



AFRICA STENI

26 - 29 APRIL 2023

Emara Convention Centre Nairobi, Kenya

PROGRAMME

participant.heartteam@gmail.com

WORKSHOP ONE

WEDNESDAY APRIL 26TH 2023

Time	Activity		Presenter
0800	State-of-the-Art: Myocardial wall motion abnormality assessment		Hasham Varwani and Derek Chin
0930	State-of-the-Art: Critical assessment of RV fai management	ilure to help direct	Sheila Klassen (SK)
1000	Open discussion		
1030	TEA BREAK AND EXHIBITIONS		
1100	Ischemic Cardiomyopathy: A to Z		Hasham Varwani
1130	How to measure EF with dyskinesis, dyssync	hrony and LV aneurysm	Mzee Ngunga
1200	Open discussion		
1215	Assessment of ischemic MR		Mzee Ngunga
	LUNCH BOX		
1300	 Option one Echo contrast and its everyday uses: Myocardial contrast perfusion to help assess LV viability and ischemia LV thrombus assessment Hassan Aden 	Option two DEBATE Africa needs MRI rather than advanced/ contrast echo to assess for CAD For (7min): <i>Anders Barasa</i> Against (7min): Kevin Ombati Vote (3min) Expert comment (10min): <i>Ntobeko Ntusi</i>	
1400	 It's not always the coronaries – Echo imaging for chest pain syndromes 1. Aortic valve disease 2. Aortic syndromes 3. Venous thromboembolism 4. Pericardial disease 		Fred Bukachi
1430	 How to image for complications of acute myocardial infarction 1. Contained rupture 2. Ventricular septal rupture 3. Papillary muscle rupture 4. LV outflow tract obstruction 5. LV aneurysms and pseudoaneurysms 6. LV thrombus 		African cases: Beverly Cheserem, Fazal Yakub, Larry Wachira, Emmanuel Benge, James Alok
1545	Open discussion		
1600	TEA BREAK AND EXHIBITIONS		
1630	 Intervention imaging crosstalk State of the Art: Imaging in mechanical circulatory support for acute and chronic coronary syndromes 1. Imaging for cardiac output 2. Impella device placement 3. LVAD assessment 		Sheila Klassen
1700	 Intervention imaging crosstalk. Case based discussions What echo specialists need to know from interventionalists What interventionalists should know from echo specialists Emerging topics: TAVR and Mitra clip 		Mzee Ngunga
1800	Meeting close		

WORKSHOP TWO

WEDNESDAY APRIL 26TH 2023

INTERVENTIONAL SUITE – STEMI 2023

Byrne, Robe Kamal Chitk Wanyoike, E Misfar, Anth	amed, Habib Gamra, Zaid Almarzooq, Kevin Ombati, Yemi Johnson, Mohs ert Mvungi, Nashwa Ahmed, David Kettles, Jose Roberto dos Santos, Aze kara, Jonathan Byrne, Awad Mohamed, Sajidah Khan, Bernard Gitura, Kh Etienne Amendeezo, Hasham Varwani, Ahmed Suliman, Peter Kisenge, C nony Gikonyo, Shingai Mutambirwa, Emmy Okello, James Kayima, George nil Vijaysinh, Charanjit Rihal.	em Latib, Harun Otieno, uzeima Khanbai, Martin Charles Kariuki, Swaleh
0800	Drug management of Coronary Artery Disease. Fundamentals	Charles Kariuki (Kenya)
0900	Primary PCI fundamentals. From type A angioplasty to retrograde CTO intervention. Interventional techniques	<i>Dave Kettles</i> (South Africa)
0930	Imaging for coronary intervention. IVUS or OCT for African cathlabs?	Harun Otieno (USA)
0945	Updates in CT angiography and CT FFR	Redempta Kimeu
1000	Health risks among interventional cardiologists and their teams. A review	<i>Emmy Okello</i> (Uganda)
1100	TEA BREAK	
1130	Quickfire African Case Review (10 minutes per case with 5 minutes discussion)	Chair: <i>Hasham Varwani</i> (Kenya)
1230	Antiplatelets and anticoagulants in ACS management	Habib Gamra
1300	HF drugs/ Stents for ACS/ dyslipidemia	
1400	Debate – A late presentation. Stent or leave? Case presentation: 2 minutes For Stent: 7 minutes For Leave: 7 minutes Vote Expert opinion: 10 minutes Discussion: 3 minutes	F: Ahmed Suliman A: Anthony Gikonyo E: Habib Gamra Chair: Awad Mohamed
1430	Ischemic pre-conditioning in patients with STEMI, an African matter.	Mpiko Ntsekhe
1445	Spontaneous Coronary Artery Dissection (SCAD) masterclass – what we should do and why	Ahmed Suliman
1530	Llve-In-A-Box – Bifurcation masterclass by Awad Mohamed	Awad Mohamed
1600	TEA BREAK	
1630	 Intervention imaging crosstalk State of the Art: Imaging in mechanical circulatory support for acute and chronic coronary syndromes Imaging for cardiac output Impella device placement LVAD assessment 	David Kettles
1700	 Intervention imaging crosstalk. Case based discussions. What echo specialists need to know from interventionalists. What interventionalists should know from echo specialists. Emerging topics: TAVR and Mitra clip 	John Byrne
	Meeting Close	

