

THE 8TH ABUJA CARDIOVASCULAR SYMPOSIUM 2024

CASE REPORT 1

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8th Abuja Cardiovascular Symposium 2024



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In The Clinic



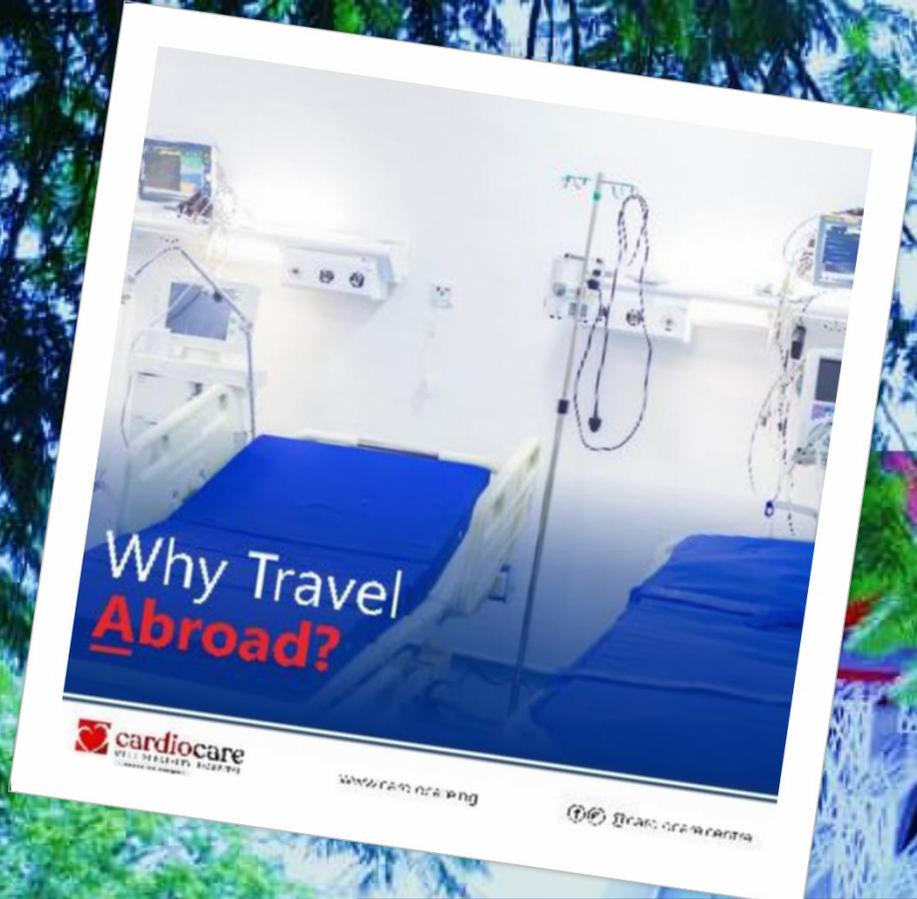
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Reversing Medical Tourism

- A 78-year-old male being managed for
 1. Hypertensive Heart Disease with Heart Failure,
 2. Chronic Atrial Fibrillation,
 3. Previous Stroke and
 4. Benign Prostatic Hyperplasia
- Presented with generalized body weakness, worsening dyspnea and cough of about a week's duration.
- Generalized body weakness was said to have worsened 2 days prior to presentation, unable to ambulate without support, and said to have fallen on 2 occasions.



- Cough was productive of whitish sputum.
- Dyspnoea was initially on moderate exertion, but progressed to dyspnoea on mild exertion, however no orthopnoea or PND.
- Medications included
 - Tabs Amiodarone 200mg daily,
 - Febuxostat 80mg daily,
 - Calcitriol 250mg daily,
 - Torsemide 10mg daily,
 - Rosuvastatin 20mg daily,
 - Rivaroxaban 15mg daily,
 - Empagliflozin 10mg daily,
 - Spironolactone 25mg daily.



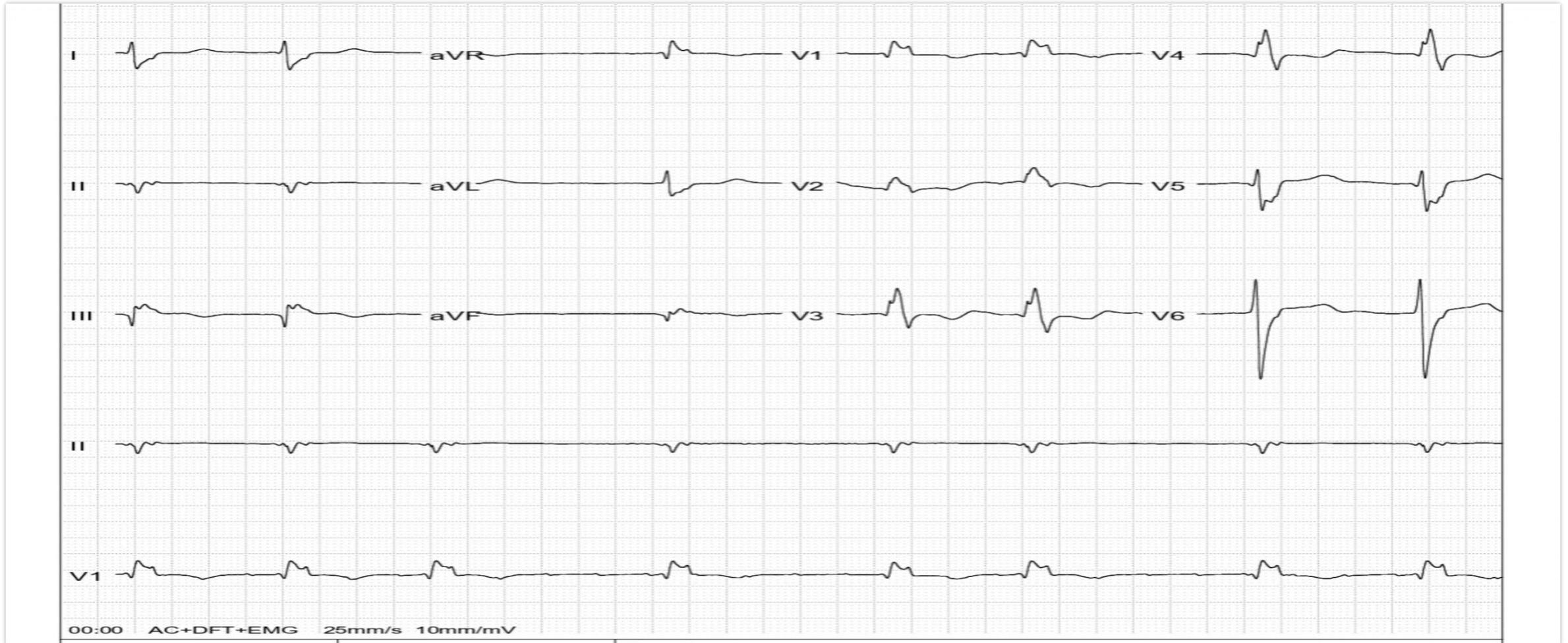
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•Clinical & Interventional Cardiology •Endocrinology & Diabetology •Neurology •Nephrology and Dialysis •Hepatology •Critical and Intensive Care •Internal Medicine
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frontdesk@cardiocare.ng



- On examination, he was lethargic, drowsy, with bilateral pitting pedal edema.
- Pulse barely palpable,
- Heart rate was 35bpm,
- blood pressure was unrecordable,
- HS S1 S2 with ectopics and power was 4/5 globally.
- Assessment:
 1. Cardiogenic Shock secondary to
 2. Biventricular Heart Failure NYHA Class III
 3. Precipitated by Atrial fibrillation and Urinary Tract Infection in
 4. background Hypertensive Heart Disease, Previous Stroke and Benign Prostatic Hyperplasia

