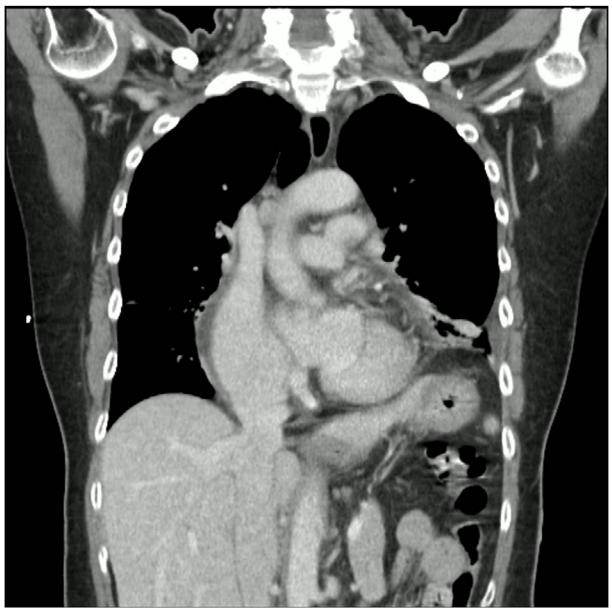
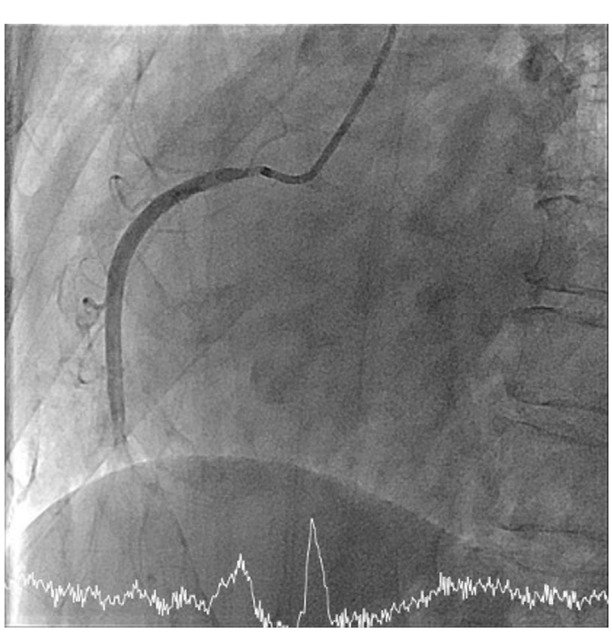
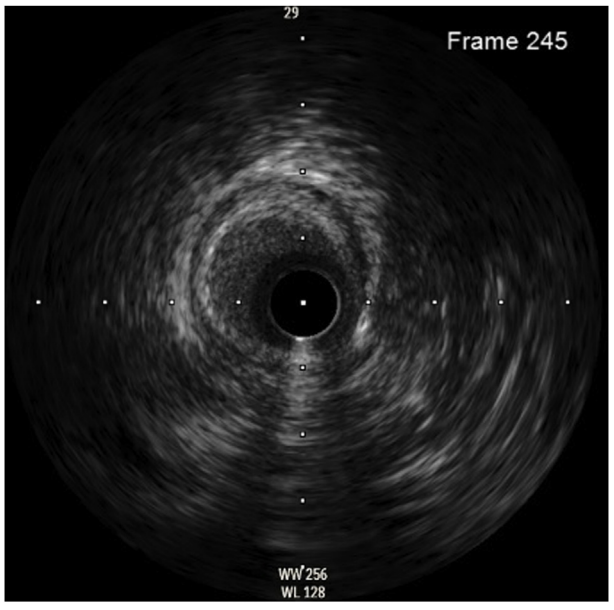


Relevant Catheterization Findings. Acute coronary syndrome due to coronary artery compression was suspected. Coronary angiography was performed and revealed 80%stenosis at the ostium of the right coronary artery (RCA) and patent left coronary artery.



