FACULTY AND ABSTRACTS OF SPEECHES

Dr. Sathyaki Nambala

Chief Cardiothoracic and Vascular Surgeon,

Apollo Hospital, Bengalaru, India

Dr. Sathyaki Nambala is a pioneer in minimally invasive cardiac surgery in India and has the unique distinction of performing the first totally endoscopic cardiac surgery in Asia. He completed his Masters in General Surgery from St. Johns Medical College Hospital in Bangalore and subsequently his Post Doctoral Training in Cardiovascular and Thoracic Surgery from Sri Chitra Tirunal Institute of Medical Sciences, Thiruvananthapuram, Kerala. He subsequently did a Clinical Fellowship at the Toronto General Hospital, Toronto, Canada followed by a Sr Clinical Fellowship with special interest in Minimally Invasive Surgery from the Brigham and Women's Hospital, Harvard Medical School, Boston, USA.

He conducts several training programs each year in minimally invasive surgery and robotic heart surgery. He has presented as well as published in several national and international forums. He has special interest in complex aortic valve and aneurysm surgery, minimally invasive valve and coronary surgery including robotic assisted surgery, heart failure surgery including VAD and transplant. Currently he is a Senior Consultant and Chief of Cardiovascular and Thoracic Surgery at the Apollo Hospital, Bangalore, India.

Dr. Keita Kikuchi

Coronary Program Director, Department of Cardiovascular Surgry,

Tokyo bay Urayasu Ichikawa Medical Centre

Dr. Keita Kikuchi is currently the Director of the Cardiovascular Center at the University of Tokyo Hospital and a Professor of Cardiovascular Surgery at the University of Tokyo School of Medicine. Dr. Kikuchi is a highly skilled and experienced surgeon who has performed over 10,000 cardiac surgeries, including complex procedures such as coronary artery bypass grafting, valve repair and replacement, and heart transplantation. He is also an active researcher and has published over 200 scientific papers in leading medical journals. Dr. Kikuchi is a respected figure in the medical community and has received numerous awards and honors for his work, including the Japanese Society of Thoracic and Cardiovascular Surgery Award and the American College of Cardiology International Scholar Award.

Dr. Rajitha Y de Silva

Consultant Cardiothoracic Surgeon,

Sri Jayawardenepura General Hospital, Sri Lanka

Dr. Rajitha Y de Silva graduated from the Faculty of Medicine, University of Ruhuna in 2001 and completed his local training in cardiothoracic surgery at the National Hospital of Sri Lanka. He got further training at the Essex Cardiothoracic Centre, UK, following which he got Board Certification in Cardiothoracic Surgery in 2012.

He has been a Consultant Cardiothoracic Surgeon at Sri Jayawardenepura General Hospital, Sri Lanka since 2013 to date. He has special interest in OPCAB, arterial revascularization, MICS coronary revascularization, mitral valve repairs. He is a member of ISMICS and has been a pioneer in minimally invasive cardiac surgery in Sri Lanka. He is a co founder of Heart-to-Heart Trust fund.

Dr. Moritz C. Wyler Von Ballmoos
Professor of Cardiovascular Surgery,
Texas Health Harris Methodist Hospital, USA

Dr. Wyler Von Ballmoos studied at the University of Bern, graduating with a medical doctorate and a PhD in cardiovascular physiology. He then completed a postdoctoral research fellowship at Harvard Medical School and Children's Hospital Boston. During his time in Boston, and obtained an MSc in Statistics and an MSc in Epidemiology from the Harvard School of Public Health. He completed his general surgery and cardiothoracic surgery training at the Medical College of Wisconsin and Duke University, including advanced fellowship training in minimally invasive cardiac surgery, robotic-assisted surgery, and transcatheter therapies for structural heart disease.

Dr. Wyler Von Ballmoos is an international contributor and thought leader in the management of valvular heart disease, mitral valve repair, atrial fibrillation, minimally invasive cardiac surgery, transcatheter therapies, and quality improvement. He has extensive experience with transcatheter technologies and has served as an institutional PI, investigator, and/or reference surgeon for more than 30 clinical trials in the structural heart disease space, including landmark trials for TAVR and TEER.

Dr. Wyler Von Ballmoos has published 8 book chapters and over 140 papers in the peer-reviewed literature, including articles in the NEJM, JAMA, Annals of Internal Medicine, Annals of Thoracic Surgery, and JTCVS. He is the recipient of multiple awards for his research and teaching efforts, a regularly invited faculty for national and international meetings such as STS, AATS, EACTS, ISMICS, CRT, TCT, and a Fellow of the American Heart Association and the American College of Cardiology.

ABSTRACT

Healthcare quality assurance in cardiac surgery

Healthcare quality assurance has become an indispensable part of medicine. Healthcare professionals, such as nurses and doctors, along with administrators, politicians, and healthcare corporations, share this responsibility to ensure patients receive care that meets a minimum safety and effectiveness standard at sustainable costs. The explosion of healthcare costs without significant improvements in quality or quantity of life in the USA particularly has fueled a conversation around healthcare value and, in that context, healthcare quality. High-risk, high-reliability disciplines of medicine, such as cardiac surgery, face a particular challenge with increasingly older and more complex patients needing care, cost savings pressures, and the expectation to improve outcomes continuously.

Cardiac surgery team members have a responsibility to actively engage in the discourse and decision-making surrounding quality assurance or else risk dictation by other entities that lack subject-matter expertise. Over the last 35 years, The Society of Thoracic Surgeons' National Databases and its quality efforts have become the gold standard of quality assurance for adult cardiac, thoracic, and congenital heart surgery and beyond. My talk will highlight several components, such as the development of a dedicated workforce of data managers, data audits, and utilization of the information to establish risk models and risk-adjusted performance metrics, that have been key to this success. I will also explore readiness for continued evolution, awareness and anticipation of healthcare trends, along with a relentless quest for excellence, as some of the attributes needed from individuals, teams, and institutions as a whole to ensure every patient receives the highest possible quality of care.

Prof. Teresa M. Kieser
Cardiothoracic and Vascular (CVT) Surgeon,
at the Libin Cardiovascular Institute,Canada

Teresa M. Kieser, MD, PhD is a Cardiothoracic and Vascular (CVT) Surgeon, at the Libin Cardiovascular Institute, and Professor Emerita, University of Calgary. She was board certified in General Surgery in Canada and USA in 1985 and in CVT Surgery in 1986. In 1988 she incepted the CVT Surgery Program at Foothills Medical Centre, University of Calgary.

Her areas of interest include total arterial bypass, (predominantly bilateral internal mammary arteries [BIMA]), skeletonization with harmonic technology, and intraoperative graft assessment with transit-time flow measurement (TTFM), epicardial ultrasound (ECUS) in She receives international invitations to speak internationally as well as to operate, teach, and demonstrate BIMA grafting techniques both on and off-pump surgery.

She defended her PhD thesis, 'Building a Better Bypass with Emphasis on BIMA Grafting', in Oct 2015. She teaches for the European Association of Cardio-Thoracic Surgery (EACTS) Academy Skills Program and is an instructor for visiting surgeons to Calgary to learn BIMA grafting techniques and IMA skeletonization with the harmonic scalpel. Since February 2020, Professor Kieser is awarded an Honorary Contract at Cardiac Surgery Departments of the Royal Brompton and Harefield National Health Service Foundation Trust, United Kingdom to operate and teach BIMA techniques.

ABSTRACT 1

Quality assurance for coronary surgery… intraoperative graft assessment with transit time flow measurement and epicardial ultrasound

Intraoperative graft assessment (IOGA) with transit time flow measurement (TTFM) and epicardial (high frequency) ultrasound (ECUS or HFUS) is one of the most important, if not the most important quality assurance methods for coronary surgery. TTFM gives a measure of function of a bypass graft and ECUS or HFUS portrays the anatomy of not only the anastomosis, but of conduits, native coronary arteries, and the ascending aorta. ECUS is akin to an intraoperative coronary angiogram but in colour. TTFM measures flow, resistance, and diastolic filling of a bypass graft. Most surgeons gravitate to the flow measurement as evidence of a good graft, but flow has many variables which can make it challenging to determine graft adequacy on the basis of flow alone. Flow can be dependent on size, length, quality of conduit and of the native coronary, run-off of the coronary bed, mean arterial pressure, heart rate, competitive flow, viscosity of the blood and finally the only aspect which surgeons can control – the quality of the proximal and distal anastomosis.

In 2014 Di Giammarco studied 333 coronary surgery patients using both TTFM and ECUS to define graft patency. Imperfect grafts with TTFM numbered 39 (5%) and ECUS confirmed 2 to be failed. Therefore, ECUS prevented 37⁄39 graft revisions. Only 5 / 717 (0.7%) grafts were revised: 3 with ECUS (TTFM was good) and 2 with poor TTFM confirmed with ECUS. ECUS has the final say; TTFM and ECUS go hand in hand.