ECG on Presentation



Echocardiography on Presentation



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Reversing Medical Tourism

Image 1

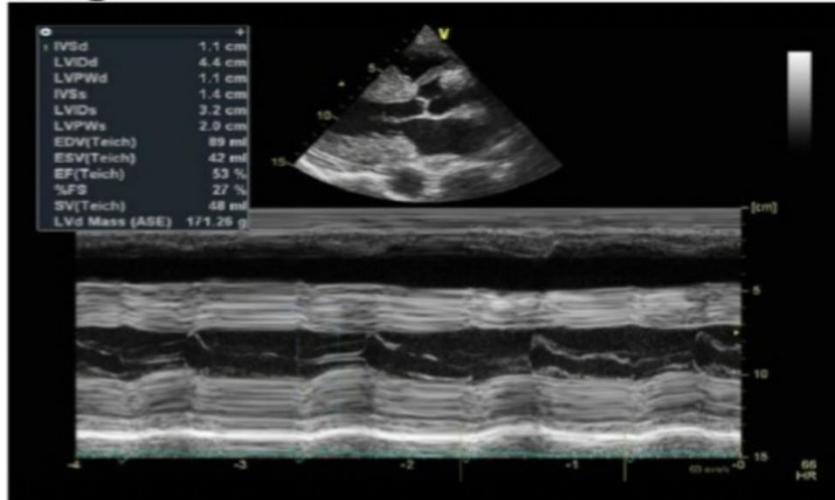


Image 2

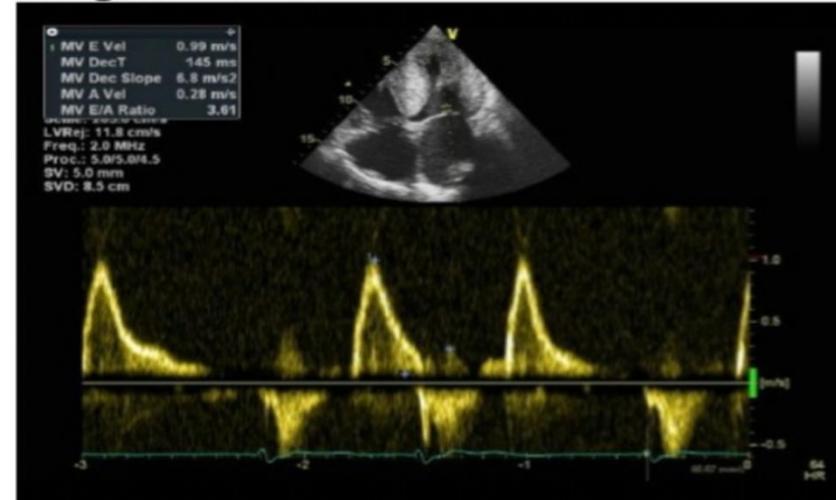


Image 3

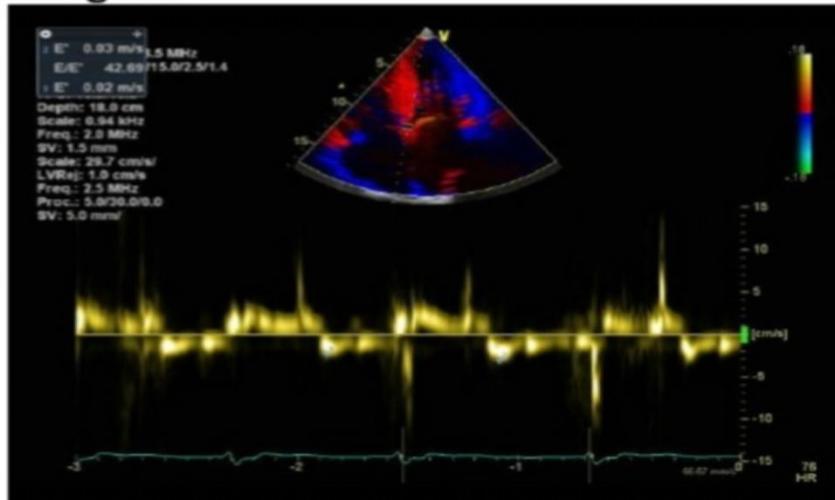
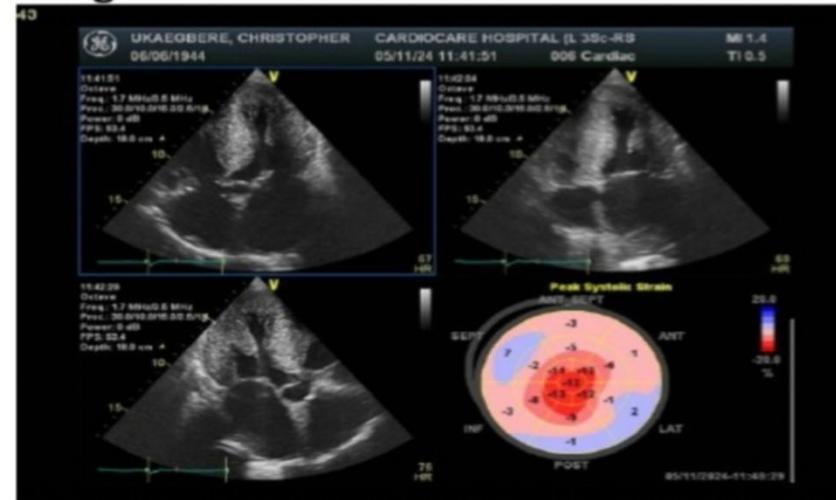


Image 4





 **The Limi Hospital**
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 Plot 1487, Off Constitution Avenue, behind ICPC/NDIC, CBD, Abuja.

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 **Limi Children's Hospital**

 39, Ademola Adetokunbo Crescent, Wuse 2, Abuja, Nigeria

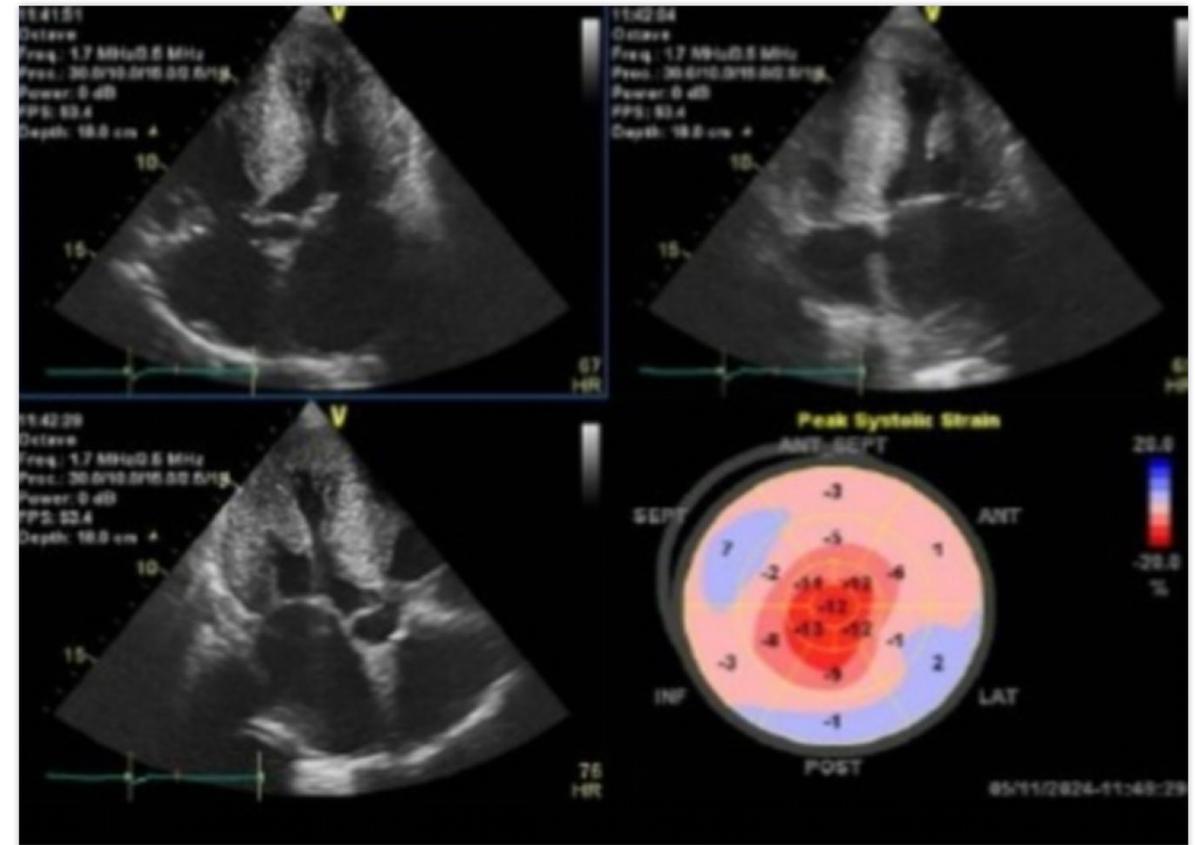
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Founded since 1982 to Support and Serve

Imaging Findings

- Echo showed moderate global hypokinesis of LV
- Moderately impaired left ventricular systolic function with EF of 35-40%.
- Restrictive LV filling pattern, consistent with elevated LA pressure.
- Tapse- 1.3cm, E/E' - 20.9
- GLSS on ECHO suggested infiltrative cardiac disease- **BULLS EYE APPEARANCE**
- Holter showed Atrial Fibrillation with Ventricular Rhythm



Laboratory Results



Lab Test	Result
Lipid Profile	Unremarkable
Uric Acid	4.0 mg/dl
Glycated Hemoglobin (HBA1C)	4.4%
Urinalysis	Glucose +++, Blood +, Leukocyte ++
Electrolytes, Urea and Creatinine	SODIUM: 124, POTASSIUM: 5.2, CHLORIDE: 95, BICARBONATE: 16, UREA: 181, CREATININE: 4.4
Full Blood Count	Normal WBC, PCV – 35.2% and Platelet - 275
TSH	2.1 mIU/L
ESR	80 (Elevated)

Introduction

- Cardiac catheterization procedures in the dedicated catheterization laboratory (cathlab) are apparently at an infantile stage in Nigeria.
- The cardiac cathlab is invaluable in the practice of Cardiology as its use is the **gold standard** for diagnosis and treatment of many cardiovascular conditions.
- In Northern Nigeria, **two prior indigenous cathlab installations had been reported**, one public and one private which had become non-functional.
- However, since 2015 there has reportedly been **no functional indigenous cardiac cathlab in the entire Northern Nigeria**.

- Urine MCS showed
 - Moderate growth of Staph aureus sensitive to Piperacillin-Tazobactam, Gentamicin, Ofloxacin, Tetracycline, Clindamycin, Cotrimoxazole
- Blood pressure and pulse improved while on inotropes.
- However, heart rate kept fluctuating getting as low as 24 per min.
- Guest was moved to the Cath-lab for Emergency Temporary Pacing and CRT-P as soon as guest was ready.

Intensive Care Unit



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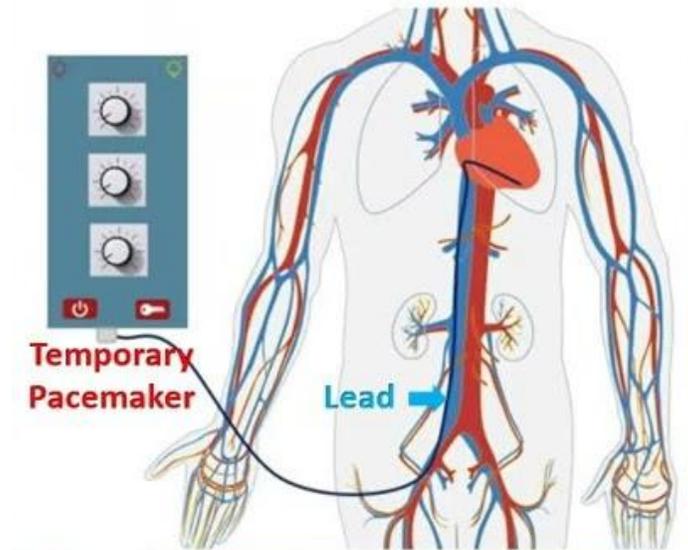
- He was admitted into the Intensive Care Unit
- Antihypertensive medications were withheld
- Commenced on IVF
- IV Dobutamine at 5mcg/kg/min and titrate
- IV Noradrenaline 4mg at 0.2mcg/kg/min
- Counsel on need for Cardiac Device Therapy
- Continue Tabs Rivaroxaban 15mg daily
- Continue Tabs Empagliflozin 10mg dly

Temporary Pacing

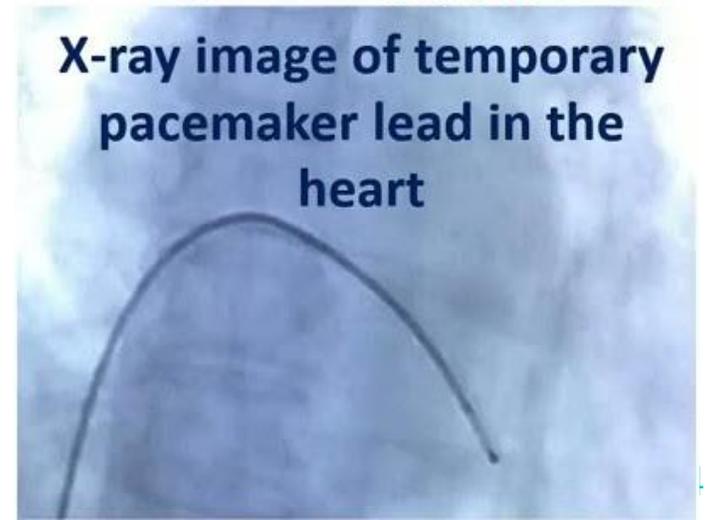
- Emergency Transvenous Temporary pacing was done because of occasional fluctuations in pulse to as low as 24/min.
- A 6Fr femoral sheath was placed in the right femoral vein .
- A Temporary pacing wire was inserted through into the right ventricle under fluoroscopy in the cathlab.
- Pacing was set at VVI 60 with good effect to maintain a Heart Rate of 60/min pending full device implantation



