft Squadron Electrocardiographic Sign (Yasser sign); an Index for Tachypnea in Specific T-wave Abnormalities- A New Diagnostic, Therapeutic, and Prognostic Sign; Retrospective-Observational Study-Research article.
4. Electrocardiographic Passing Phenomenon (Flying Phenomenon or Yasser's Phenomenon) Conveys the Traditional Cardiovascular Management; Interpretations and Reassurance; Retrospective Observational Study.
5. Movable-weaning off an electrocardiographic phenomenon in hypocalcemia (changeable phenomenon or Yasser's phenomenon of hypocalcemia)-retrospective-observational study.

Biography

Yasser Mohammed Hassanain Elsayed is a scientist, critical care physician, cardiologist, and independent researcher (Egyptian Ministry of Health). He obtained MBBch (Al-Azher University) and a PGDip Cardiology (Middlesex University). The researcher has (122) articles and (4) medical books. He has (10) innovative issues; (3) innovative "Medical Signs", (4) "Phenomena", (1) "Modification", (1) "Maneuver", and "Method" (1). He has peer-reviewed (189). He was a Speaker at (19) International Conferences. COVID-19 publicized articles; (37). He is an instructor; (7) official lectures and (73) non-official one. He is an editorial member (187 medical journals). International Conferences OCM; (7). He was honored for research by several institutes. Prizes nomination; Breakthrough Prize and Einstein Prize. Excellence certificate (93). Research Interest: Critical Care, Emergency, Cardiology, Internal Medicine, Pharmacology, and Toxicology.

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