ABSTRACT 2

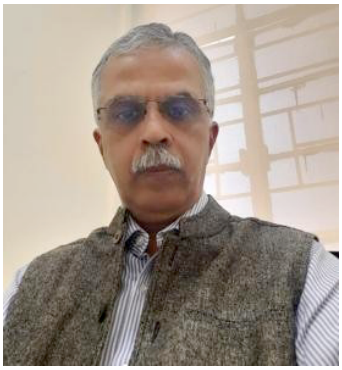
To BITA or not to BITA: This is the question'

Why are BIMA grafts so good? Because God made them that way and he is probably wondering why his humans goes to the farthest corner of the body (the ankle) when he put the two most perfect conduits right next to the heart. Why are vein grafts so bad? Because veins were never meant to be arteries.

Some last 30 years, but most don't. Common sense: the average blood pressure in the long saphenous vein is 58 mm Hg; the blood pressure in arteries is 120/80 mm Hg.

What deters surgeons from using more BIMA? BIMA takes longer, but we are no longer 'barber surgeons' and need to be 'so quick'. There is reluctance to believe in the superiority of BIMA over SIMA. Technical challenges are greater with two IMAs. Use of the RIMA is 2-5 times harder than use of the LIMA. There is perceived conduit-coronary flow mismatch; this rarely happens and most often is due to technical issues. And finally, there is the risk of serious sternal wound infection. This talk will explore;

'Building a better bypass with emphasis on bilateral mammary artery grafting': use of intraoperative graft assessment, ways to dramatically reduce deep sternal infection, safe and quickest way to harvest IMAs, and completeness of revascularisation – is this necessary with arterial grafting? Tips and tricks will include prevention of radial artery spasm, maximizing length of IMAs, dealing with calcified arteries, construction of complex sequential anastomoses and cases of creative arterial grafting.



Dr. Vinayak Shukla
Senior Consultant Cardiothoracic Surgeon,
Naruvi Hospital, Vellore, India

Dr. Vinayak Shukla started his career in Cardiothoracic surgery at Christian Medical College, Vellore, India in 1986. Completed training in 1990 and continued to work in CMC Vellore. He further gained experience at University Hospital of Wales, Cardiff UK and, then at The Hospital for Sick Kids, Toronto before coming back to Vellore in 1998.

He was the head of the Department of Cardiovascular surgery at CMC Vellore for more than 2 decades. He has a keen interest in teaching, has been a mentor to a large number of Cardiothoracic surgery trainees who now serve in India and across the Globe. He retired from CMC Vellore after an illustrious career spanning 37 years. He now works as a senior Consultant at Naruvi Hospital, Vellore.

ABSTRACT 1

Small coronary arteries – why and how to manage

In this part of the world, each one of us will have our share of small coronary arteries if we are doing this surgical procedure. To deal with them takes a lot of experience. One has to be very judicious in deciding whether to graft or not to graft. I will make you aware of a few salient features that one needs to keep in mind if you come across small vessels. Which I am sure one would!

ABSTRACT 2

Dealing with small aortic root

A surprise in the earlier part of my career would give us sleepless nights doing patients with aortic stenosis. But now with TEE and CT scans it has become a lot easier. When you are aware of this, then operating becomes a lot easier. Once prepared, half the battle is already won!

ABSTRACT 3

Difficulties in coming off pump after TOF repair: have a plan

Tetralogy of fallot: one of the few congenital defects being operated all over the world, can take a bad turn if one is stuck in coming off pump. Then it takes all your life time experience to manage this issue. A few points to keep in mind while doing this surgery.

Dr. Nalaka Dissanayake
Senior Consultant Cardiothoracic Surgeon,
National Hospital, Kandy, Sri Lanka

Dr. Dissanayake graduated from faculty of medicine, peradeniya in 2008 with second class honors with distinctions. He obtained his MD in 2015 and underwent post-MD training in adult cardiac surgery at NHSL, with training at LRH and Chest Hospital, Welisara. He obtained his overseas training in adult cardiac surgery at the Royal Brompton Hospital, London and transplant training at Queen Elizabeth Hospital, Birmingham. Upon board certification, he has worked in National Hospital, Kandy and Teaching Hospital, Jaffna. His special interests include OPCAB, total arterial revascularization, and aortic surgeries, medical education and research.

ABSTRACT

Choice of conduits in CABG

Coronary artery bypass surgery (CABG) utilizes various conduits such as internal thoracic artery, saphenous vein, radial artery, and right gastroeiploic artery, with factors like morphological features, disease segment involvement, and patient history influencing conduit selection. The saphenous vein is the most commonly used conduit due to its large diameter, easy harvesting, and long reach to any coronary artery, with the no-touch technique showing promise in maintaining graft patency. Bilateral internal thoracic artery grafting reduces mortality and complications, but increases the risk of sternal wound complications and mediastinitis, particularly in certain patient groups. The radial artery is considered a good graft due to its length, adaptability to high blood pressures, and good short, medium, and long-term patency, but it is more prone to spasm and has a higher prevalence of atherosclerosis and calcification compared to the internal thoracic artery. The right gastroepiploic artery is a versatile conduit with a low incidence of severe atherosclerosis and good flow capacity, but its small size makes it prone to vasospasm, and its biological and physiological profiles are not extensively studied.

Dr. Muditha Lansakara
Consultant Cardiothoracic Surgeon,
Teaching Hospital, Kandy, Sri Lanka

Dr. Muditha Lansakara completed his primary medical education at the Faculty of Medicine, University of Colombo, graduating with second class honours in 1998. He obtained the Master of Surgery (MS) in 2005 and became a Member of the Royal College of Surgeons, UK in 2007.

His training includes local cardiothoracic training at the Teaching Hospital, Karapitiya, Galle, and overseas training at the Regional Hospital in Wellington, New Zealand, as well as the Royal Wolverhampton Hospital in the United Kingdom. Dr. Lansakara's special interests lie in warfarin free valve surgery, particularly mitral valve repair and the Ozaki procedure, as well as off-pump coronary artery bypass surgery. He is involved in cardiothoracic postgraduate training and serves as a proctor in the Ozaki procedure.

Furthermore, Dr. Lansakara has a notable research and academic background, with numerous local and international publications, as well as delivering various orations and presentations which include delivering the 2023 Handy Memorial Oration at the Annual Academic Sessions of the College of Cardiology of Sri Lanka. He is the current president-elect of the ACTSSL (Association of Cardiothoracic Surgeons of Sri Lanka).

Dr. I. H. D. S. Pradeep Iddagoda
Consultant Thoracic Surgeon,
National Hospital for Respiratory Diseases, Welisara, Sri Lanka

Dr. Iddagoda graduated from University of Colombo, Faculty of Medicine in 2010 with second class honors and started Postgraduate training in Surgery from October 2013 and Completed MD surgery in April 2017 from Post Graduate Institute of Medicine, University of Colombo.

He completed his specialty training in Thoracic surgery at NHRD, Welisara, Southwest Cardiothoracic center; Plymouth; UK, Royal Papworth Hospital; Cambridge Biomedical Campus; UK and Guy's Hospital London; UK during the period of 2019 to 2021.

He specializes in minimally invasive thoracic surgery with special interest in Uniport VATS , Subxiphoid VATS and Trained in Robotic Thoracic surgery in 'Davinci xi' system.

He has done numerous local and international publications in Peer reviewed Journals and participated as a collaborator in international multicenter studies conducted by the National Institute of Health Research in the UK. He is currently working as a Consultant Thoracic surgeon in Sri Lanka attached to National Hospital for Respiratory Diseases, Welisara since October 2023.

ABSTRACT

Blunt thoracic trauma is one of the commonest chest trauma presentations in A and E units in Sri Lanka. Most of the patients managed by emergency physicians and general surgeons with good clinical outcomes in local setup. Patients who need specialised care are managed by thoracic surgeons and cardiac surgeons at specialised centres across the country. Motor vehicle collision is the most commonest cause for blunt thoracic injury in Sri Lanka. Direct injury to the chest and pressure changes within the cavity due to acceleration / deceleration forces are the main mechanisms of blunt thoracic injury.

Prompt treatment and specialised care will improve patient survival and reduced morbidity and mortality.

Mr. Aman Coonar
Consultant Thoracic Surgeon,
Royal Papworth Hospital, Cambridge, UK

Mr. Coonar, following his primary medical qualification in UK completed his general surgery and cardiothoracic surgery training at Guy's, St Thomas's, King's, Royal Brompton and the London Chest Hospitals. He worked at the Toronto General Hospital in Canada and took fellowships in general thoracic surgery and lung transplant surgery in 2005-2007.