Temporary pacemaker and lead schematic diagram



X-ray image of temporary pacemaker lead in the heart



Introduction

- Beyond service to the Nigerian populace, Cardiocare as an indigenous cathlab practice and Cardiovascular Hospital has provided avenues for:
 - Local research
 - Local training and exposure of medical professionals
 - Reversing of medical tourism (>\$2billion dollars annually)
 - Improvement of related Healthcare economics- staffing & employment, development of the healthcare value chain

Cardiac Resynchronization Therapy with Defibrillator (CRT-D)



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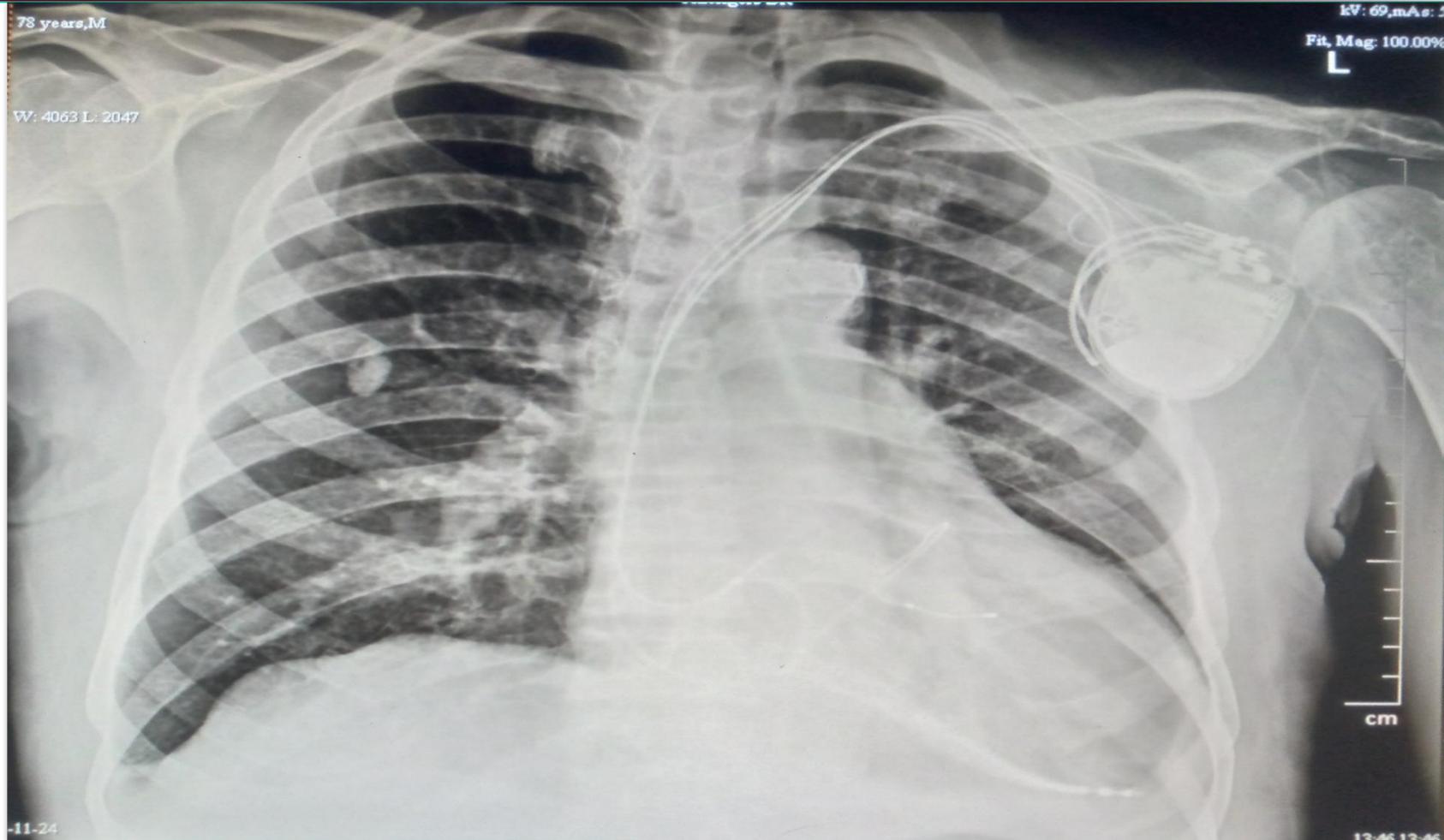
- CRT-D was successfully inserted
- Procedure was well tolerated
- Post procedure vital check showed PR: 70 bpm, BP: 129/78 mmHg, RR: 18cpm, SPO2: 98% in room air
- He was placed on IV Antibiotics, while Tabs Spironolactone 25mg and IV Torsemide 10mg were recommenced.
- Inotropic support was discontinued.

Post CRT-D Implantation Chest X-Ray

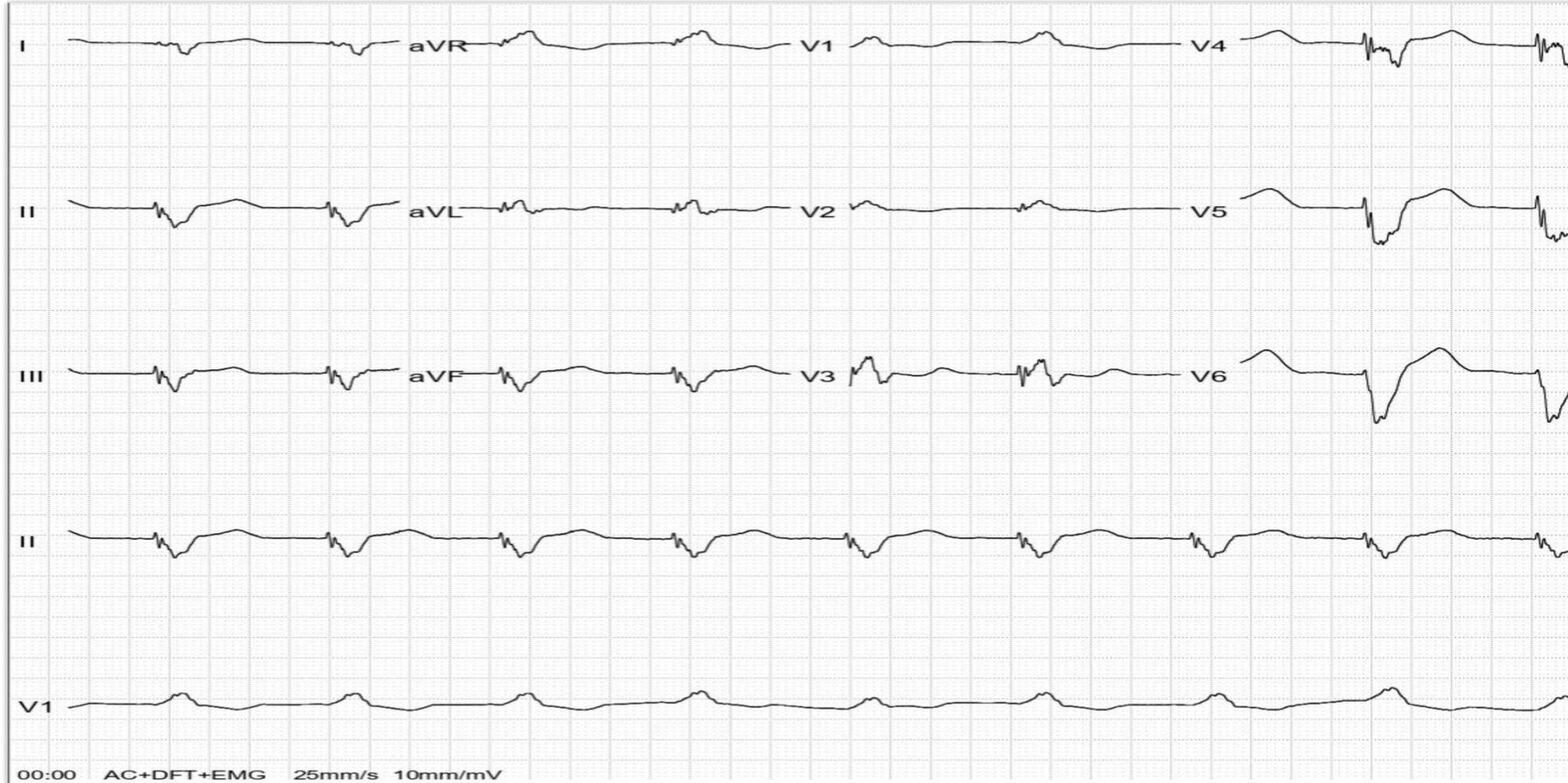


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Post CRT-D Implantation ECG



Discharge



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- Wound dressing was done 5 days post-op and guest was discharged
- Was discharged on Antibiotics and routine medications.
- Was counselled on device care.
- To see in clinic in 5 days time

Who is Cardiocare Multispecialty Hospital?