INTERVENTIONAL MANAGEMENT

Procedural Step. Radial access was chosen in the procedure. The RCA was engaged with a 6 Fr JR4 SH guide catheter and the lesion was passed with a Sion wire. Intravascular ultrasound (IVUS) showed external compression of the RCA ostium causing lumen encroachment from the 9-12 o'clock direction. We stented the RCA from the ostium to the proximal segment with a 3.5 x 19 mm graft stent and post-dilated with a 3.5 x 15 mm non-compliance balloon at 24atmospheres. After stenting, IVUS was checked, and good stent expansion was confirmed. There was TIMI 3 flow with a residual 20-30% stenosis in ostial RCA. The patient was symptom-free during the procedure and no acute post-procedure complication was noted.



Conclusions. This is a rare case of acute coronary syndrome due to external coronary artery compression by an anterior mediastinal tumor. CT-guided biopsy confirmed the diagnosis of thymic cancer. We treated this patient successfully with coronary stenting so that the patient could receive chemotherapy and radiotherapy smoothly.

TCTAP C-005

Conundrum of a 'Primary' Angioplasty: Provisional Stenting of Left Main Stem / Left Anterior Descending During STEMI With Double Bifurcation

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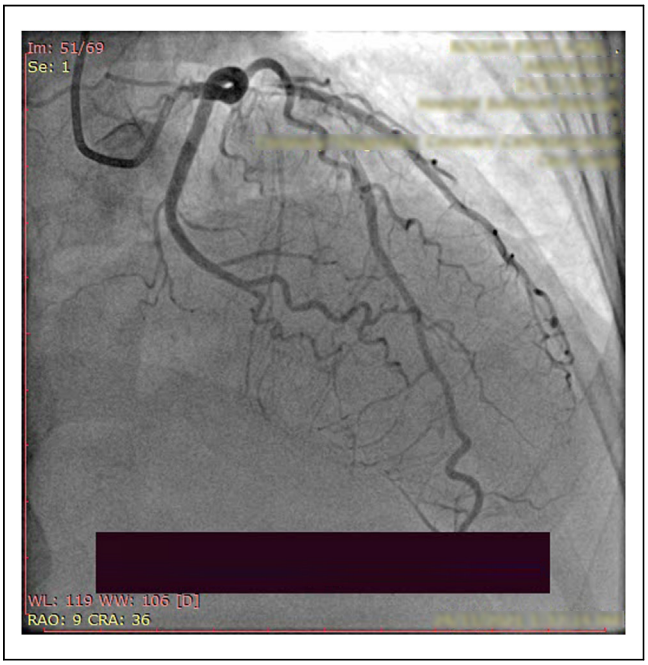
CLINICAL INFORMATION

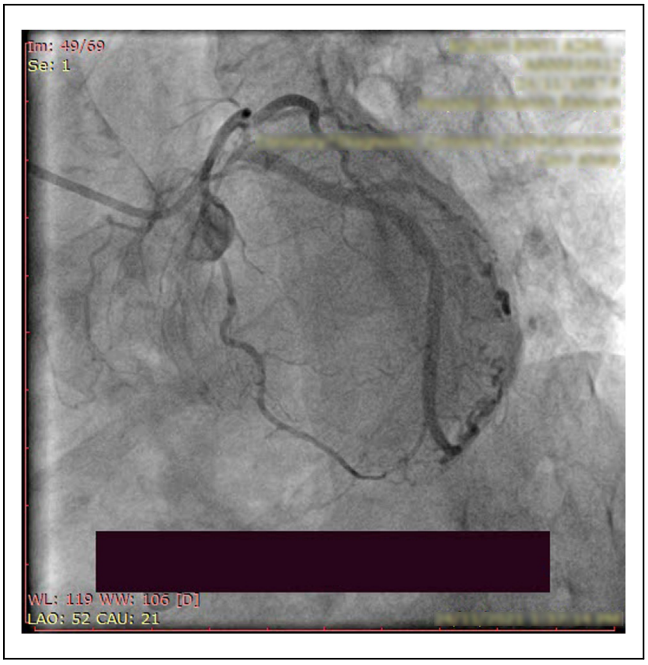
Patient Initials or Identifier Number. R