Mr. Coonar has been a consultant at Royal Papworth Hospital since 2007 and his practice is in pure thoracic surgery. He works closely with a large team including other surgeons, specialist nurses, radiologists and physicians. He was appointed President of the Royal Society of Medicine Cardiothoracic Section in December 2013. He is the President Elect of Society of Cadiothoracic Surgery in Great Britain and Ireland. He handles benign diseases and cancer. His main clinical interests are: minimally invasive surgery (video-assisted, endoscopic and others), lung cancer surgery (including advanced cases and patients with poor lung function), mesothelioma surgery, chest wall surgery, airway surgery, lung volume reduction surgery.

Mr. Coonar has published several research papers and book chapters, some of which have received awards.

ABSTRACT 1

Lung sparing surgery: sleeve resections

Saving lung leads to a better prognosis. For lung cancer, sleeve resections should be done if oncological principles are maintained: disease clearance is essential.

As these are uncommon operations it is important to train so that the operations become familiar.

This talk covers the indications, surgical techniques and presents a simple training model.

The steps for bronchial sleeve, vascular sleeves and combined operations are presented.

Sleeve resections have been shown to be at least as oncologically effective as conventional lung resections when properly done.

ABSTRACT 2

Lung volume reduction for emphysema

Lung volume reduction surgery is a highly effective treatment for emphysema. It reduces hyperinflation and the associated work of breathing and improves ventilation/perfusion matching. It has been shown to reduce mortality in selected cases.

This presentation discusses the background and current practices. In Great Britain and Ireland there has been the national roll out of this treatment with a MDT approach. This is outlined.

The operative procedure is described with tips to improve outcomes, including the prevention and management of major air-leaks.

Dr. Dhammika Rasnayake
Consultant Thoracic Surgeon,
National Hospital for Respiratory Diseases, Welisara, Sri Lanka

Dr. Dhammika Rasnayake completed his local Training in thoracic surgery at National Hospital for Respiratory Diseases, Welisara, Sri Lanka.

His overseas training included a fellowship in Advanced Thoracoscopic surgeries in John Radcliffe Hospital, Oxford, UK and a fellowship in advanced Thoracoscopic and Airway surgeries in Liverpool Heart and Chest Hospital.

Has been a pioneer of VATS surgery in Sri Lanka performed many VATS first time surgeries in Sri Lanka.

Dr. Rasnayake's special interests include Advanced Video Assisted Thoracoscopic Surgeries, Endo-bronchial surgeries Video Assisted Mediastinoscopic Lymph Node Dissection Chest wall reconstruction for congenital chest wall deformities, Tracheo-bronchial resection and reconstructions, Chest wall trauma, rib fixation and chest wall reconstruction, Management of airway trauma, Oesophageal surgeries including total endoscopic oesophageal surgeries.

ABSTRACT

Management of tracheal stenosis

Tracheal stenosis is a complex and potentially life-threatening condition characterised by the narrowing of the trachea, posing significant challenges in both diagnosis and management. This presentation aims to provide a comprehensive overview of the incident, causes, and surgical methods involved in addressing tracheal stenosis.

The incidence of tracheal stenosis has been on the rise, with various etiological factors contributing to its development. Understanding the diverse range of causes, including traumatic injuries, prolonged intubation, inflammatory processes, malignancies and congenital anomalies, is crucial for accurate diagnosis and effective treatment planning.

Surgical intervention plays a pivotal role in managing tracheal stenosis, and several approaches exist to address the diverse anatomical and etiological aspects of the condition. This presentation will delve into the intricacies of surgical methods such as tracheal resection, reconstruction, and the use of grafts or stents. The advantages and limitations of each technique will be explored, emphasising the importance of personalised treatment strategies tailored to individual patient profiles.

While advancements in surgical techniques have significantly improved outcomes, the management of tracheal stenosis remains inherently challenging. Factors such as the location and extent of stenosis, patient comorbidities, and the potential for recurrence necessitate a multidisciplinary approach.

In conclusion, the surgical management of tracheal stenosis is a dynamic field that demands a nuanced understanding of its incident, causes, and diverse surgical methods. By addressing the challenges head-on and adopting a patient-entered approach, healthcare professionals can enhance the quality of care and improve outcomes for individuals grappling with this intricate condition.

Dr. Sujeewa Ilangamge
Consultant Thoracic Surgeon,
National Hospital for Respiratory Diseases, Welisara, Sri Lanka

Dr. Sujeewa Ilangamge graduated from Faculty of Medicine, University of Colombo and obtained MS (Surgery) – Postgraduate Institute of Medicine. University of Colombo. Following completion of his local training in thoracic surgery at National Hospital for Respiratory Diseases, Welisara, Sri Lanka, he had the overseas training in the Royal Brompton and Harefield NHS Trust, United Kingdom. Currently he is working as a Consultant Thoracic Surgeon at National Hospital for Respiratory Diseases, Welisara, Ragama.

ABSTRACT

Challenges in the management of mediastinal masses

Mediastinum is the median septum between 2 pleural cavities and margined by mediastinal pleurae on either side, sternum anteriorly, vertebral column posteriorly, root of the neck above and diaphragm below.

Mediastinum contains several tissues and organs and most of them are vital for survival. Eg: pericardium, heart and great vessels, trachea and main bronchi, oesophagus, thymus, lymph nodes etc.

It is divided into 3 compartments anterior, middle and posterior mediastinum. Mediastinal masses are categorized according to the compartment in which they arise, which has diagnostic and management implications.

Types of mediastinal masses include Solid masses, Cyst, cystic and solid, and Aneurysms.

Histopathology of mediastinal masses widely varies according to their tissue of origin. Ultimate management frequently depends on the histopathology of the tumour.

Management of mediastinal masses is a challenge due to various reasons. These include challenges in diagnosis and assessment; Mass effect of tumours such as Mediastinal Mass Syndrome due to compression of the Trachea and Bronchi and major vessels; Infiltration of surrounding structures SVC, Trachea, Lung, Pericardium and heart; Functional effects Due to the mediastinal masses such as Hormone secretion – pheochromocytoma, Myasthenia gravis in thymic tumours, Autoimmune diseases associated with thymic tumours.

Issues associated with anaesthesia, oncological management and surgical approach further complicate the scenario.

Dr. Sumana Handagala
Senior Consultant Thoracic Surgeon,
National Hospital for Respiratory Diseases, Welisara, Sri Lanka

Dr. Sumana Handagala graduated from the University of Colombo in 1996. In 2006, he completed his training in general surgery and then pursued specialized training in Thoracic surgery. He completed his foreign training in the United Kingdom at Leicester and Nottingham University Hospitals NHS Trust, and became board certified in 2009. Since 2011, he has been working as a consultant Thoracic surgeon at NHRD, Welisara. He is also a trainer in thoracic surgery for PGIM, University of Colombo, an examiner in the MD surgery examination, and a member of the specialty board in Cardiothoracic surgery at the same institute.

In addition, Dr. Handagala serves as the vice president of the Association of Cardiothoracic and Thoracic Surgeons of Sri Lanka, a council member of the College of Surgeons of Sri Lanka, and the Sri Lanka College of Pulmonologists. He is a member of the committee for the first revision of the Organ and Tissue Transplant Act of the Ministry of Health, representing CSSL in the National Programme for Tuberculosis Control and Chest Diseases in the Technical Support Group, as well as in the editorial committee for the revision of National Guidelines in Extra Pulmonary TB.

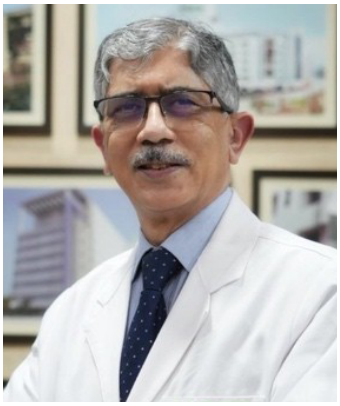
ABSTRACT

Tuberculosis – Thoracic surgical aspects

Tuberculosis, a global pandemic, affected over 10.5 million individuals in 2021, resulting in 1.6 million reported deaths. The disease is more complex in patients with HIV, non-communicable diseases, and in instances of drug resistance. While the mainstay of treatment is chemotherapy with antibiotic combinations, surgical procedures play a crucial role in aiding diagnosis and addressing complications of Pulmonary Tuberculosis (PTB). Surgical intervention for PTB is reserved for specific cases, considered when medical therapy alone is insufficient, based on the patient's overall health, disease extent, and treatment response. The management of PTB necessitates a comprehensive and multidisciplinary approach, requiring collaboration between microbiologists, respiratory physicians, radiologists, and thoracic surgeons to identify, treat, and provide ongoing care for patients who may benefit from surgery.

Current surgical indications in PTB encompass diagnostic procedures like bronchoscopy, lymph node biopsy, and Video-assisted Thoracoscopic Surgery (VATS). Surgery is also essential in treating TB complications, inappropriate healing responses to medication, and cases where sputum positivity persists after a 5-6 months treatment period with a localized radiological lesion or a destroyed lung in Multi Drug Resistant TB patients. Thoracic surgical procedures, ranging from biopsy to more extensive interventions, may be performed using conventional open techniques, VATS, or, in advanced centres, Robotic-assisted Thoracic Surgery (RATS).