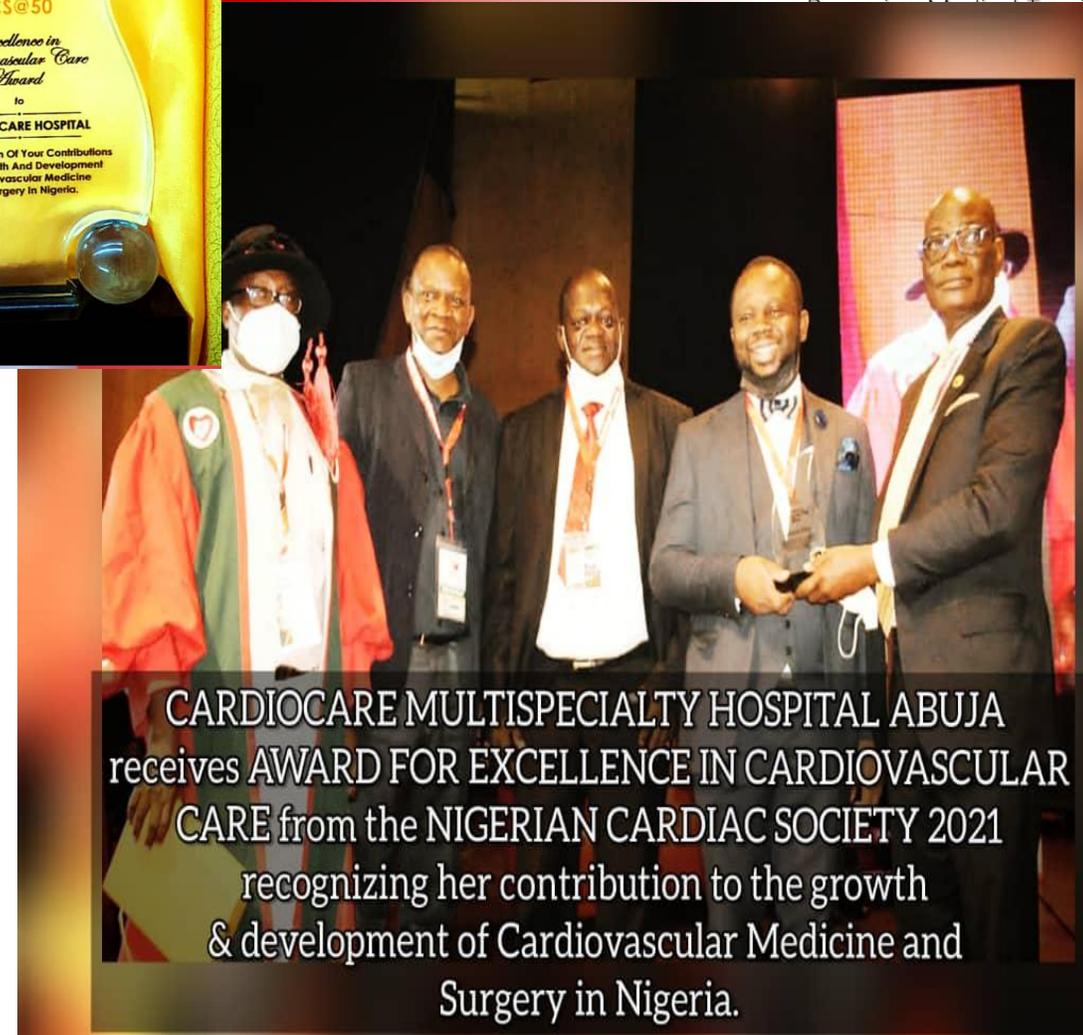


Northern Nigeria's **pioneer standalone Institution** wholly dedicated to comprehensive **Cardiovascular and Internal Medicine**.

Received Multiple **Awards for Excellence in Service**.

We are a **Support Hospital** for your practice in Nigeria through our **specialized services, training, and research in collaboration with**

you World class Healthcare, All Day, Everyday
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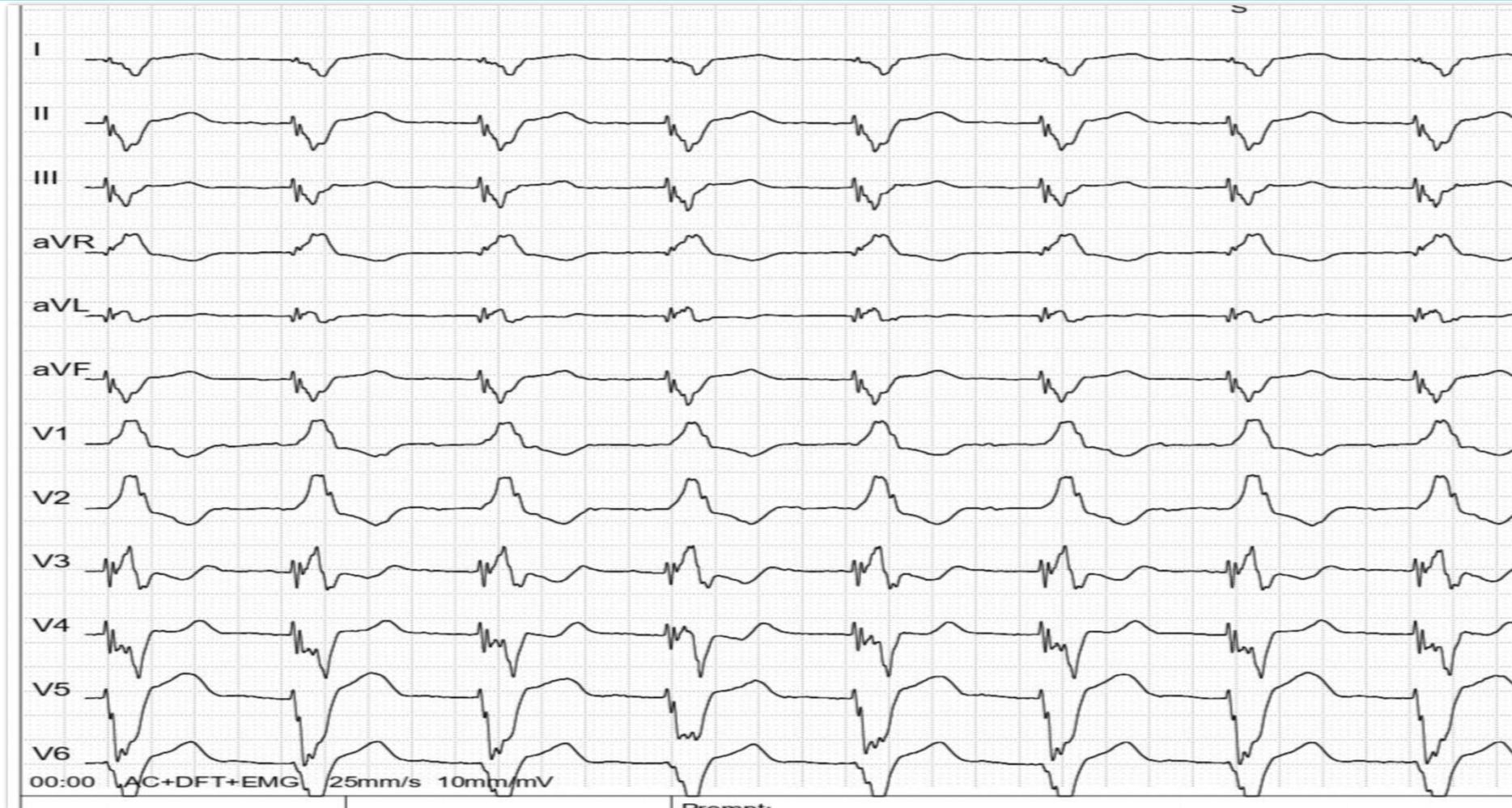


Follow-up



- Guest presented for follow up 5days after discharge.
- Had no new complains and was doing well.
- Pulse was 70bpm, BP - 90/60mmHg, HS S1 and S2
- For continued follow-up and heart failure medications.

ECG at First Clinic Visit



THE 8TH ABUJA CARDIOVASCULAR SYMPOSIUM 2024

CASE REPORT 2

Dr. Kumo Fatima Abubakar
GP Medical Officer
The Limi Hospital Group,
Abuja-Nigeria.

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Abuja Cardiovascular Symposia- Eight (8) so far.



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Reversing Medical Tourism

- Over 750 participants from over **17 states**
- Trained in **PRIMARY CARDIOVASCULAR SKILLS-mainly**
 - ECG interpretation,
 - Basic Management of Diabetes, Hypertension, Acute coronary syndromes, etc
 - Basic Life Support
- **10 CME points & Certificate**



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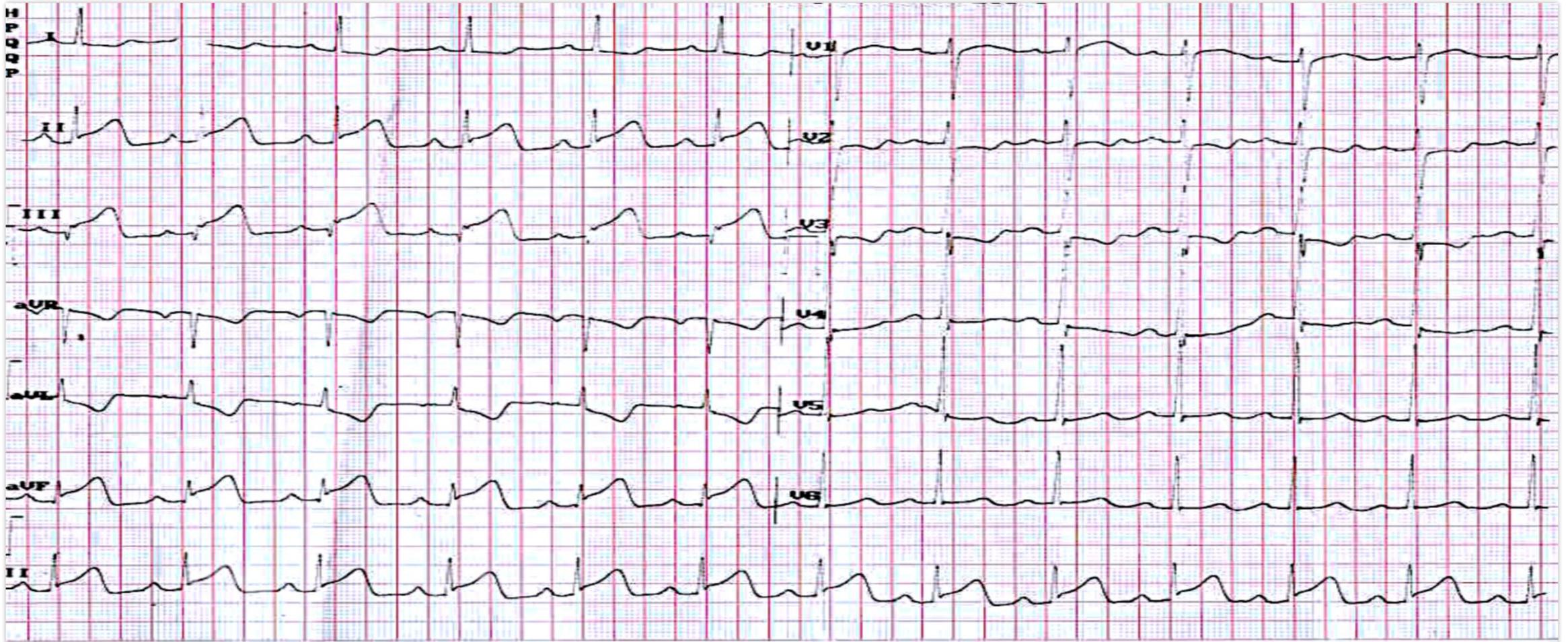