Relevant Clinical History and Physical Exam. A 64-year-old lady with underlying dyslipidemia presented to our emergency department with typical chest pain. Immediate electrocardiogram was performed which showed sinus rhythm, ST elevation at lead 1, aVL and V1, hyperacute T wave at V2 till V3 with ST depression at leads II, III and aVF. Hence a diagnosis of acute anterolateral myocardial infarction, Killip 1 was given and urgent referral to cardiologist was made. Subsequently, she was subjected for primary angioplasty.

Relevant Test Results Prior to Catheterization. Blood results showed sodium of 134 mmol/L, potassium of 3.5 mmol/L, urea of 3.2 mmol/L and creatinine of 67 mmol/L. Liver enzymes were within normal limits with aspartate transaminase of 38 U/L and alkaline phosphatase of 91 U/L. Creatinine kinase was 330 U/L but increased to 2861 U/L during subsequent day. In addition, COVID-19 RTK antigen was negative.

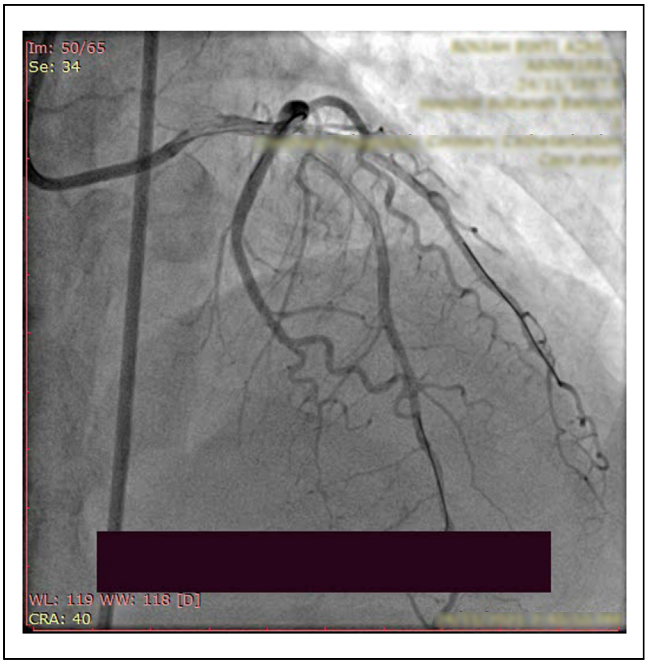
Relevant Catheterization Findings. Coronary angiogram revealed mild disease at proximal right coronary artery and proximal left circumflex. Minimal disease was noted at distal left main stem, but severe disease was observed from proximal left anterior descending till mid left anterior descending. Heterogenous plague suggesting thrombus was seen at ostial first diagonal as well.