The timing of surgery is critical, depending on the patient's response to medical therapy. Minimally invasive techniques, such as VATS, are increasingly utilized when feasible. Success relies on patient adherence to antibiotic therapy, underscoring the need for consistent compliance to prevent recurrence and complications.



Dr. Krishna S Iyer

Executive Director, Pediatric and Congenital Heart Surgery,

Fortis Escorts Heart Institute, New Delhi, India

Dr. Iyer is a highly experienced pediatric cardiac surgeon in India, known for his extensive involvement in cardiac care for children in India and other developing nations. Currently leading the Department of Pediatric and Congenital Heart Surgery at the Fortis Escorts Heart Institute in New Delhi, Dr. Iyer holds a strong academic background with M.B.B.S, M.S., and M.Ch. degrees from the All India Institute of Medical Sciences (AIIMS), New Delhi. He trained in pediatric and infant cardiac surgery under the guidance of the renowned pediatric cardiac surgeon, Dr. Roger Mee, as Senior Fellow at the Department of Pediatric Cardiac Surgery at Royal Children's Hospital, Melbourne in Australia. His career spans significant contributions, including establishing the first dedicated pediatric cardiac care program in North India at Escorts Heart Institute Research Centre in 1995.

With a focus on popularizing the specialty of pediatric and congenital heart surgery in India, Dr. Iyer has operated on over 15,000 babies, children, and adults with congenital heart diseases specializing in various procedures such as the arterial switch procedure, double switch operation, TAPVC repairs, Fontan procedure and its modifications, corrections for tetralogy of Fallot, DORV, Truncus, Senning operation, conduit repairs and wide range of one stage and multi-stage corrections for complex congenital heart diseases. He has performed original work on rapid two-stage arterial switch procedures and worked on the first successful rapid two stage arterial switch and double-switch operation in India. His expertise includes a wide range of procedures and original work on rapid two-stage arterial switch procedures. Dr. Iyer's current interests lie in setting benchmarks for outcomes in congenital heart disease, refining complex neonatal cardiac surgery, addressing late presentations of congenital heart disease, and developing cost-effective cardiac care for children in developing countries. A prolific lecturer and author, he has contributed over 150 journal articles and book chapters to the field.

Dr. Shahzad G. Raja
Consultant Cardiac Surgeon
Harefield Hospital, London, United Kingdom

Dr. Shahzad Raja, a consultant cardiac surgeon at Harefield Hospital, completed his specialized training in cardiothoracic surgery at Glasgow University Hospitals, Harefield Hospital, Alder Hey Hospital, and Great Ormond Street Hospital. His expertise encompasses a wide array of cardiovascular surgical procedures such as multiple and total arterial coronary bypass grafting, off-pump coronary artery bypass surgery, minimal access aortic valve replacement, and aortovascular surgery.

Dr. Raja is committed to advancing the field through his involvement in training, clinical research, and quality improvement. Notably, he serves as the quality assurance lead of the Surgical Advisory Committee in Cardiothoracic Surgery for the United Kingdom and Ireland. His extensive contributions to literature include 346 peer-reviewed publications with 14043 citations on ResearchGate, and an impressive h-index of 42 as reported by Google scholar in 2023.

With a particular focus on evaluating the impact of off-pump coronary artery bypass surgery and arterial grafting on patient outcomes, Dr. Raja has authored chapters in various cardiac surgery textbooks and publications tailored for both undergraduate and postgraduate surgery education. Additionally, he has authored essential resources for the FRCS Cardiothoracic Surgery examination, and is the editor of “Cardiac Surgery: A Complete Guide,” the premier textbook of Cardiac Surgery from the United Kingdom.

ABSTRACT

Off-pump coronary artery bypass grafting – outcomes, concerns, and controversies

Coronary artery bypass grafting (CABG) continues to be one of the most commonly performed cardiac surgical procedures globally. Conventional CABG performed on cardiopulmonary bypass termed on-pump CABG is regarded as the gold standard. However, on-pump CABG results in several physiologic, haematologic, immunologic, and inflammatory derangements resulting in organ dysfunction. Furthermore, embolization particularly secondary to manipulation of an atherosclerotic ascending aorta, during cannulation and cross-clamping, accentuates stroke risk. Recognition of these detrimental effects of on-pump CABG resulted in rejuvenation of interest in off-pump CABG over quarter of a century ago. Off-pump CABG since its renaissance has been a subject of intensive scrutiny and criticism. Despite large volume of good quality evidence validating the safety and efficacy of off-pump CABG, the technique continues to attract scepticism and remains a subject of several misconceptions and misperceptions. This lecture provides an overview of current best available evidence and addresses the concerns and controversies associated with off-pump CABG.

Dr. Chandima Amarasena
Consultant Cardiothoracic Surgeon,
Kotalawela Defence University, Sri Lanka

Dr. Chandima Amarasena was the senior most consultant cardiothoracic surgeon in the Ministry of Health. He is currently working at the UHKDU setting up a new cardiac surgical unit. He has over 32 years in the field of Cardiothoracic surgery, of which 28 years are as a consultant at the National Hospital of Sri Lanka.

With his 2 colleagues he set up the first coronary artery bypass (CABG) programme in the state sector. He was also instrumental in setting up the first thoracic aortic surgery programme in Sri Lanka for thoracic aortic aneurysms and aortic dissections. He performed the first series of successful mitral and tricuspid valve repair surgeries in Sri Lanka.

His special interests are valve repair surgery and aortic surgery. He has many publications in local and international journals delivered many invited lectures on cardiothoracic surgery. He delivered the 1st Ravi Pillai memorial oration in January 2023.

He has delivered 2 special lectures he gave on "Leonardo da Vinci" to the SLMA and "Mythology in Medicine" to the Ceylon College of Physicians. He contributed the chapter on "History of Cardiothoracic Surgery" in the recently published book "History of Surgery in Sri Lanka".

ABSTRACT

Myocardial revascularization – the guideline controversy

The debate on the best possible mode of revascularization for ischaemic heart disease is still mired in controversy. This is compounded by the recognition of the increased role of optimal medical therapy in chronic stable angina.

Different trials, meta analyses and registry data have provided conflicting data. This is further complicated by the different philosophies of interventional cardiologists and cardiac surgeons in the management of ischaemic heart disease.

The two major guidelines (European and the American) are a distillation of current available evidence, at the time of composing the guidelines. But certain controversies about some trials which were used to generate the guidelines, composition of the guideline committees and conflict of interest among some authors of trials and guidelines have resulted in controversies.

This has resulted in cardiothoracic surgical associations questioning some aspects of the myocardial revascularization guidelines. Two such examples are discussed. They are as follows. The left main revascularization guidelines in the "2018 ESC/EACTS Guidelines on Myocardial Revascularization". The downgrading of CABG for triple vessel disease and preserved LV function in stable angina from Class I to Class IIa in the "2021 ACC/ AHA/ AATS/ STS /SCAI Guideline for Coronary Artery Revascularization".

Mr. Richard Firmin
Consultant Cardiothoracic Surgeon
University Hospitals of Leicester NHS Trust

Mr. Richard Firmin is a renowned adult and paediatric cardiac surgeon who was based at Glenfield Hospital, Leicester, United Kingdom. He holds expertise in various aspects of cardiac surgery and was a pioneer in starting ECMO procedures in United Kingdom in 1989.

He has contributed to the development of the field with numerous research work with a number of publications in peer reviewed journals. He has trained a number of Cardiothoracic surgeons. He was bestowed with Life Time Acheivement Award and a Honorary Fellowship from the Extra Corporeal Life Support Organisation (ELSO) and a Lifetime acheivement Award from the Indian and Asian Extracorporeal Life Support Organisation. His generous support in the development of cardiothoracic services in Sri Lanka and India is highly commendable. Of special note, he was a pioneer in setting up an ECMO unit in Sri Lanka at Teaching Hospital, Karapitiya. Apart from his special interests in various aspects of cardiac surgery as paediatric cardiac surgery including ECMO he is an expert on jewellery.

Professor Timothy R Graham
Consultant Cardiothoracic Surgeon,
Queen Elizabeth Hospital, Birmingham, UK

Professor Graham is a Consultant Cardiothoracic Surgeon Queen Elizabeth Hospital Birmingham, since 1993 and was a Consultant Cardiothoracic Surgeon and Senior Lecturer Royal London Hospital and University of London 1992 to 1993. He is the Medical Director – Clinical Governance University Hospitals Birmingham Trust since 2016 and Professor Institute Cardiovascular Sciences University of Birmingham while being the Previous Chair of the UK National Training SAC in Cardiothoracic Surgery and Previous Chair JCIE UK and Ireland and Chair of European Board of Cardiothoracic Surgery (examinations) 2013-2019.

He is the past President of the Society for Cardiothoracic Surgery Great Britain and Ireland 2014-2016 and Head of the School of Surgery for the West Midlands Deanery/Health Education England 2017-2023.