At Emergency Ward



- A **70 year old female, self referred** from a Government Hospital on account of **chest pain X 29 hours** prior to presentation
- **Chest pain:** Sudden onset, epigastric, characterized as heavy and burning , aggravated with exertion and minimal relief on rest, non radiating, graded 9/10 on pain score, lasting few minutes then recurring and
- Associated profuse sweating, body weakness and feeling on impending doom.
- history of intermittent leg swelling

ECG from Referring Center



Intervention before Referral



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- Presentation at Referring Centre ;

Vitals :

PR : 98 b/min

BP : 90/60mmHg

RBS : 11mmol/L

PCV – 21%

Troponin : 0.11ng/mL

ECG – ST elevation on Leads ii, iii and AVF

National Interventional Cardiology Symposium- One (1)



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- 41 attendees from:
 - Lagos=3, Benin=1, Kano=3, Katsina=3, Sokoto=5
 - Enugu=3, Gombe= 5, Jos=5, Kebbi=4, FCT= 8



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Treatment from Referral Centre



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- Transfusion with 1 pint of blood o/a anemia
- Medications included:
 - Tabs Aspirin 500mg and 300mg,
 - Tabs Clopidogrel 75mg,
 - IV heparin 5000 units,
 - SC Clexane 40mg and
 - Tabs Atorvastatin 80mg

At Emergency Ward



- On examination: Elderly woman, afebrile (T: 36.4 C), pale, anicteric, acyanosed, mild pedal edema.
- CVS
 - PR : 56 b/min, Full volume, Regular
 - BP : 157/96mmHg(R) , 147/94mmHg (L)
 - JVP : Not raised
 - Apex : 5th ICS MCL
 - HS : 1 and 2, distant
- Chest :
 - RR : 22 c/min
 - SPO2 : 97% on RA
 - Vesicular BS
- Abdomen : Full, Soft, MWR, epigastric tenderness
- CNS : Conscious and alert, OTPP

An assessment of **Acute Inferior MI** was made

Imaging Findings

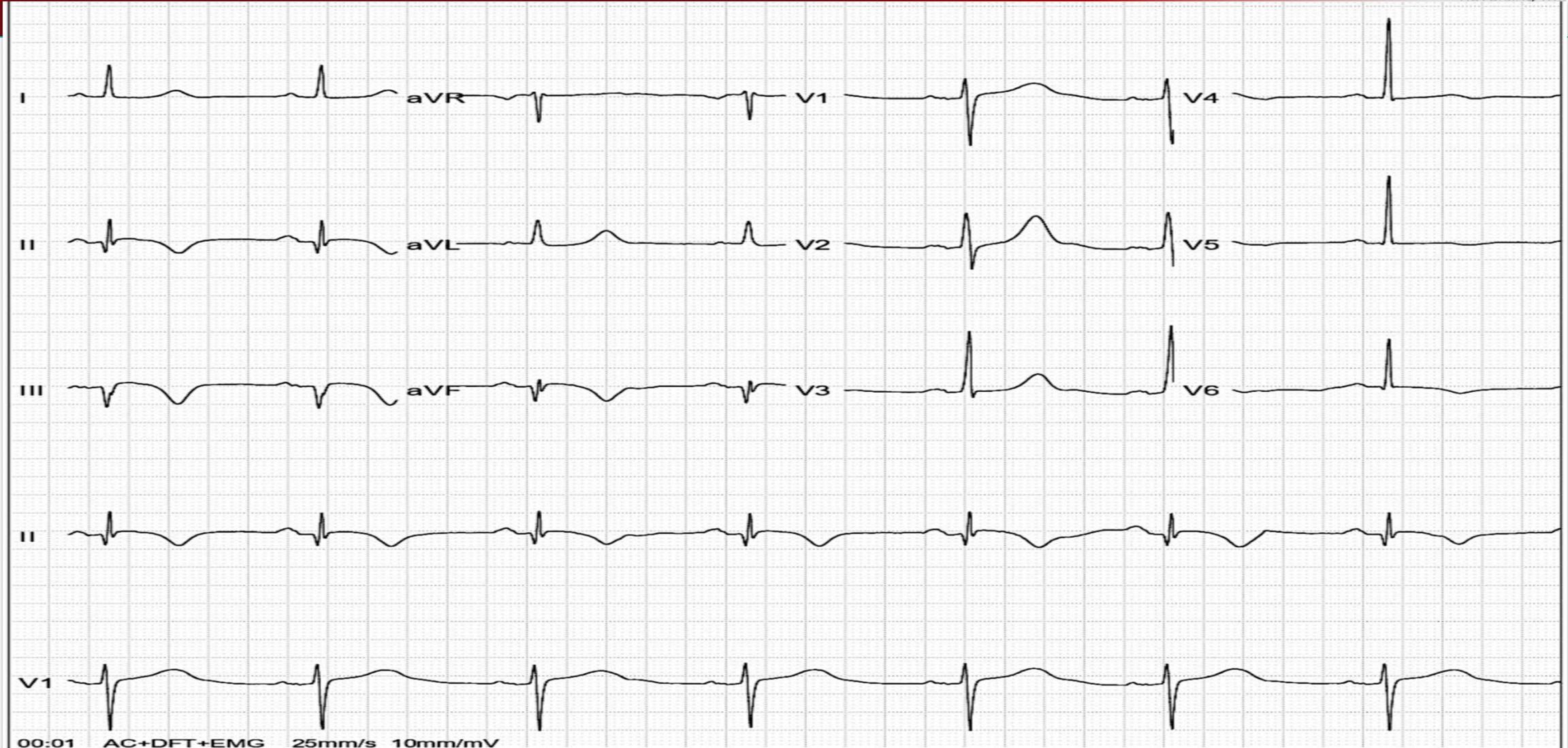


- ECG at presentation :
T wave inversion on Leads ii, iii and avf
- Echo :
Mild pericardial effusion
- Abdominopelvis USS :
Mild ascites

Our Experience

- A total of **1000 procedures** were carried out on 847 patients over the last 5 years
- Male to female ratio of **4.4:1**,
- Mean age of **59.0 (+/- 12.4)** years
- Of the patients,
 - 32 (10.6%) were partially financed through discounts, sponsorships, and donations from:
 - Cardiocare/Limi Hospitals
 - Nigerian Cardiovascular Education Foundation

ECG on Presentation



00:01 AC+DFT+EMG 25mm/s 10mm/mV

Echocardiography on Presentation



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Image 1

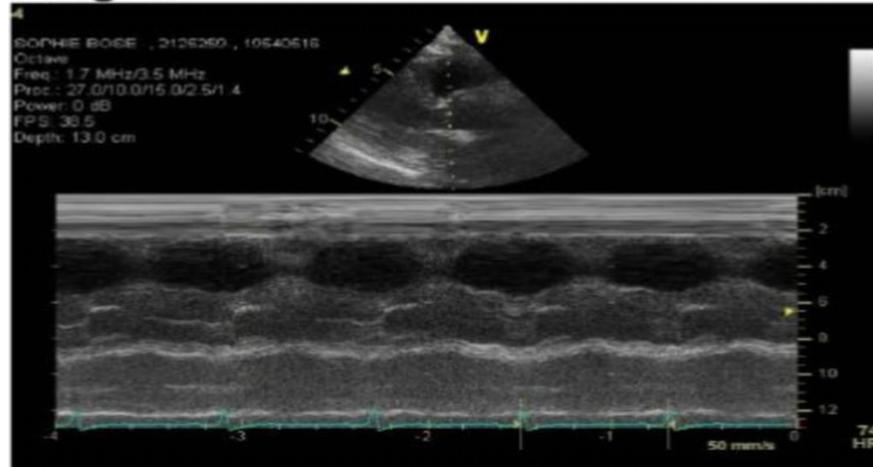


Image 2

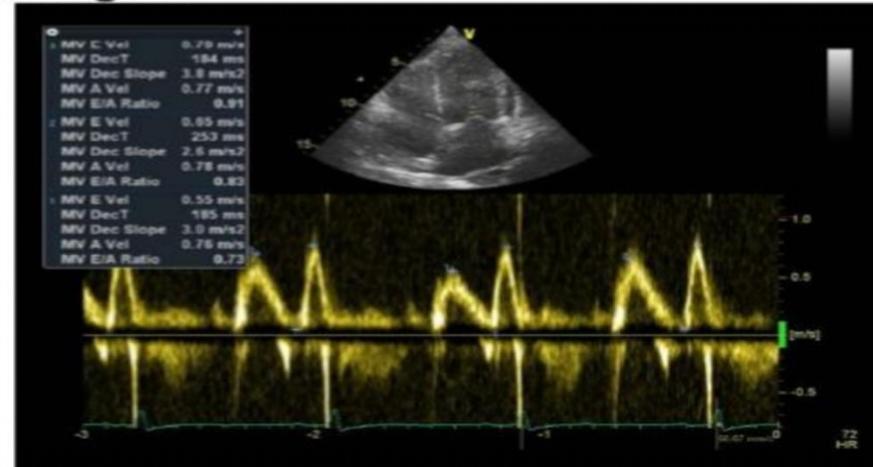


Image 3

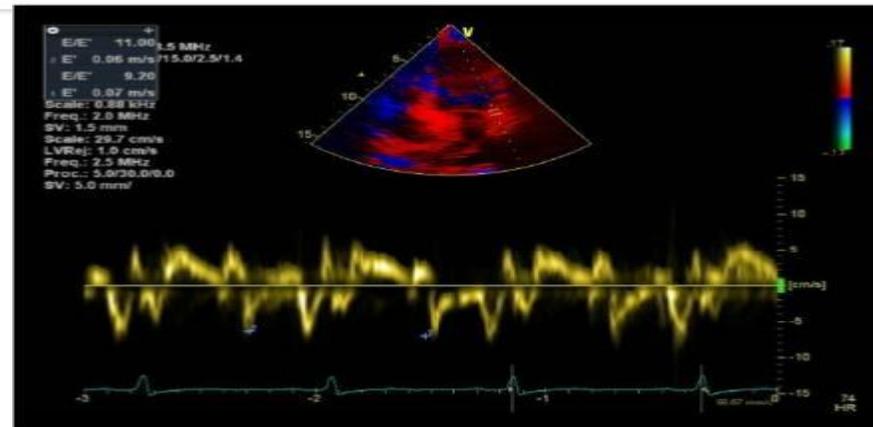
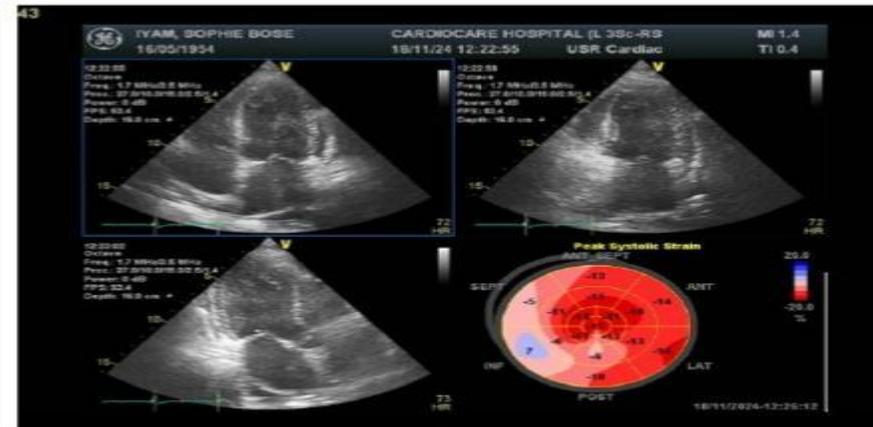