WORKSHOP THREE

WEDNESDAY APRIL 26TH 2023

Acute Cardiac Care Symposium

Acute cardiac emergencies taught through case scenarios, enhanced by hands on simulation training.

Emphasized by utilization of point-ofcare ultrasound.

For each case-based scenario there will be a presenter (fellow or resident) as well as a moderator for the session.

TOPICS:

- Acute Congestive Heart Failure
- Acute Coronary Syndrome
- Tachyarrhythmia
- Bradyarrhythmia
- Cardiac Tamponade
- Acute Pulmonary Embolism
- Acute Hypertensive Urgency and Emergencies

DAY 1

Chairperson: Parag Patel Moderator: Ettiene Amendezo

Introduction to Course at 0800H

1. ACUTE HEART FAILURE (2 hours)

Case 1

Acute HF exacerbation secondary to ischemic cardiomyopathy in patient with recent MI. Clinical and diagnostic pathway. Treatment. Approach to cardiogenic shock.

Objectives:

- History taking and recognizing/suspecting acute CHF in patients with ischemic cardiomyopathy in emergency department (presentation, symptoms, vital signs).
- Build the differential diagnosis in emergency settings.
- Point of care ultrasound (POCUS) as a valuable diagnostic tool of ventricular function and diagnosis of wall motions abnormalities (include videos of TTE).
- Utilization and interpretation of blood test and imaging (NT-proBNP, CXR).
- Initial treatment of acute CHF exacerbation in emergency settings.
- Recognize and diagnose cardiogenic shock and develop treatment strategy.
- Treatment of cardiogenic shock in ICU. Best practice where resources are available: Mechanical support for treatment of cardiogenic shock.

Suggested Case: Patient is 67 years old male with past medical history of hypertension, hyperlipidemia, CAD, recent myocardial infarction, COPD who presented to emergency department for shortness of breath and lower extremity edema.

Case 2:

Heart failure secondary to myocarditis.

Objectives:

- History taking and recognizing/suspecting acute CHF in patients with nonischemic cardiomyopathy due to myocarditis in emergency department (presentation, symptoms, vital signs).
- Build the differential diagnosis in emergency settings.
- POCUS as a valuable diagnostic tool of ventricular function and global dysfunction of myocardium.
- Utilization and interpretation of blood test and imaging (NT-proBNP, CXR).
- Initial treatment of acute CHF exacerbation in emergency settings
- Develop treatment strategy for nonischemic cardiomyopathy.
- Recognizing acute decompensation and developing pathway for the patient.
- Guideline of HF treatment will be presented to participant and can be discussed by the end of the case.

Suggested Case: Patient is 38 y.o. male who presented to the emergency department with chest discomfort, cough and insomnia. He has no past medical history. He recently recovered from COVID-19. Patient refused COVID vaccine in the past.

Case 3

Arrythmia induced cardiomyopathy.