While holding various top positions in the field of surgery he is the Vice President Royal College of Surgeons of Edinburgh 2022-2025.

ABSTRACT

Emerging technology – virtual surgical training

The delivery of surgical care is evolving, and training environments for surgeons are becoming increasingly demanding. In order to meet the challenges of the 21st century, surgical training programs must still focus on developing and delivering on Clinical knowledge and skills and this can be via e learning platforms.

For technical skills Surgeons must develop dexterity and precision to perform surgical procedures safely and effectively. They must be able to use a variety of surgical instruments and technologies. This will include the use of minimally invasive surgical techniques, such as laparoscopy and robotics and now to facilitate this – emerging technology in virtual surgical training.

The training of surgeons into the 21st century is a complex and challenging task. Learners should be integrated with new teaching techniques eg cognitive simulation and the use of virtual (IT) e learning platforms and Artificial Intelligence (AI) and social media channels appropriately. Simulation training provides practice of surgical procedures in a safe and controlled environment facilitating the development of technical skills.

Emerging technology is developing the capacity to provide simulated surgical training via virtual and augmented reality platforms. The e virtual learning environment is developing rapidly and provides the means by which knowledge and teaching can be developed and widely disseminated.

Virtual E learning and the use of simulation teaching is the inevitable direction of surgical training as we move into new ways of hybrid working teaching and learning in the post Covid pandemic era.

Dr. Gihan Piyasiri
Consultant Cardiothoracic Anaesthetist
Teaching Hospital, Karapitiya, Galle, Sri Lanka

Dr. Gihan Piyasiri is the Consultant Cardiothoracic Anaesthetist at Teaching Hospital Karapitiya, Galle, Sri Lanka. Prior to the current post, he has worked in DGH Hambantota, DGH NuwaraEliya and BH Balangoda as a Consultant in Anaesthetics and Critical Care.

His special interests include Cardio-Pulmonary Resuscitation (CPR), Extra Corporeal Membrane Oxygenation (ECMO) and Acute and Chronic Pain relief. Since 2019, he has taken active participation in management and training in ECMO. He is a member of the Galle Extra Corporeal Life Support Association (GELSA). In addition to Anaesthesia and Critical Care, he also carries an enthusiasm and interest in Palliative Care and hopes to contribute in establishing, developing and integrating palliative care into mainstream clinical practice in Sri Lanka.

ABSTRACT

Cardiac Arrest occurring in the post cardiac surgical patient is a surgical emergency and carries a reported incidence of 0.7-2.9%. The current survival rate are nearly 80% and contrasts considerably with the survival rates after traditional (all cause) in-hospital cardiac arrests (18% vs 79%). Clear statistics are not available for Sri Lanka and the observed success rates appear to be much lower than in the west. The management of post cardiac surgery cardiac arrest is different from conventional resuscitation and thus the Cardiac Advanced Life Support(CALS) algorithm differs from the current Advanced Life Support (ALS)

algorithm. The key differences from the conventional Advanced Life Support(ALS) algorithm include avoidance of External Cardiac Compressions (ECC), Avoidance of full-dose Adrenaline in favour of three(3) stacked shocks and immediate Re-sternotomy within 5minutes. The knowledge, awareness and the integration of practice of the Cardiac Advanced Life Support (CALS)algorithm among health professionals appears to be low globally and it is especially so in a Sri Lankan context. The CALS protocol and the algorithm has been designed for use in all Cardiac Intensive Care Units(CICUs) for any cardiac surgical patient. It is high time that integration of CALS protocol, CALS algorithm and training in CALS is initiated in Sri Lanka.

Dr. Asanka Hemachandra
Consultant Anaesthetist,
Paediatric Cardiothoracic Unit, Lady Ridgeway Hospital for Children, Colombo, Sri Lanka

Dr. Asanka Hemachandra graduated from the Faculty of medicine Colombo in 2005. After the completion of her local training and further training at Newcastle upon Tyne Hospitals NHS trust UK obtained her MD in anaesthesia with special interest in intensive care in 2012. She was board certified in 2014.

Her Special Interests are Paediatric Cardiothoracic Anaesthesia, Trans Esophageal Echocardiography.

ABSTRACT

Challenging separation from cardiopulmonary bypass

This delves into the intricate challenges associated with the separation from cardiopulmonary bypass (CPB) in cardiac surgery. The separation phase, a pivotal moment in cardiac procedures, poses unique difficulties that demand careful consideration and strategic management.

Key issues include right or left ventricular dysfunction, vasoplegia, pulmonary hypertension, arrhythmias, or owing to technical complications of the surgery, all of which significantly impact patient outcomes. In fact, a complex separation from CPB if not treated promptly leads to a poor outcome in the vast majority of cases. Unfortunately, no specific criteria defining complex separation from CPB and no currently existing guidelines for these patients.

Taking into account the above considerations, the aim of the talk is to describe the most common scenarios associated with a complex CPB separation and to suggest strategies, pharmacologic agents, and para-corporeal mechanical devices that can be adopted to manage patients with complex separation from CPB.

Dr. K. A. Prasantha Dhammika
Consultant Thoracic Anaesthetist,
National Hospital for Respiratory Diseases, Welisara, Sri Lanka

Dr. Dhammika graduated from Faculty of medicine, University of Colombo and obtained MD anaesthesiology from the PGIM University of Colombo. After receiving training in anaesthesiology in Sri Lanka he further gained training at Royal Perth Hospital, Western Australia. He is currently working as the consultant thoracic anaesthetist at the National Hospital for Respiratory diseases Welisara.

He is anExaminer in MD Anaesthesiology, Part 1 and Final MD PGIM Colombo.

He previously held posts of Acting consultant in Paediatric cardiothoracic anaesthesia LRH, Consultant in transplant anaesthesia, National Institute for Nephrology Dialysis and Transplant, Acting Consultant in Neuro Anaesthesia, Teaching Hospital Kandy, Consultant anaesthetist in many other hospitals including the military hospital.

He is an keen innovator and among other things he invented and patented the oxygen delivery system Low flow Fixed performance Oxygen Delivery System (L-FODS), that can bring down the oxygen consumption of venturi devices down to one third of the current requirement.

ABSTRACT

Challenges in thoracic anaesthesia

Thoracic surgery is a rapidly evolving surgical field and also extremely challenging as well. Thoracic anaesthesia has many challenges. One is to provide safe anaesthesia for an extremely high-risk patient category, and the other is to keep up with the rapidly evolving surgical techniques and many more.

Hypoxia due to shunting of blood in one lung anaesthesia being the generic challenge, there are many more critical issues that the thoracic anaesthetist has to address including maintaining oxygenation with pathologically destructed lungs, airway narrowing by tumors within, and compression due to external tumors.

Patients presenting with large mediastinal tumors with critical airway obstruction for biopsies give a bigger challenge than resection of the same tumor and need additional methods to maintain oxygenation.

Severely hypoxic patients with extreme medical conditions like severe interstitial lung diseases for diagnostic procedures and patients with alveolar proteinosis presenting for therapeutic bronco alveolar lavage is another challenging category. The thoracic anaesthetist should be ready to face the above and many more predictable and also unpredictable and unexpected challenges using conventional and nonconventional techniques.

Dr. Kanchana Singappuli
Consultant Cardiothoracic Surgeon,
Lady Ridgeway Hospital for Children, Colombo, Sri Lanka

Dr. Kanchana Singappuli is a Consultant Cardiothoracic Surgeon at Lady Ridgeway Hospital for Children, Colombo, Sri Lanka from December 2009 to date. He previously held posts of Consultant Cardiothoracic Surgeon Teaching Hospital, Kandy.

After completion of his primary medical education from the Faculty of Medicine, University of Colombo, he trained in Cardiothoraicic surgery at Sri Jayawardenepura General Hospital, he then proceeded to his overseas training at Westmead Hospital, Sydney, Australia and, Royal Alexandra Hospital for Children at Westmead, Sydney, Australia. He was a senior fellow in Paediatric Cardiac Surgery at Mater Children's Hospital, Brisbane, Australia.

Dr. Singappuli is a post graduate trainer in Paediatric Cardiothoracic Surgery. He has many publications in peer reviewed journals and has scientific presentations in many local and international conferences. Notably he delivered Dr. G. R. Handy memorial lecture at the Sri Lanka Heart Association in 2011 on "Neonatal Arterial Switch Operation in Sri Lanka."

He is a co author in Chapter on Common Atrioventricular Septal Defect in Cardiac Surgery: A Complete Guide: Springer 2020.