Image 4



Laboratory Results



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LABORATORY INVESTIGATION	RESULTS
Full Blood Count	WBC 10.87, PCV 37%, Plt 172
Electrolytes, Urea & Creatinine	Na131, K 3.8, Cl 98, HCO3 22, Urea 30, Cr 0.7
Uric Acid	4.1mg/dl
Lipid Profile	Total cholesterol : 289mg/dL, LDL 179mg/dL
Urinalysis	Protien +, Blood +, Ketone +
Troponin- Normal (<0.3)	23.17 ng/mL
ESR / CRP	40 mm/hr
HIV 1 &2, HBV, HCV,	Non-reactive
N Terminal Pro BNP: Normal (<300)	2537 pg/ml
HbA1C/RBG	4.8%. RBG: 132mg/dl

Our Experience- Coronary

- The predominant procedures were:
 - 233 (51.3%) diagnostic coronary angiographies
 - 90 (19.8%) percutaneous interventions



Intensive Care Unit



- IV Morphine 5mg
- IV Metoclopramide 10mg 8hrly
- IV Omeprazole 40mg 12hourly
- NTG spray 1 puff X 3doses
- SC Clexane 40mg dly
- Tabs Aspirin 300mg stat then 75mg dly
- Tabs Nicorandil 10mg bd
- Tabs Valsartan 80mg dly
- Tabs Atorvastatin 80mg daily
- Continuous ECG monitoring
- **For Urgent CAG/PCI**

Coronary Angiography



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Findings :

- 100 % Proximal RCA Occlusion
- Proximal LAD Stenosis 95%

Intervention :

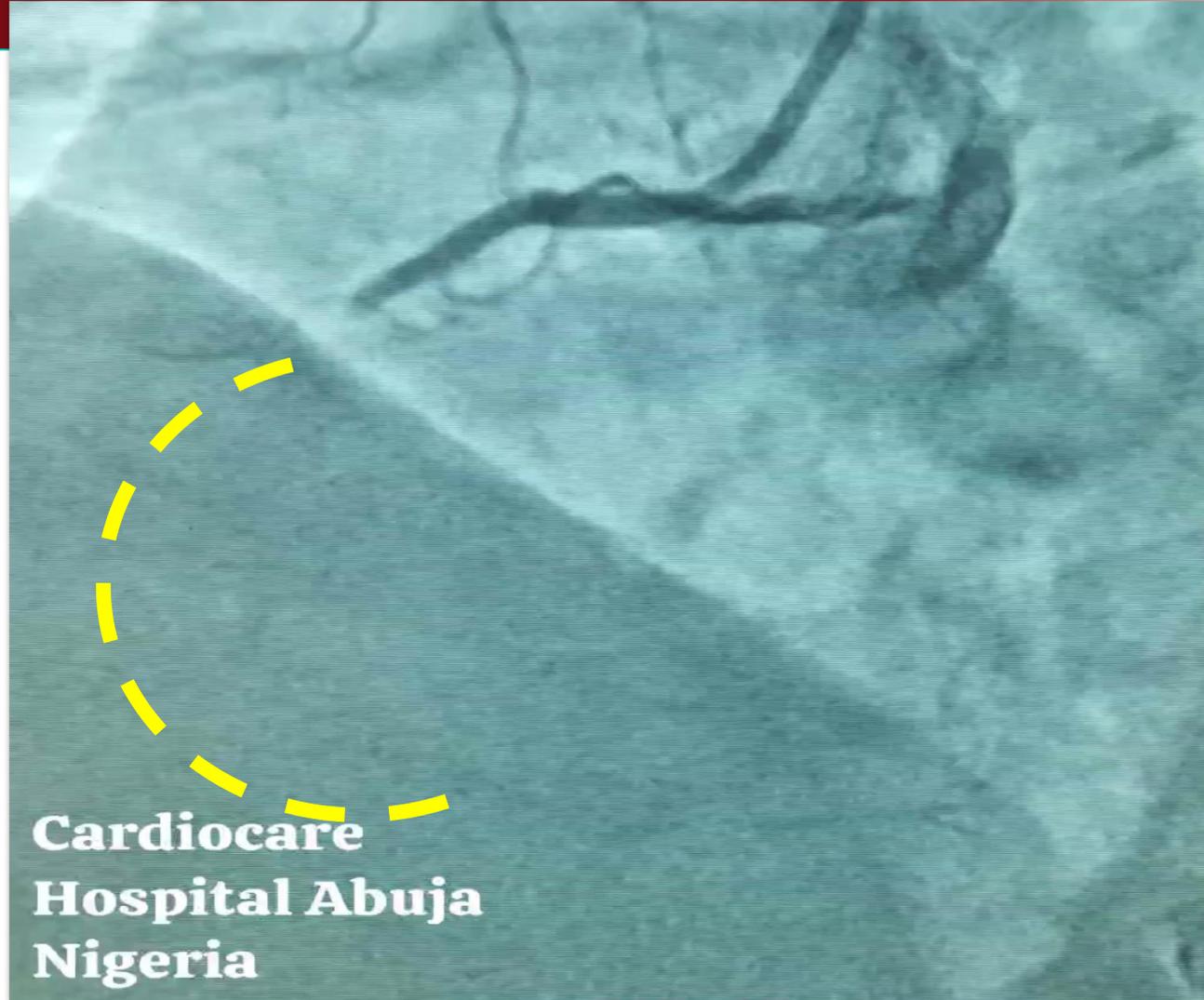
- 2 stents were deployed with balloon angioplasty to RCA
- LAD for review as guest became restless and uncooperative
(for review in 4-6 weeks)

Before Stenting



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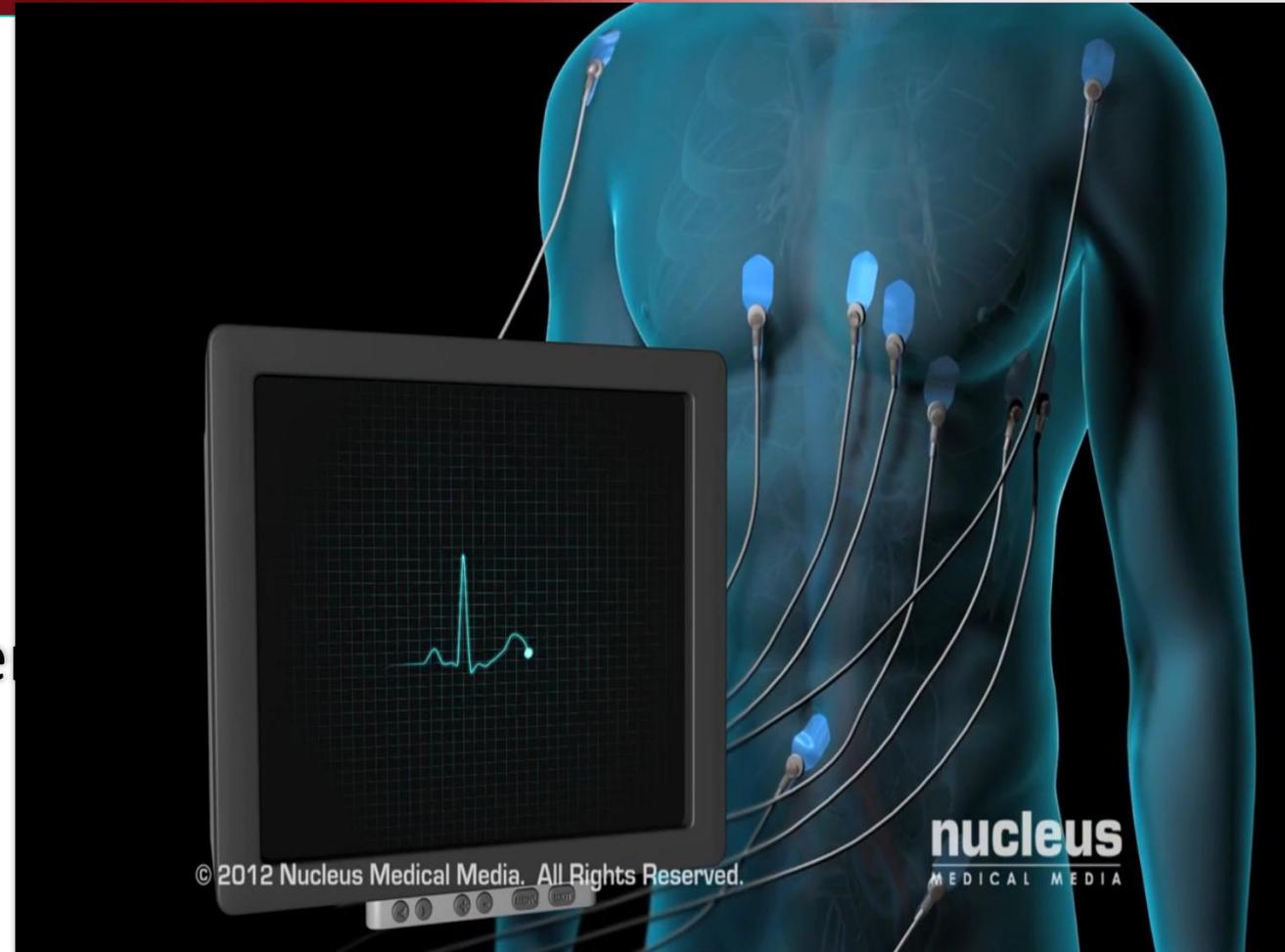
Our Experience- Cardiac Devices



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- 43 (9.5%) permanent cardiac devices consisting of:
 - 20 (4.4%) Pacemakers,
 - 14 (3.1%) Cardiac resynchronization devices, and
 - 9 (2.0%) implantable cardioverter defibrillators.