Objectives:

- History taking and recognizing arrythmia and suspecting tachycardia/arrythmia induced cardiomyopathy.
- History taking and recognizing/suspecting tachycardia induced cardiomyopathy in patients with arrythmia and tachycardia in emergency department (presentation, symptoms, vital signs).
- Build the differential diagnosis in emergency settings.
- POCUS as a valuable diagnostic tool of ventricular function and global dysfunction of myocardium/ hypokinesis.
- Utilization and interpretation of blood test and imaging (NT-proBNP, CXR).
- Initial treatment of tachycardia induced cardiomyopathy in emergency settings.
- Develop treatment strategy for tachycardia induced cardiomyopathy.
- Recognizing acute decompensation and developing pathway for the patient.

Suggested Case: Patient is 57-year-old female who presented to emergency department with palpitations and shortness of breath. She has no medical history. She is under a significant amount of stress due to a new project at work and has been drinking more coffee lately. You checked the vital signs: BP 104/66. HR 156, RR 27, SpO2 – 91% on RA. You ordered ECG that demonstrated (show ECG with A. fib with RVR).

2. ACUTE CORONARY SYNDROME (90 mins)

Case 1

Unstable angina (MRN 4815757)

Objectives:

- History taking
- Physical exam
- Reading EKG
- When to suspect ACS
- Chest pain/anginal equiv vs atypical vs non-cardiac CP
- Pt risk factors
- Clinical story
- Diagnosing UA
- Treatment options
- Timing of treatment and intervention

Suggested Case: 65 y.o F PMH HTN, HLD, DM2, active smoker presents to PCP office for L shoulder and chest pain x6 mo. Sometimes exertional, other times non-exertional (difficult to know if typical, atypical, or noncardiac). Pain can occur randomly and last for hours then spontaneously resolve. Lexiscan showed: Large mod-severe reversible perfusion defect in apical-mid anterior and apical walls Large, mod-severe reversible perfusion defect in entire inferior wall

Medium, mild reversible perfusion defect in apical-mid inferolateral and lateral walls.

Case 2 Typical NSTEMI (MRN 12468551)

Objectives:

- History taking
- Physical exam
- Reading EKG
- Diagnosing NSTEMI
- Treatment options
- Timing of treatment and intervention

Suggested Case: 62 y.o M PMH active smoker presents for right-sided, nonexertional, nonreproducible, nonradiating chest pain. Initial EKG showed sinus rhythm with T wave inversion in aVL, which later normalized on repeat EKG. Initial high-sensitivity troponin 122. Cardiology consulted. Patient noted to have bilateral medial upper eyelid xanthomas.

Case 3

High risk NSTEMI (MRN 13004626)

Objectives:

- History taking
- Physical exam
- Reading EKG
- Diagnosing NSTEMI
- Define and recognize high risk patients
- GRACE score >140
- TIMI score 5-7
- Recent PCI (<6 months ago) or previous CABG
- Established systolic heart failure (EF<40%)
- Define and recognize high risk clinical features
- Dynamic ECG changes
- Sustained ventricular tachycardia
- Hemodynamic instability
- Recurrent ischemic chest pain despite med therapy
- New heart failure pulm edema, new MR
- Recent PCI (less than 6 months) or previous CABG
- Established systolic heart failure (EF<40%)
- Treatment options
- Timing of treatment and intervention

Suggested Case: 59 yo F no PMH presents for substernal, non-exertional, non-reproducible, chest pain for 10 hours. EKG shows anteroseptal Q waves and diffuse ST depression. Bedside TTE shows severe anterior and anteroseptal hypokinesis. Stable vitals. Taken urgently to cath.

Case 4 STEMI (MRN 11342009)

Objectives:

- Focused history taking
- Focused physical exam
- Reading EKG
- Bedside TTE
- Diagnosing STEMI
- Treatment options

Suggested Case: 71 yo M PMH active smoker presents for nonexertional, nonreproducible, bilateral arm radiating chest pain. EKG showed inferior STEMI. Cath alert was called.

3. TACHYARRYMTHMIA (45 mins)

- History taking and recognizing/suspecting arrythmias based on provided information and building initial differential diagnosis.
- Analyze initial vinal signs on presentation.
- Performing physical exam. (On physical exam patient is not in acute distress, HEENT normal, PEARL. Upon examination of the heart: Rhythm irregular, S1 S2 normal. Lung, abdomen exam normal. There +2 LE pitting edema.)
- Analyze and interpret findings of physical exam.
- After physical exam you performed ECG (demonstrate ECG with irregular-irregular rhythm). HR 142
- POCUS as a valuable diagnostic tool of ventricular function and diagnosis of wall motions abnormalities (include videos of TTE).
- Demonstrated ejection fraction of 42%. No wall motion abnormalities.