ABSTRACT

An overview of univentricular pathway in congenital heart surgery

Congenitally malformed hearts consisting of either a single common ventricle or unbalanced two ventricles cannot provide a biventricular support for the blood circulation. A significant proportion of congenital heart disease defects consist of single ventricular anatomy and or physiology and they contribute to a parallel blood circulation system in the body instead of the normal two chambered series circulation. A third category of defects that fall into univentricular pathway are those that have two good sized ventricles but consist of other cardiac anomalies that cannot be repaired to support a biventricular circulation. The anatomical defects can be further categorized into those having systemic or pulmonary outflow obstructions or to those having no outflow obstruction and causing high pulmonary blood flow from infancy.

Surgical treatment for those born with single ventricular type anatomy has been the focus of cardiac surgeons since the mid 1900s. With continuous research and improvement of techniques, surgical treatment for univentricular pathway has presently developed into a state where almost all patients born with univentricular anatomy can be offered some form of surgical palliation. These children can be made to lead good quality lives by careful management through infancy to optimize the anatomy and physiology culminating in total cavo-pulmonary anastomoses as staged procedures establishing right heart bypass or Fontan circulation.

With carefully monitored staged approach, the parallel circulations can be made to be in series with a non pulsatile pulmonary circulation. Definitive criteria must be met for successful establishment of a series circulation and maintenance in these patients. Management strategies need to be tailored

according to each condition and careful patient selection and preparation is mandatory for a successful univentricular palliation pathway.

The probability of long-term complications is inherent to the univentricular pathway and there are many preventive measures that can be taken to minimize the occurrence of Fontan circuit failure based on study of long-term data. Ancillary surgical procedures have been developed to overcome post Fontan complications and long-term adverse outcomes and they include cardiac transplant as a final option for those who are eligible.

Univentricular palliation has been a part of the surgical workload since paediatric cardiac services commenced in Sri Lanka in the mid 1990s. A formal program for completing the univentricular pathway was established only in 2011 after the commencement of the paediatric cardiothoracic surgical services at the Lady Ridgeway Hospital for Children in 2007. While the number of patients embarked on the staged univentricular pathway is increasing the number progressing to the completion of the pathway is still low. In addition to making the progression to the third stage more feasible, a great amount of work needs to be done to improve the after-care services and surveillance for post Fontan patients in the country.

Dr. Christopher Baird
Associate Professor of Surgery,
Harvard Medical School, USA

Dr. Christopher Baird is a renowned cardiacsurgeonwho holds the prestigious position of Benderson Family Chair at the Congenital Heart Valve Center. He is also an Associate at the same institution. Dr. Baird is highly respected in the field of congenital heart valve disorders and has made significant contributions to the diagnosis and treatment of these conditions. Dr. Baird is a distinguished graduate of the University of North Carolina at Chapel Hill School of Medicine. With an impressive background in Congenital Cardiothoracic Surgery, he completed his fellowship at the Hospitals of the University Health Center of Pittsburgh and Boston Children's Hospital.

His expertise encompasses a wide array of specialized areas including Pulmonary Atresia/MAPCAs, Interrupted Arch, transposition of the Great Arteries, Adult Congenital Heart Surgery, Minimally Invasive Pediatric Cardiac Surgery, Pediatric Mechanical Support, Mitral valve repair and reconstruction, Aortic valve repair and reconstruction, and Complex Neonatal and Infant Heart Surgery.

He has contributed to the academic community with over 150 publications in peer-reviewed journals and conducted workshops and performed complex congenital cardiac surgeries in various countries, including Sri Lanka and India.

Dr. Sithamparanathan Mugunthan
Consultant Cardiothoracic Surgeon,
Lady Ridgeway Hospital for Children, Colombo, Sri Lanka

Dr. Mugunthan graduated from University of Jaffna in 1998 and obtained his MD surgery in 2009. He underwent his Cardiothoracic surgery training at National Hospital of Sri Lanka and overseas training in Waikato Hospital, Hamilton, New Zealand and Starship children's hospital of New Zealand. After his board certification he has served as the pioneer Consultant Cardiothoracic Surgeon at TH Jaffna and joined Lady Ridgeway Hospital for Children in 2020.

He has been a keen teacher and involved in undergraduate teaching at Faculty of Medicine University of Jaffna from 1999 to 2005 and currently involved in post graduate training in surgery.

ABSTRACT

Pulmonary vein stenosis – a challenging problem in clinical practice

In clinical practice, Pulmonary vein stenosis (PVS), even though rare, remains one of the most challenging problems in diagnosis and management with an unpromising prognosis at advanced stages. It is either primary (congenital) or secondary in aetiology. In children, it can occur as an isolated congenital lesion or in association with other unrelated cardiac problems or following surgery involving pulmonary veins. In adults, PVS seems to be exceedingly rare before the extensive usage of radiofrequency ablation for the treatment of atrial fibrillation, known as pulmonary vein isolation. Other aetiologies of PVS include fibrosing mediastinitis, mediastinal neoplasms and other rare infiltrative processes. PVS is characterized by neointimal hyperplasia and Fibromyxoid proliferation causing lumen narrowing, typically originating at the veno-atrial junction or at the site of vein distortion by external anatomy and may extend upstream into the intrapulmonary veins. When lumen narrowing is hemodynamically significant to raise the lobar capillary pressure, it leads to respiratory symptoms and failure to thrive. The progression of disease can be rapid, giving rise to pulmonary hypertension and right ventricular failure leading to significant morbidity or mortality. Involvement of more pulmonary veins and extensive lesion imply unfavorable prognosis. Imaging techniques are needed to confirm the diagnosis, to delineate the anatomy and to decide the correct intervention. Multimodal surgical, transcatheter, medical or in combination interventions have been used in the management with varying incidences of restenosis, but sutureless technique gives a relatively promising long-term outcome.

Assoc Prof Prem Venugopal
Director of Paediatric Cardiac Surgery,
Queensland Children's Hospital at Brisbane, Australia

Assoc Prof Prem Venugopal is the Director of Paediatric Cardiac Surgery at the Queensland Children's Hospital at Brisbane, Australia. He heads the heart valve bank at the Queensland tissue bank. His areas of interests include neonatal cardiac surgery, minimally invasive cardiac surgery, "fast Track" in paediatric cardiac surgery and ECMO. He is passionate about levelling of inequity in provision of care in paediatric cardiac surgery across the globe. After his training in Cardiac Surgery in India, he moved to UK for advanced fellowship in congenital cardiac surgery following which he took up the position of consultant congenital cardiac surgeon at the Alderhey Children's Hospital, Liverpool. He moved to Australia in 2015 to take up his current position.

ABSTRACT

Minimally invasive paediatric cardiac surgery with special focus on upper partial sternal split

With the mortality of congenital cardiac surgery coming down, the focus has shifted to improving the quality of post operative recovery and cosmesis flowing paediatric cardiac surgery. Minimally invasive paediatric cardiac surgery is the next natural step in transition to achieve this.

Lower partial sternal split has been widely utilised to perform some of the congenital cardiac surgical procedures. I will be presenting our experience with the utilisation of upper partial sternal split approach in performing selected congenital cardiac procedures. The spectrum of conditions suitable for upper partial split approach, preparation for the procedure, operative steps, post op management and challenges associated with the procedure will be presented.

Dr. Ruvan Ekanayake
Senior Consultant Cardiologist,
Norris Clinic and Nawaloka Hospital, Colombo, Sri Lanka
Former Consultant Cardiologist, NHSL, Colombo, Sri Lanka

Dr. Ruvan Ekanayake qualified MBBS honors being first in the merit list winning six medals and prizes. Completing his local training in NHSL, Colombo he further trained at Guy's Hospital, London and obtained MD (SL) and MRCP (UK). He was board-certified as a Cardiologist in 1986. He was the founder Cardiologist of the Cardiac Center of the Teaching Hospital, Karapitiya. He is a Fellow of Royal College of Physicians, London, Edinburgh, Glasgow and a Fellow of the American College of Cardiology, Ceylon College of Physicians and European Society of Cardiology.

Dr. Ekanayake was the principal investigator for Sri Lanka in the Odyssey trial and has over 80 research publications. He is the Editor of the Journal of Universa Medicina and founder Editor of the Galle Medical Journal and Editor in Chief of the Sri Lanka Journal of Cardiology.

He has authored a number of books on Cardiology for layman and internists. Dr. R Ekanayake was the President of Sri Lanka Heart Association in 2015.

Vidya Jothi Professor Prasad Katulanda
Professor in Medicine and the Head of the Department of Clinical Medicine,
University of Colombo, Sri Lanka

Professor Prasad Katulanda is a professor in medicine and the Head of the Department of Clinical Medicine, Faculty of Medicine, University of Colombo. He is also a consultant endocrinologist and diabetologist at the University Medical Unit at the National Hospital of Srilanka. He is in charge of the Diabetes Research Unit, University of Colombo which he was instrumental in establishing in 2005.

He had his clinical training at the Colombo South Teaching Hospital, General Medicine at the University Medical Unit of the National Hospital of Sri Lanka. Then he pursued overseas clinical training at the Oxford Centre for Diabetes Endocrinology and Metabolism (OCDEM) in the United Kingdom from 2004 to 2008.