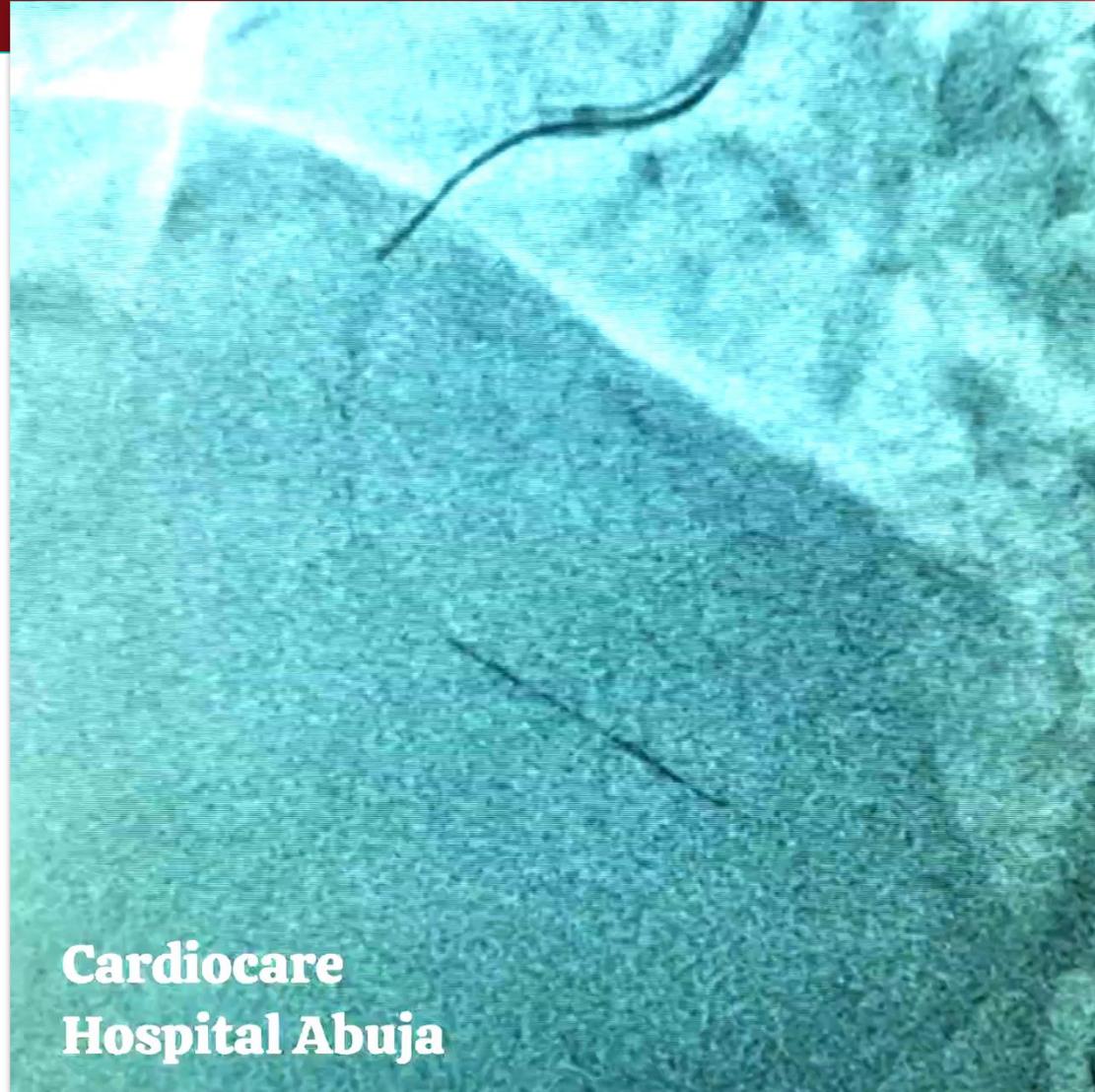


During Stenting



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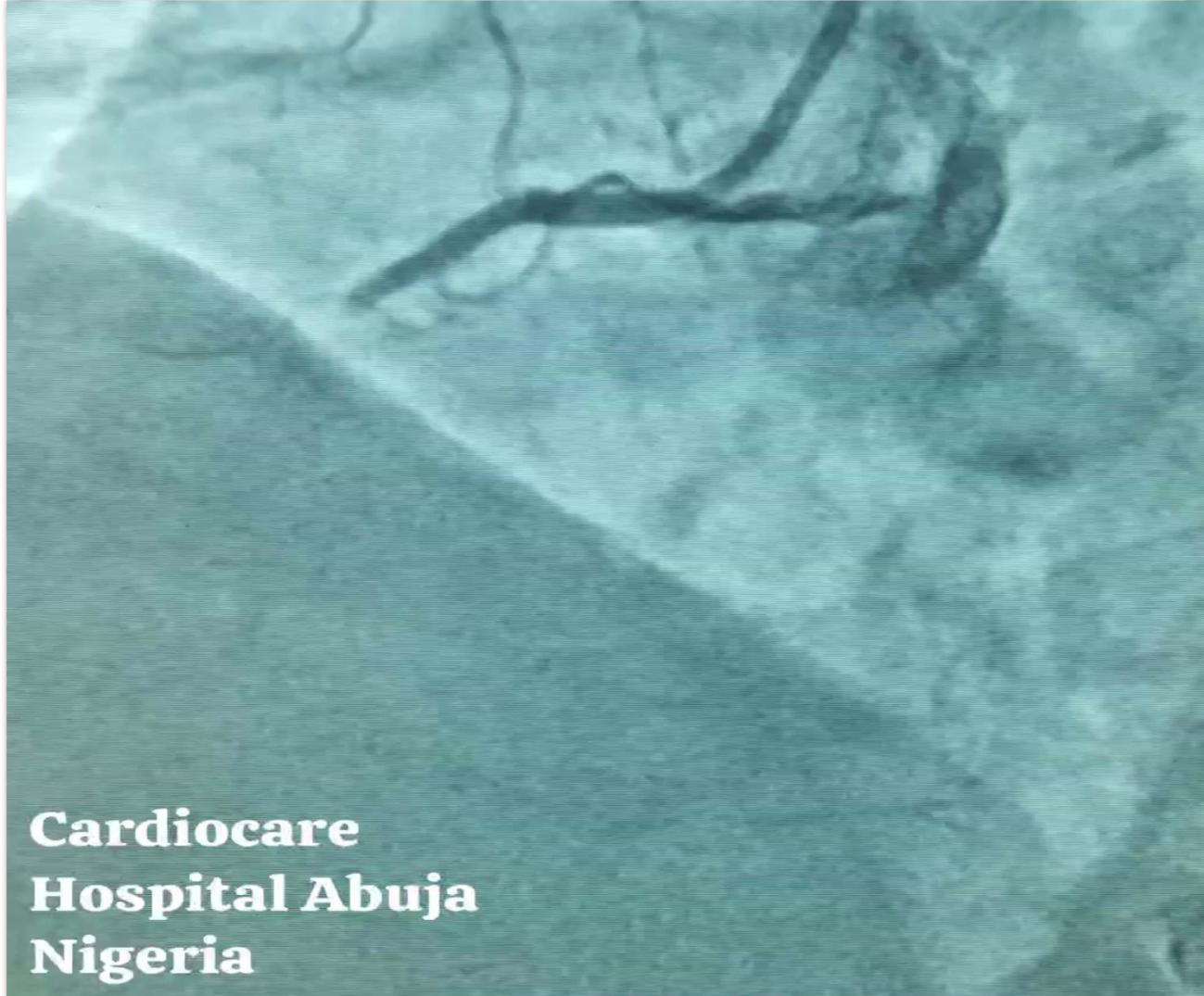
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After Stenting

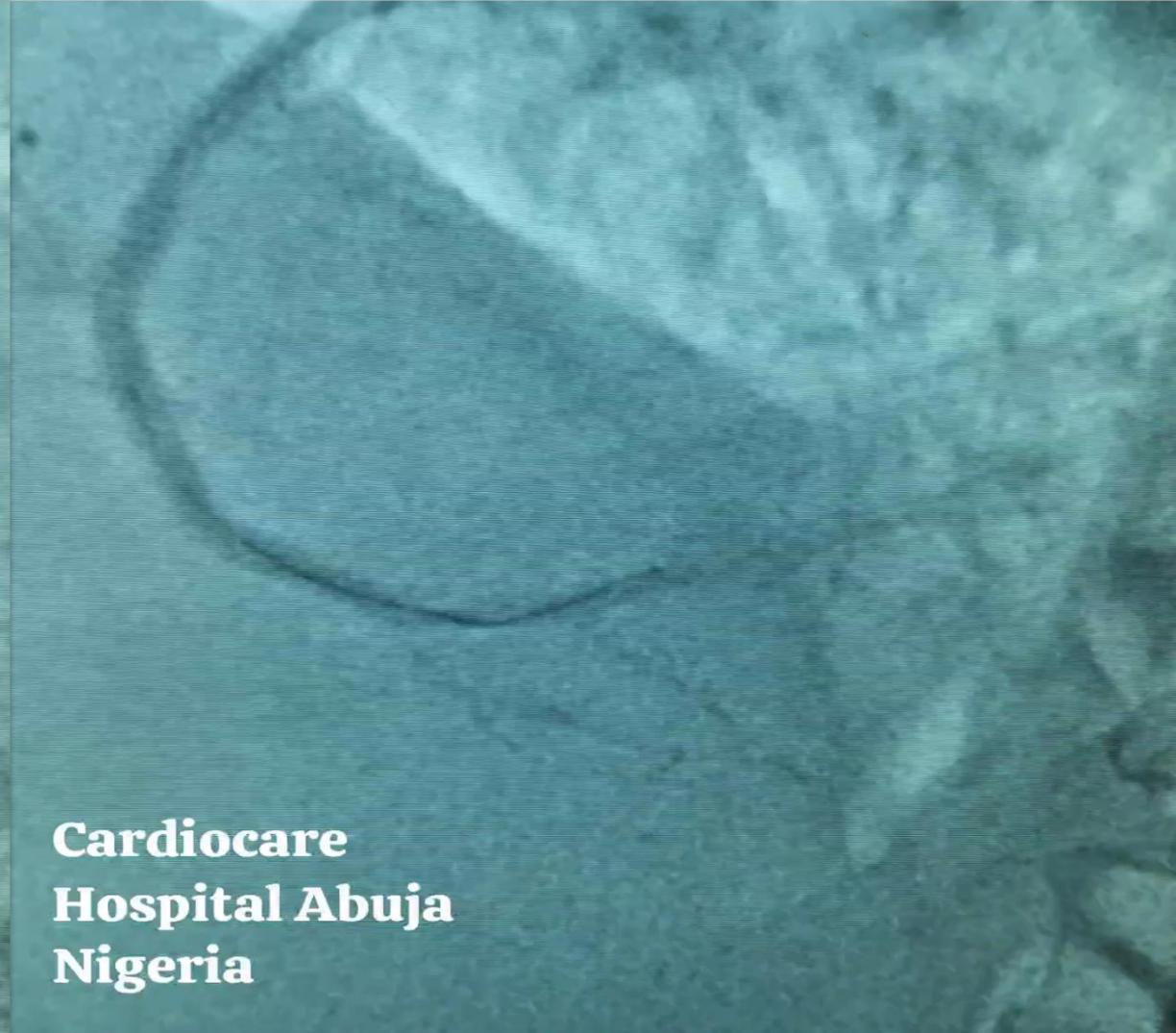


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Post procedure

- Procedure well tolerated
- Post procedure vital check showed PR: 74 bpm, BP: 130/78 mmHg, RR: 22cpm, SPO2: 97% in RA
- Was noted to be hypotensive few hours post procedure (BP: 88-97 /53-64mmHg)
- IV fluid resuscitation and anti hypertensive + NTG spray was withheld
- Commenced on inotropic support with dopamine
- Repeat ECG : No arrhythmias nor ST changes
- Repeat PCV : 35 %
- Bedside Echo : Mild pericardial effusion , fair ejection fraction, no tamponade
- FBS : 10 mmol/L