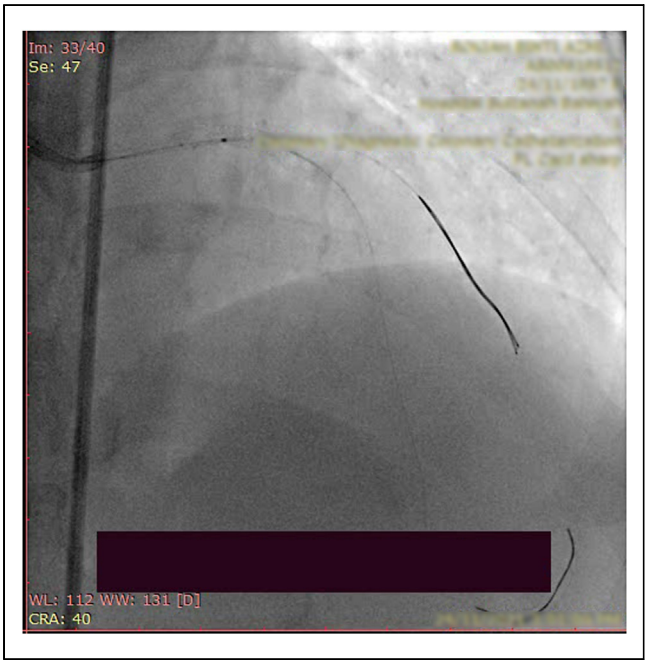


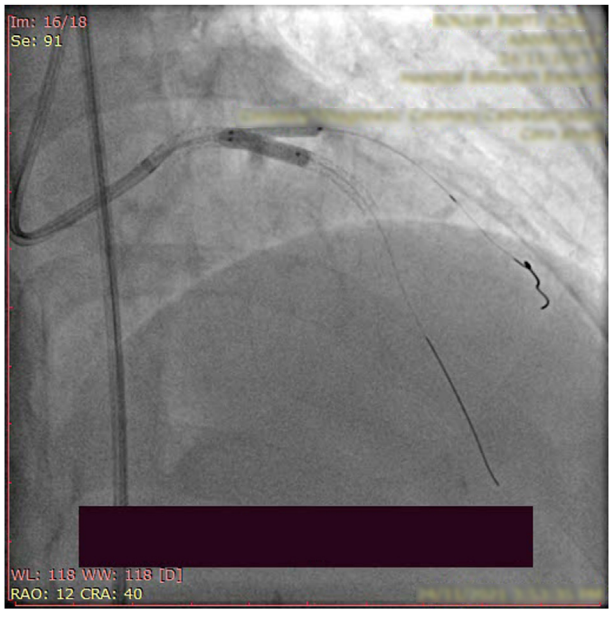


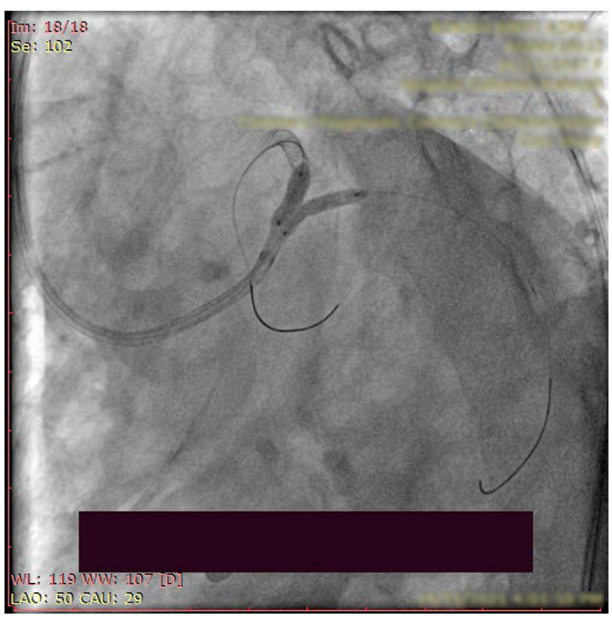
INTERVENTIONAL MANAGEMENT

Procedural Step. Right femoral assess was obtained with 7Fr sheath, and SL 3.5 7Fr guiding catheter was engaged to left coronary artery. Intracoronary heparin and tirofiban were given prior to wiring. First diagonal was wired with Sion Blue while left anterior descending was wired with Runthrough Floppy. Post-wiring both vessels, coronary flow remained TIMI 3 and hence we decided to proceed with IVUS. From IVUS, noted fibrous elastic plague with heavy thrombus burden. Intracoronary streptokinase was given and noted improvement of thrombus from IVUS. BMW wired to left circumflex. Lesion predilated with scoring balloon and associated with no reflow events, resolved post vasodilators. Left main stem was stented with Onyx 3.5 x 26 mm and deployed at 16 atm. Both side branches wires were rewired into same branches via Crusade microcatheter. LMS stent was post dilated with NC Euphora 4.5 mm at nominal pressure. Noted impingement of both ostium diagonal and circumflex branches. Balloon kissing inflation was performed for both LAD/Diagonal bifurcation and LMS/LAD/ circumflex bifurcation. POT was performed post balloon kissing inflation with NC Euphora 3.5 mm and 4.5 mm for both LAD and LMS respectively. Next, IVUS was repeated for mid LAD stent length and Onyx 3.0 mm X 15 mm was deployed at nominal pressure. IVUS repeated and noted under-expansion of overlapped segments and post dilated with NC Euphora 3.0 mm at high pressure.