- Utilization and interpretation of blood test and imaging (NT-proBNP, CXR)
- What other questions can you ask patient to decide what additional blood to order? (TSH)
- Initial treatment of atrial fibrillation in emergency settings
- Develop treatment strategy for atrial fibrillation in outpatient setting
- Recognizing signs of heart failure that was induced by atrial fibrillation

Suggested Case: Patient 76 y.o female with PMH of hypertension, hyperlipidemia, DM type 2 presented to emergency department with feeling of palpitation and lightheadedness for the last 10 days. VS BP 156/77, HR 127, RR 22, SpO2 – 99%

4. BRADYARRYTHMIA (45 mins)

Case 1

Complete heart block

Objectives:

- History taking (sudden onset, medications, travel history)
- Physical exam/ Vitals (bradycardia, rashes, possible murmur, possible associated decompensated HF signs)
- EKG findings (consistent P-P and R-R, lack of relation between P and QRS, more Ps than QRS)
- Management (Pulse unresponsive to atropine and exercise. Epi or dopamine. Transcutaneous/transvenous pacing. Ultimately tx with pacemaker)

Suggested Case: 57-year-old male with pmhx of HTN presents with syncope. Vitals: HR 32, BP 103/87, SpO2 100%.

Case 2 Mobitz type 1

Objectives:

- History taking (asymptomatic or fatigue with exertion)
- Physical exam/vitals (benign exam)
- EKG findings: (progressively prolong PR with eventual drop of QRS)
- Causes (medications (BB, CCB, dig or amio), increased vagal tone, inferior MI, myocarditis, following cardiac surgery)
- Treatment (atropine for symptomatic patients)

Suggested Case: 64-year-old female with pmhx of T2DM, HTN, HLD presents for pre op eval. Vitals: HR 60, BP 136/82, Spo2 100%.

5. CARDIAC TAMPONADE (20 mins)

Case 1

Cardiac tamponade (MRN 12609954) (How many cases do we need)

Objectives:

- History taking
- Physical exam
- Reading EKG
- Performing bedside TTE
- TTE signs of pericardial effusion and tamponade
- Diagnosing UA
- Treatment
- Pericardiocentesis
- Anti-inflammatory + colchicine

Suggested Case: 59-year-old male PMH former smoker presented to LGH ED on 9/5/2022 for SOB, LE edema, and substernal, nonexertional, nonreproducible, positional chest pressure x2 wk. Reports chest pressure worse with laying down, improved with sitting up.

WORKSHOP FOUR

WEDNESDAY APRIL 26TH 2023

Echocardiography

Chairperson: Sheila Klasse Moderator: Mzee Ngunga

Objectives:

- How to perform bedside TTE
- How to diagnose pericardial effusion
- How to diagnose tamponade

Objectives:

- How to perform subxiphoid vs parasternal vs apical
- Ways to confirm pericardial position

1. ACUTE PULMONARY EMBOLISM (45 mins)

Case 1

Acute pulmonary embolism with right heart strain

Objectives:

- History taking to reveal VTE risk factors (travel, fam hx, oncological hx)
- Vital signs associated with PE and atypical signs/symptoms
- EKG/ CXR findings concerning for PE
- Labs/diagnostic imaging modalities
- Categorizing PE using POCUS
- Management/Therapies
- Discuss/Review causes of PE

Suggested Case: 62-year-old female with pmhx of metastatic breast cancer who presents to PCPs office with left calf pain and shortness of breath.

Case 2

Acute Pulmonary Embolism with Right Ventricular Dilatation

Objectives:

- Massive PE Criteria
- POCUS to classify PE
- PEA arrest -> ACLS
- Management/Therapy

Suggested Case: 53-year-old male who has not been seen by a doctor in several years presents to the emergency department with syncope.