Indications for permanent pacing



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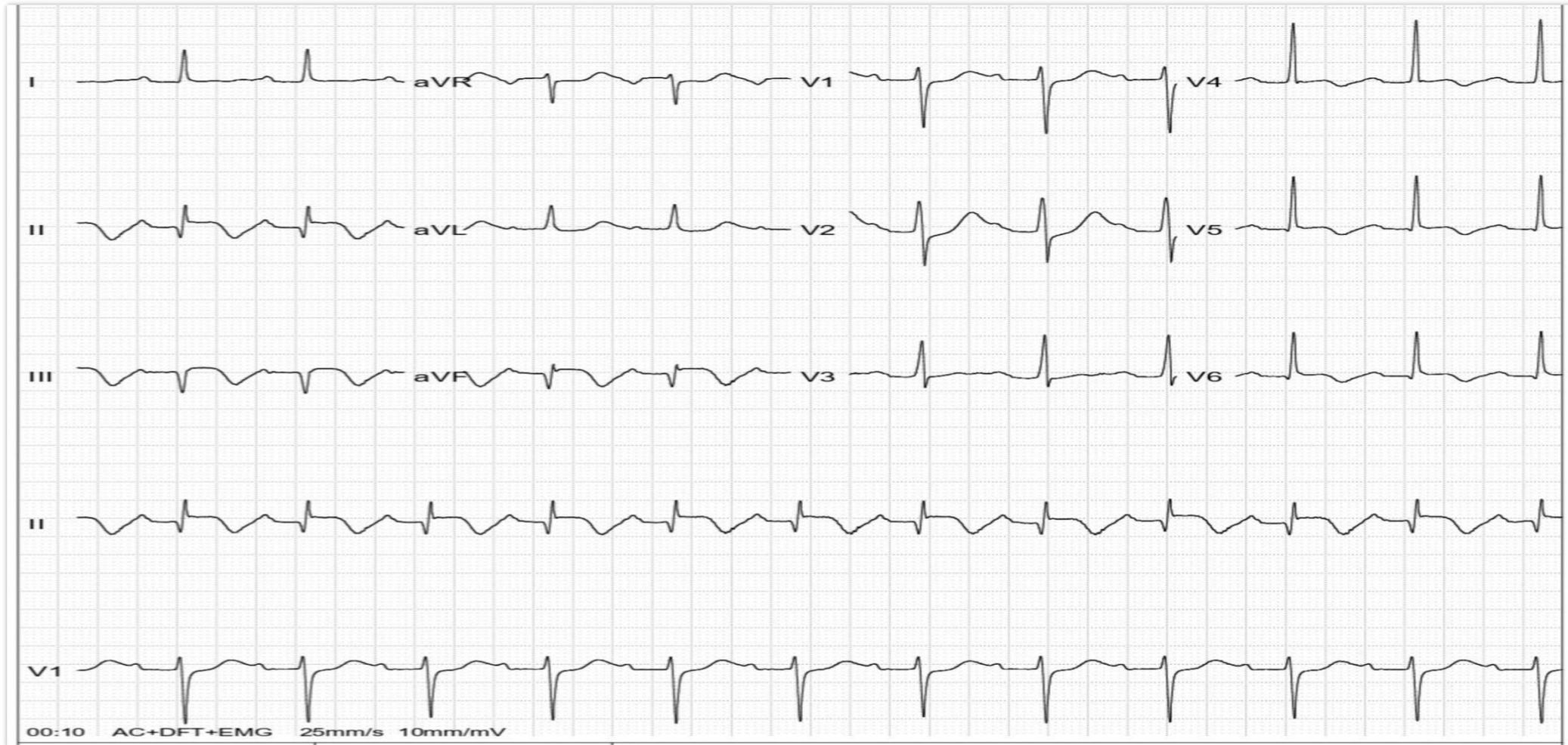
Reversing Medical Tourism

- In bradycardia caused by reversible etiologies, permanent pacing is not warranted.
- The **indication for pacing is based on the severity of bradycardia** rather than its etiology.
- Symptomatic sinus bradycardia as a result of medical therapy is an indication for permanent pacing if there are no alternative treatment options.
- Typically from:
 1. Sinus Node Dysfunction
 2. AV Block



- An Assessment of Inferior MI complicated by
- Acute pericarditis ? Dressler's Syndrome.
- Killips Class 2 HF
- Possible Cardiorenal syndrome

Post-procedure ECG



Day 2-4



- Chest pain reduced significantly
- No new complaints
- Urine output improved from 1-2mls/kg/hour to 3-4mls/kg/hour
- Inotrope support was down-titrated as BP permitted, then discontinued as BP normalized
- Femoral sheath removed
- Commenced on IV antibiotics
- Transferred to ward

How we often choose Pacemakers?



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- Dual Chamber (Atrium & Vent)
 - Second degree or Third-degree AV block
 - Potential AV block now or in future
- Consider CRT-P if QRS is also prolonged and heart failure criteria for CRT
- Single Chamber Ventricular Pacemaker
 - Chronic AF when no AV may not be needed

Discharge



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- Was discharged on oral Antibiotics and routine medications.
- Was placed on HFSLF diet and counselled by dietitian on adequate diet
- To see in clinic in 3 days time
- Scheduled for CAG + stenting of LAD in 2-3weeks

Follow-up



- Guest presented for follow up 3days after discharge.
- Had no new complains and was doing well.
- Pulse was 80bpm, BP - 122/78mmHg, HS S1 and S2
- Scheduled for CAG + stenting of LAD in 2-3weeks
- To see in clinic in 1 week

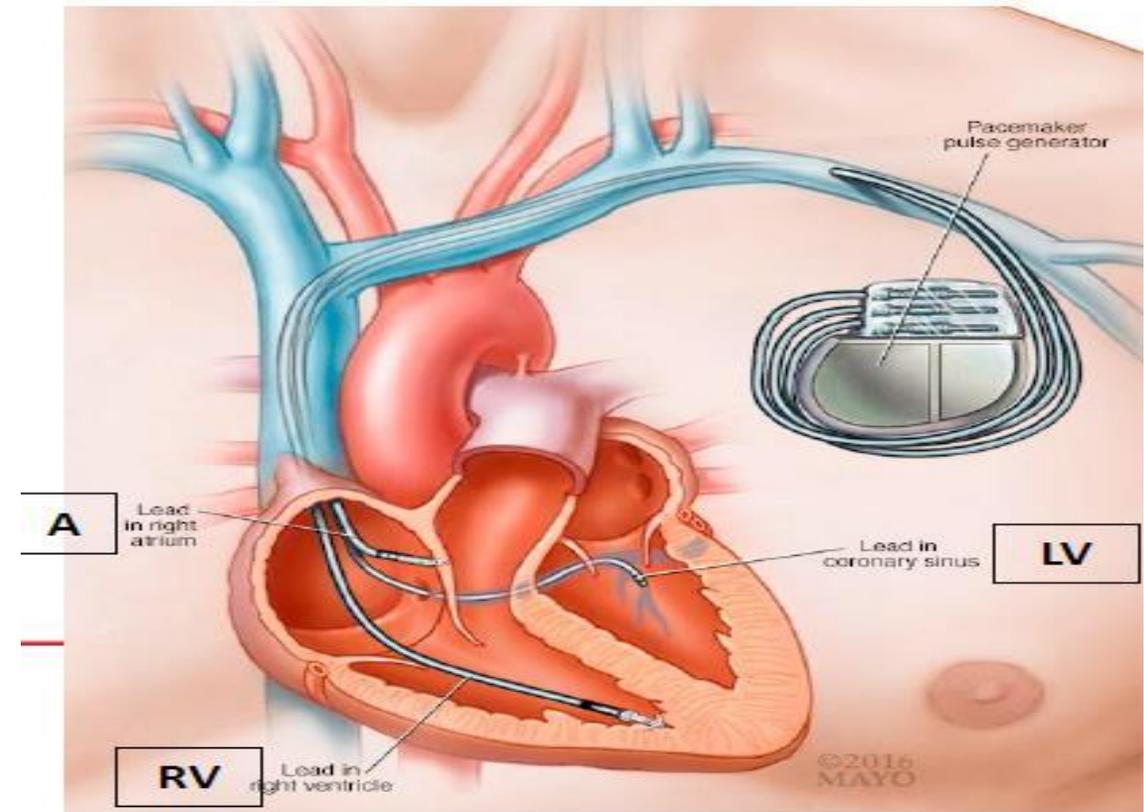
Common Indications for Cardiac Resynchronization Therapy (CRT)



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- After Optimal Medical Therapy for at least 3/12, symptomatic HF (NYHA ≥ 2) and $<EF < 35\%$
 - LBBB and a QRS duration ≥ 150 ms (1A), and a class I indication (LoE B)
 - LBBB and a QRS width of 130–149 ms (1B)
 - QRS complex ≥ 150 ms and non-LBBB (class 2a)
 - QRS complex 130-149ms and non-LBBB (class 2b)



Follow up



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- Presented 1week after last follow up
- Complains of mild tenderness at sight of femoral cannulation
- Reassured, do warm fomentation and to continue routine drugs
- For LAD stenting
- To see in 2 weeks

THANK YOU