He has more than 150 publications in peer reviewed journals and has many scientific presentations in local and international conferences. He has been honored with prestigious awards, including the Vidya Jyothi national distinction for outstanding research. He is a Research Fellow at the Harris Manchester College Oxford and has been appointed as a Visiting Professor at the Michigan University.

Dr. Jayani Radika Tennakoon Jayaweera
Consultant Nutrition Physician,
Colombo South Teaching Hospital, Sri Lanka

Dr. Jayani Tennakoon Jayaweera is currently the Consultant Nutrition Physician at Colombo South Teaching Hospital, Kalubowila.

She obtained her MBBS degree in year 2006 from Faculty of Medical Sciences, University of Sri Jayewardenepura. She completed Msc (Human Nutrition) in year 2013 and MD (Clinical Nutrition) in 2019 at Post Graduate Institute of Medicine, University of Colombo. She obtained the foreign training St. Mark's Hospital, London.

Dr. Tennakoon Jayaweera has involved in nutrition related audits, research and given her technical contribution for developing nutrition related national guidelines by the Ministry of Health, Sri Lanka. She is the founder co-secretary of Sri Lanka College of Nutrition Physicians.

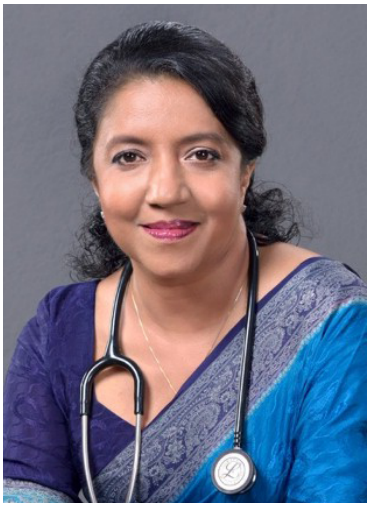
ABSTRACT

Nutrition the double edged sword

Cardiovascular diseases (CVDs) are the leading cause of death globally. The most important behavioural risk factors of heart disease and stroke are unhealthy diet, physical inactivity, tobacco use and harmful use of alcohol. When considering prevention measures, it is estimated the adoption of healthy lifestyle choices reduces the risk of myocardial infarction (MI) by 81-94%. Nutrition tips in primary prevention of CVDs will be highlighted in the lecture to enlighten the audience.

The nutritional status and adequate nutrition therapy are crucial factors contributing to the outcome of patients undergoing cardiac surgery. Nutrition management strategies targeting systemic inflammatory response occurring in this cohort of patients is another main area of discussion.

Nutrition management plays a key role in secondary prevention of CVD. This aspect will be touched upon while highlighting certain food taboos and myths in relation to dietary options.



Dr. (Mrs) Tolusha Harischandra
Consultant Cardiothoracic Surgeon
Teaching Hospital, Karapitiya, Galle, Sri Lanka

Dr. (Mrs) Tolusha Harischandra graduated from Faculty of Medicine, University of Colombo in 1996. She obtained the MS (Master of Surgery) degree in 2003 and was awarded the Dr Milroy Paul Gold Medal for Clinical Surgery by the PGIM that year. She was Board certified in 2008, becoming the first woman Cardiothoracic Surgeon in Sri Lanka.

She Introduced ECMO (Extracorporeal membrane oxygenation), a form of mechanical heart and lung support, to Sri Lanka and was the Founder President of GELSA (Galle Extracorporeal Life Support Association).

Dr. Harischandra obtained MPhil in 2011 for the thesis on coagulation changes during hypothermia in neonatal ECMO. She has 23 publications and presentations on ECMO and one SLMA oration on ECMO. She is the editor-in-Chief of the Ceylon Journal of ECMO, Cardiothoracic Surgery and Critical Care. Authored many books fiction and non fiction. Presently she is the Consultant Cardiothoracic Surgeon at Teaching Hospital, Karapitiya, Galle.

ABSTRACT

Extracorporeal membrane oxygenation (ECMO) for accidents and injuries

Accidents and injuries that result in severe but reversible compromise of the lungs and /or heart that cannot be manged by conventional methods are potential candidates for extracorporeal membrane oxygenation (ECMO), a temporary form of mechanical cardio-pulmonary support.

Our own experience of 200 patients referred to the National ECMO Centre (NEC) of Sri Lanka in Galle over nine years is that 9% were for accidents/ injuries. Twelve (66.7%) could not undergo ECMO as they were either not within the eligibility criteria (9/18; 50%) or were not stable enough to be transferred conventionally (3/18; 16.7%). Only 6/18 (33.3%) underwent ECMO. Their mean age was 20 (11-30) years. There were four males and two females. The indications were: chemical pneumonitis(2), near drowning (2) and road traffic accident (RTA) (1) and foreign body inhalation(1). They underwent 506 cumulative ECMO hours (mean 84 hours) on either veno-venous (5) or veno-arterial (1) ECMO. There were two mortalities: the RTA who succumbed to concomitant cerebral/ brainstem injury and the chemical pneumonitis from petrol inhalation who succumbed to sepsis. Four recovered completely (66.6%) and all remain well to date. Their survival (66.7%) is highly favorable as compared with overall international ECMO survival (54%) for all causes.

Two thirds of patients were eligible but could not undergo ECMO due the risks of conventional transfer. This problem could be mitigated with the development mobile ECMO in Sri Lanka in the future.

Dr. Renuke Manoj Kannangara
Consultant Cardiothoracic Surgeon
Teaching Hospital Kandy, Sri Lanka

Dr. Renuke Manoj Kannangara completed his undergraduate studies at the Faculty of Medicine, University of Colombo. He pursued postgraduate studies, earning an MD in Surgery in 2013 from the Post Graduate Institute of Medicine at the University of Colombo and obtaining MRCS (Eng) in 2015.

Dr. Kannangara underwent extensive post-MD training, specializing in Adult Cardiac Surgery at NHSL Colombo, Pediatric Cardiac Surgery at LRH Colombo, and Thoracic Surgery at Chest Hospital Welisara. He further honed his skills as a Fellow of Cardiac Surgery at Alder Hey Children's Hospital and Liverpool Heart and Chest Hospital in the UK.

Board certified as a Consultant Cardiothoracic Surgeon in Sri Lanka in 2020, Dr. Kannangara has developed special interests in off-pump CABG, paediatric and adult congenital cardiac surgery, and repairs of mitral, aortic, pulmonary, and tricuspid valves. After the board certification, Dr. Kannangara has served as a Consultant Cardiothoracic Surgeon at prominent institutions, including NHSL, LRH, TH Jaffna, TH Karapitiya, and is currently working affiliated to NH Kandy.

ABSTRACT

Redo CABG – Think before you Leap

Undertaking a redo CABG presents a formidable challenge for cardiac surgeons marked by heightened morbidity and mortality compared to primary CABG procedures. There are inherent complexities associated with redo coronary revascularization, urging careful consideration before embarking on this demanding surgical path.

Key challenges include the multitude of comorbidities prevalent in this aging population, technical intricacies related to sternal re-entry, the delicate task of safeguarding patent grafts, athero-embolism risks from stenosed grafts, challenges in myocardial preservation, potential incomplete revascularization, a limited supply of available conduits and the spectre of perioperative bleeding. These challenges necessitate thorough evaluation and strategic planning in the perioperative phase.

The importance of comprehending these risks, meticulous perioperative planning and employing precise surgical techniques to optimize outcomes in the intricate landscape of redo CABG procedures cannot be overemphasized. By addressing these considerations proactively, surgeons can navigate the complexities and enhance the potential success in the arena.

Dr. Nallathamby Sivashangar
Consultant Cardiothoracic Surgeon
Teaching Hospital, Jaffna, Sri Lanka

Following completion of his undergraduate studies in the Unvrsity of Peradeniya Dr. Nallathamby received his training in cardiothoracic surgery at Sri Jayewardenepura General Hospital, Sri Lanka and perceived overseas training at the Royal Brompton Hospital, Royal Brompton Harefield NHS trust, London.

He has given many oral and poster presentations of abstract in locally at Annual Academic Sessions. Moreover, he is a co-author of a publication in international journal with international authors. He has worked in NHSL, Lady Ridgeway Hospital for Children and he is currently working at the Jaffna Teaching Hospital.

ABSTRACT

Deep sternal wound infection – an overview

Deep sternal wound infection (DSWI) is an infrequent but devastating challenge faced by each cardio thoracic surgeon after sternotomies. It is associated with high mortality, prolonged morbidity with inward patient care, multiple reoperations and above all, significant financial burden to the patient as well as the health care system.

The management is usually complex. But, better outcome can be achieved by having high index of suspicion, accurate diagnosis, treating with appropriate antibiotics, aggressive surgical debridement and at later stages the reconstruction procedures are essential for a successful management.

The prevention of DSWI can be achieved by multidisciplinary approach and paying attention in identification of high-risk patients and optimization of risk factors in preoperative as well as in immediate post operative period.