ACUTE HYPERTENSIVE URGENCY AND EMERGENCIES (40 mins)

Case 3 HTN urgency

Objectives:

- Recognizing Hypertensive Emergency vs Hypertensive Urgency
- Target Organ Damage (AKI, Myocardial Ischemia, Pulmonary Edema, Hypertensive Encephalopathy)
- Causes of hypertensive urgency (primary vs secondary) Most common medication noncompliance
- Work up including diagnostics (CBC, CMP, Troponin, NTpro)
- Physical Exam findings (S4, Fundoscopic, Lung Exam)
- Recognizing EKG patterns seen in elevated BP
- POCUS for LV function, Volume Status, R/O dissection can't miss
- Treatment of Hypertensive Emergency (Blood pressure goal in first 1-2 hours, Next 2-6 hours)

- Stabilize patient (ABCs)
- Medications IV & Oral (CCBs, BB, Nitro (esp if pulm edema)
- When to transition from IV to Oral
- Reference 2017 ACC/AHA Guidelines of High Blood Pressure

Suggested Case: 35-year-old male with no significant past medical history presents to emergency room with shortness of breath and chest pain for past 3 hours.

THURSDAY APRIL 27TH 2023

DAY 2

HANDS ON SIMULATION TRAINING

(60-70 people total, split into 5 groups)

Session 1:	10:30 AM- 11:30AM
Session 2:	1:00PM-2:00PM
Session 3:	2:05PM-3:05PM
Session 4:	3:10 PM-4:10PM
Session 5:	4:15PM-5:15PM
Station 1:	CPR Fundamentals and Basic Airway
Station 2:	 FAST exam (Cardiac and Lung) B lines Pneumothorax Pleural effusion
Station 3:	12-Lead STEMI Recognition
Station 4:	Advanced Airway Training
Station 5:	 Tachy and Brady Arrythmia Training (Defibrillation and Pacing) Recognize pre-arrest Progress to cardiac arrest

AFRICA STEMI LIVE

FRIDAY APRIL 28TH 2023

Time	Activity	Presenter
0800 - 1030	INNOVATION IN CVD	David Kettles/ Mohamed Jeilan
0800	Humans versus ChatGPT in Cardiovascular medicine - State of the Art and Live challenge	David Jankelow
0820	An overview of Artificial Intelligence in Cardiovascular medicine	Paul Friedman
0840	Q&A	Moderator
0850	Telemedicine from diagnostics to intervention	David Kettles
0900	Telemedicine and ECG	TBC - Rachel Mbuthia
0915	Telemedicine and Echo	Charit Bograj
0930	The TIM HF-2 trial	TBC - Thomas Luescher
0945	Q&A	Moderator
1000	STATE OF THE ART: The future of Imaging. Where we have come from and where we are going.	Mark Monaghan and Joseph Kisslo
1030	Open Discussion	Moderator
1100	Tea Break	
1130 - 1300	RISK MANAGEMENT	Shaheen Sameh/ Harun Otieno
	Risk stratification and decision making - case based	TBC - Shaheen Sameh
	Case of asymptomatic hypertensive patient (low risk).	Harun Otieno
	Case of asymptomatic hypertensive smoker with intermediate risk scoring /risk enhancers. CT coronary calcium scoring	Harun Otieno
1130	Assessing CV risk in patients with type 2 diabetes: lessons learned from imaging	Harun Otieno
	Assessing CV risk in patients with type 2 diabetes: SCORE-2 diabetes	Barbara Karau
	Prediabetes – why is it relevant for cardiovascular risk?	Willy Mucyo
1215	LDL with residual risk not addressed by statins, the role of non-statin therapy	Chairs comment
1220	Ezetimibe in seven minutes	Chebet
1227	PCSK9 inhibitors. An update in seven minutes	Harun Otieno