Conclusions. Our clinical vignette demonstrated few learning points including utilization of IVUS during primary angioplasty. Understanding of plague characteristic ensures adequate stents expansion especially with fibro elastic plague. In addition, we also demonstrated several precautions in dealing with bifurcation lesions including usage of double lumen microcatheter for wiring the side branches. Even though we opted for provisional stenting, balloon kissing inflation played pivotal role in preserving flow into side branches.

TCTAP C-006

Emergency Complex Left Main Bifurcation PCI in a Case of NSTEMI With Pulmonary Edema and Cardiogenic Shock: Should We Strive for Angiographic Perfection in Unfavorable Anatomy?

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CLINICAL INFORMATION

Patient Initials or Identifier Number. SM

Relevant Clinical History and Physical Exam. This 77-year-old male patient presented to ED with complaints of dyspnea, cough and chest discomfort of 3 days duration which worsened on the day of admission. He has a known case of hypertension, diabetes, dyslipidemia, bronchial asthma and CAD with history of coronary intervention in the remote past, the details of which were not available.

He was tachypneic with respiratory rate 38/min, SpO2 86%, HR 111 bpm, BP 91/61 mmHg.

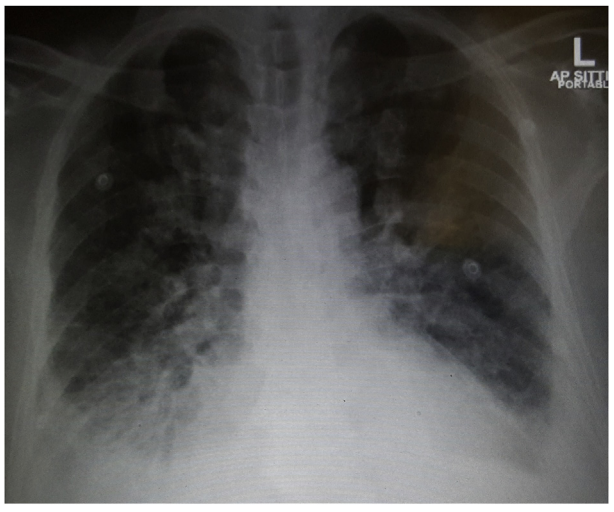
He had bilateral rhonchi with crepitation and muffled heart sounds.

Relevant Test Results Prior to Catheterization. ECG showed sinus tachycardia with diffuse ST-T changes in inferolateral leads and poor R progression in anterior leads.

Blood investigations revealed acute kidney injury on CKD, elevated cardiac troponin and NT-proBNP.

Sodium 136 mmol/L
Potassium 3.7 mmol/L
Creatinine 187 micromol /L
Urea 12.8 mmol/L
eGFR 33 mL/min/1.73m2
Hb 12.2 gm/dL
Troponin 9.43 micrg/L
NT-pro BNP 10388 ng/L

Echo: mid to distal septum, anterior wall and apex akinetic. Apical inferior and posterolateral wall hypokinetic.



Relevant Catheterization Findings. LMCA: Tapering of distal left main with 60% stenosis.

LAD:
Severe (99%) stenosis of ostioproximal LAD.
Severely calcified vessel throughout.
Severe diffuse tubular stenosis throughout with total occlusion distally.
Diagonals-severe diffuse disease.

LCX:
Severe (95%)ostial stenosis
Moderate to severe stenosis of proximal segment at a sharp bend.