Dr. G. Gandhiji
Consultant Cardiothoracic Surgeon
Lanka Hospital Colombo, King's Hospital Colombo, Sri Lanka

Dr. G. Gandhiji graduated from Faculty of Medicine, University of Peradeniya and obtained Master of Surgery (MS) in 2004. He had his local cardiothoracic training at Sri Jayawardenapura General Hospital and the overseas training at the Regional Hospital, Wellington, New Zealand and Starships Hospital, Auckland, New Zealand. Later he further gained experience at the Townsville Hospital, Townsville, Australia and St Vincent's Hospital, Sydney, Australia following a Fellowship in Heart and Lung Transplant Surgery.
He worked as a Consultant Cardiothoracic Surgeon at Teaching Hopital, Kandy before joining Lanka Hospital, Colombo. His special interests are minimally invasive cardiac surgery, mitral valve repairs, complex coronary artery bypass surgeries.

ABSTRACT

Mitral valve repair for all

Mitral valve repair for mitral regurgitation due to degenerative mitral valve disease is well established and proven as long lasting and associated with significant survival benefit. However, our national mitral

valve repair rate for degenerative mitral valve disease is unacceptably low. In this presentation I am going to discuss the following

- Advantages of mitral valve repair as opposed to valve replacement.
- Present evidences for valve repair.
- Some simple and reproducible repair techniques that all surgeons can adopt to repair great majority of cases.
- Suggestions to improve our national repair rates.

Share my limited experience with mitral valve repair for degenerative mitral valve disease.

Dr. Ajith Karunaratne
Cardiothoracic Surgeon
Asiri Central Hospital, Colombo, Sri Lanka

Dr. Ajith Karunaratne trained in cardiothoracic surgery at Sri Jayawardenepura General Hospital, Sri Lanka and completed his overseas training in University Hospital of Wales, Cardiff, UK followed by Royal Liverpool Children's Hospital, UK.

He worked as a Consultant Cardiothoracic Surgeon at National Hospital of Sri Lanka, Colombo from 2004 to 2012 before joining Asiri Central Hospital, Colombo. His special interest areas are off pump coronary surgery, mitral valve repair, and surgery of thoracic aorta.

ABSTRACT

Tricuspid regurgitation (TR) is a highly prevalent disease in the general population and is associated with increased mortality and morbidity. In patients with isolated severe TR, North American and European Societies of Cardiology and Cardiac Surgery guidelines recommend tricuspid valve surgery when patients are symptomatic or present with right ventricular dilatation in the absence of severe right ventricular dysfunction. However, the level of evidence is limited, and most patients are conservatively managed, with diuretics to relieve symptoms, while a surgical correction for isolated severe TR is seldom performed even in the recent era. Reluctance to refer patients for isolated tricuspid valve surgery is due on the one hand to the belief that TR is benign and on the other hand to the high post-operative mortality and to the uncertainties regarding the benefit of TR correction. A key element, often overlooked, is the progressive nature of the disease and its long-term effects on cardiac and extra-cardiac function. Clinical presentation is the main driver of the post-operative outcome, and a late intervention after the development of right ventricular remodelling, or renal and hepatic dysfunction contributes to the 10% in-hospital mortality rate reported after isolated tricuspid valve surgery.

A French group recently developed the TRI-SCORE, based on eight clinical, biological, and echocardiographic parameters, to predict in-hospital mortality after isolated tricuspid valve surgery.

TRIGISTRY a large international multicenter registry confirmed and extended the predictive value of TRISCORE and showed that valve intervention enabling a successful TR correction was associated with significantly better survival in the low and, to a lesser extent intermediate TRISCORE categories.

Mr. Shakil Farid
Consultant Cardiac Surgeon
Royal Papworth Hospital, Cambridge, UK

Mr. Farid undertook specialist training in cardiac surgery in Cambridge, London, Sheffield, Manchester and Brussels. Mr. Farid was appointed as a Consultant Cardiac and Aortic Surgeon at Oxford University Hospitals in 2018 following completion of cardiothoracic specialist training from Royal Papworth Hospital. He then joined Royal Papworth Hospital as a consultant surgeon in 2021.

Mr. Farid subspecialises in advanced aortic repairs along with complex aortic surgery and hybrid aortic surgery. Mr. Farid offers full range of cardiac surgery which includes coronary artery bypass grafting (using multiple arterial grafts), complex valvular surgery, aortic root surgery, aortic aneurysm repair, minimally invasive surgery and redo surgeries. He introduced frozen elephant trunk technique for aortic arch replacement at John Radcliffe Hospital, Oxford.

Mr. Farid has consistently performed at a very high level, which is represented by his excellent surgeon-specific mortality and outcome results. Mr. Farid remains a strong advocate for patient-focused care and robust clinical governance to maintain the highest standards in cardiac surgery.

Mr. Farid has keen interest in medical education. He was the Chair of the Surgical Training Committee for Cardiothoracic Surgery at Oxford deanery. He is the surgical tutor for the Royal College of Surgeons of England. He is also a member of the Specialty Advisory Committee for Cardiothoracic Surgery which is responsible for national training in UK.

ABSTRACT

Dilated aortic root

Dilated aortic root presents complex challenges. Treatment options such as the David procedure, Yacoub procedure, Ross procedure and modified Bentall procedure offer different approaches.

The David and Yacoub procedures are valve sparing aortic root replacement procedures. David procedure is more suitable for younger patients with connective tissue disorder with a dilated ventriculo aortic junction as it stabilises the basal ring. Yacoub procedure is effective when basal annuloplasty is added to it.

The modified Bentall procedure combines aortic root replacement with valve replacement. Ross procedure is often considered in younger patients with suitable anatomy and when the expertise is available. It avoids the need for lifelong anticoagulation, however it is technically challenging and converts a single valve pathology into potentially a double valve pathology for future. Reintervention on the pulmonary homograft is inevitable and reoperations may be necessary on the aortic autograft due to dilatation and neoaortic insufficiency.

Dilemmas in management often revolve around choosing the most suitable procedure based on the patient's condition, considering factors like the degree of dilation, valve function, age and the overall health of the individual.

The choice often requires a careful assessment by the multidisciplinary team to achieve the best outcome for the patient. All these patients should be discussed in a dedicated multidisciplinary team meeting to offer personalised management of the aortic root.

Dr. Palinda Bandarage
Consultant Cardiothoracic Surgeon
Teaching Hospital, Jaffna, Sri Lanka

Dr. Palinda Bandarage completed his primary medical education in the Faculty of Medicine, University of Colombo with Second Class Upper Honours and took up cardiothoracic surgery for his postgraduate specialist training.

He has been trained in the National Hospital of Sri Lanka, Lady Ridgeway Hospital for Children and National Hospital for Respiratory Diseases. He completed the overseas training in the University Hospital of Wales, Cardiff and John Radcliffe Hospital, Oxford University Hospitals NHS Trust and got board certified in 2020.

He has a number of academic publications under his name in both local and international peer reviewed journals. He is the current editor of the *Sri Lankan Journal of Cardiac and Thoracic Surgery*. His areas of special interest are coronary surgery (on pump and off pump) and mitral valve repair surgery.

ABSTRACT

Timing of surgery in infective endocarditis – an analysis of current guidelines

Surgery has definite indications in managing specific scenarios in infective endocarditis with proven prognostic benefits. The timing and the mode of surgical intervention plays a vital part in determining the outcome.

2023 ESC Guidelines for the management of endocarditis developed by the task force on the management of endocarditis of the European Society of Cardiology (ESC) is endorsed by the European Association for Cardio-Thoracic Surgery (EACTS). This is currently the most up to date guideline with some significant revisions of 2015 ESC recommendations. Meanwhile the American Heart Association (AHA) updated it's 2005 guidelines with a statement released in 2015. In our local practices we will have to adapt the standard guidelines whenever applicable to our patients and while developing our own recommendations for conditions peculiar to our setting.

The general indications for surgery in the setting of acute IE are heart failure (HF), uncontrolled infection, and prevention of septic emboli. The standard guidelines provide specific guidance on the ideal timing for surgical intervention. The ESC 2023 guidance on surgery for IE can be briefed as following.

Emergency surgical interventions (within 24h) are needed in IE induced valve regurgitation, obstruction, or fistula resulting in refractory pulmonary oedema or cardiogenic shock.

Urgent surgery (within 3-5 days) is indicated for aortic and mitral IE with heart failure, locally uncontrolled infection, and persistent vegetation ≥10 mm after ≥1 embolic episode or vegetation ≥10 mm with other indications for surgery. Fungal IE and multi resistant IE may need surgery as well as early PVE with complete debridement and valve replacement.

Right-sided IE needs surgical intervention when causing an acute severe tricuspid regurgitation and right ventricular dysfunction, recurrent pulmonary emboli requiring ventilatory support or with large (>20 mm) residual tricuspid vegetations, or involvement of left-sided structures.