Time	Activity	Presenter
1235	Bempedoic acid. The latest kid on the block.	Kausik Ray
1250	Inclisiran: how widely and when should we use it?	Ahmed Kamau
1305	Beyond LDL: Newer approaches	David Silverstein
1315	Triglycerides: lessons from the omega-3 fatty acid trials / ICOSAPENT according to the REDUCE IT TRIAL	Thomas Luscher
1322	High density lipoproteins in seven minutes	Ahmed Suliman
1330	Lipoprotein(a) in seven minutes	Hasham Varwani
1340	Open Discussion	
1400	Lunch	
1500 - 1800	CARDIAC ARREST	
1500	High profile cases that taught us what to do	Sanjay Sharma
1520	Key evidence in ACLS guidelines. What must not be ignored in the guideline documents	Chris Granger
1540	What's needed for CPR training in Africa	Ben Wachira
1600	Recruiting the public to help with CPR - Lessons from Canada	Carolina Malta Hansen
	Unusual CPR scenarios	Chairs comment
1620	Cardiac arrest affecting the athlete	Sanjay Sharma
1020	Cardiac arrest affecting the covid 'survivor'. Myocarditis in cardiac arrest	Bernard Gersh
1700	State of the Art - Resuscitation in Africa	Sanjay Sharma
1720	Do ACLS guidelines cover cardiac arrest in the cathlab?	Chet
1740	Q&A	Moderator

AFRICA STEMI LIVE

SATURDAY APRIL 29TH 2023

Time	Activity	Presenter
0800 - 1030	STEMI Live!	
0800	Looks like an MI but not an MI. Misleading troponin and misleading ECG patterns.	Hassan Aden
0820	Complications of MI - managing thrombosis in MI patients. LV clot, AF post PCI, DVT post PCI	Martin Wanyoike
0840	Myocardial Infarction - From Eisenhower to present day	Thomas Luscher
0900	What's new in cardiac biomarkers	Anoop Shah
1015	Choosing the correct DOAC for your patient.	Mohamed Salim
0915	Q&A	
	STEMI Live! Transmissions	
	Live STEMI from a high volume centre. From ER to reperfusion OR	Jon Byrnes/ Kings College
0930	Pharmacoinvasive/ bystander disease	Khuzeima Khanbai/ JKCI
	SubQ ICD implant OR	Parag Patel/ Chicago
	LBBB pacing in HF in a post MI patient OR	Brian Vezi/ Aga Khan Nairobi
	CardioMIMS for HF	Parag Patel/ Aga Khan Nairob
1030	Tea Break	
1100 to 1400	HEART FAILURE	
1100	Lumping and splitting: The road to modern heart failure management	Thomas Luscher
1120	Do we need LVEF to manage HF? (SGLT2 inhibitors)	Scott Solomon
1140	Slow or fast, high or low? How to start and get to the fantastic four in ischemic heart failure patients	Mahmood Sani/ Selma Mohammed
1155	Acute heart failure: Decongesting patients after decompensation	Mahmood Sani/ Selma Mohammed/ Wilfried Mullens
1210	Q&A	
1225	ICD or/CRT in ischemic heart failure. Are SGLT2i and ARNIs making them redundant?	Selma Mohammed/ Emmy Okello
1240	Revascularization in Ischaemic Heart Failure: Is it necessary, does it work?	Bernard Gersh. Divaka Pereiro to discuss
1300	Letter from America: Cardio-renal syndromes	Selma Mohammed
1320	Novel therapy. Whats on the horizon in heart failure?	Thomas Luescher
1340	Q&A	Swaleh Misfar

Time	Activity	Presenter
1400	Lunch	
1500 to 1600	KEYNOTE LECTURE	
1500	Barriers to management of Hypertension in Africa and the Epidemic of CAD	George Mensah
1520	Renal denervation: rise, fall and rise again	Bernard Gersh
1540	Q&A	Elijah Ogola
1600 to 1730	THE (HE)ART OF MEDICINE	
1600	Running a cathlab in the midst of a conflict. Impossible task?	Abraha Hailu
1615	African Medical Schools. Do the curricula cover management of ASCVD sufficiently?	Laura Nyiha
1630	Health risks among cardiologists.	Harun Otieno
1645	African women in cardiology	Selma Mohammed
1700	Addressing the shortage of African cardiologists in the region. Exit visas vs. regional advocacy and mentorship	Dan Gikonyo
1730	Q&A	
	ARRHYTHMIA, STROKE AND CAD	
1800	The PVC: When should we worry	Bernard Gersh
1820	Management of A Fib in patients with LV dysfunction	Mohamed Shaush
1840	An important and misunderstood cause of syncope	Bernard Gersh
1900	Can atrial fibrillation be prevented? Upstream therapy	Bernard Gersh



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