

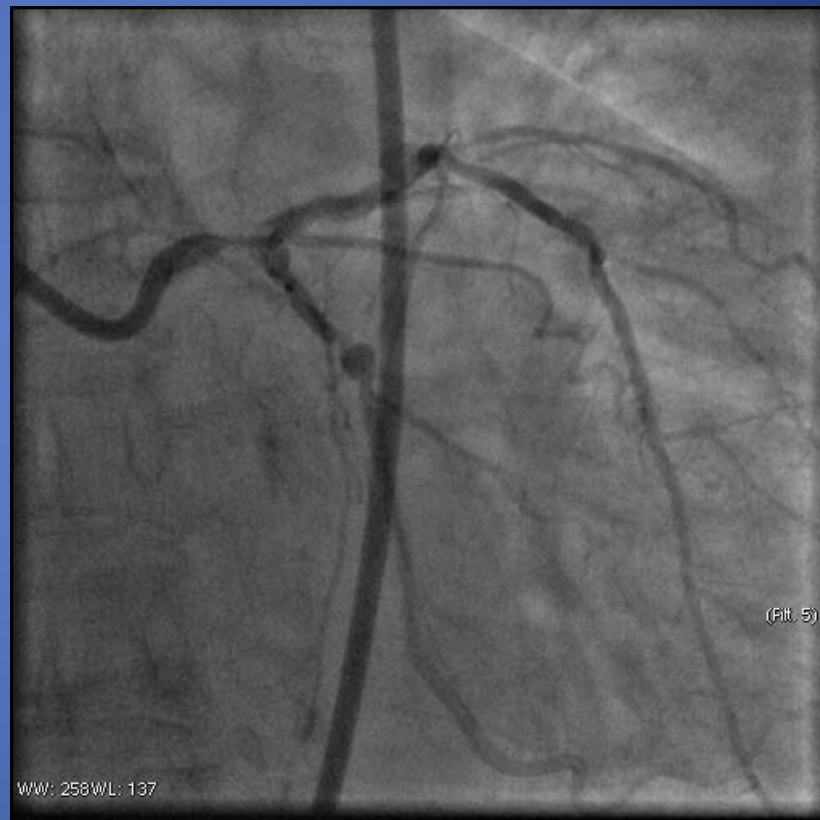
Guiding Catheter Induced Aortic Dissection In True Left Main Trifurcation Stenosis In An Elderly Woman

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- 69 yo lady, angina pectoris, CCS III
- Risk factor: dyslipidemia
- ECG: SR, normal

- Coroangiography: right radial approach





(Fit. 5)

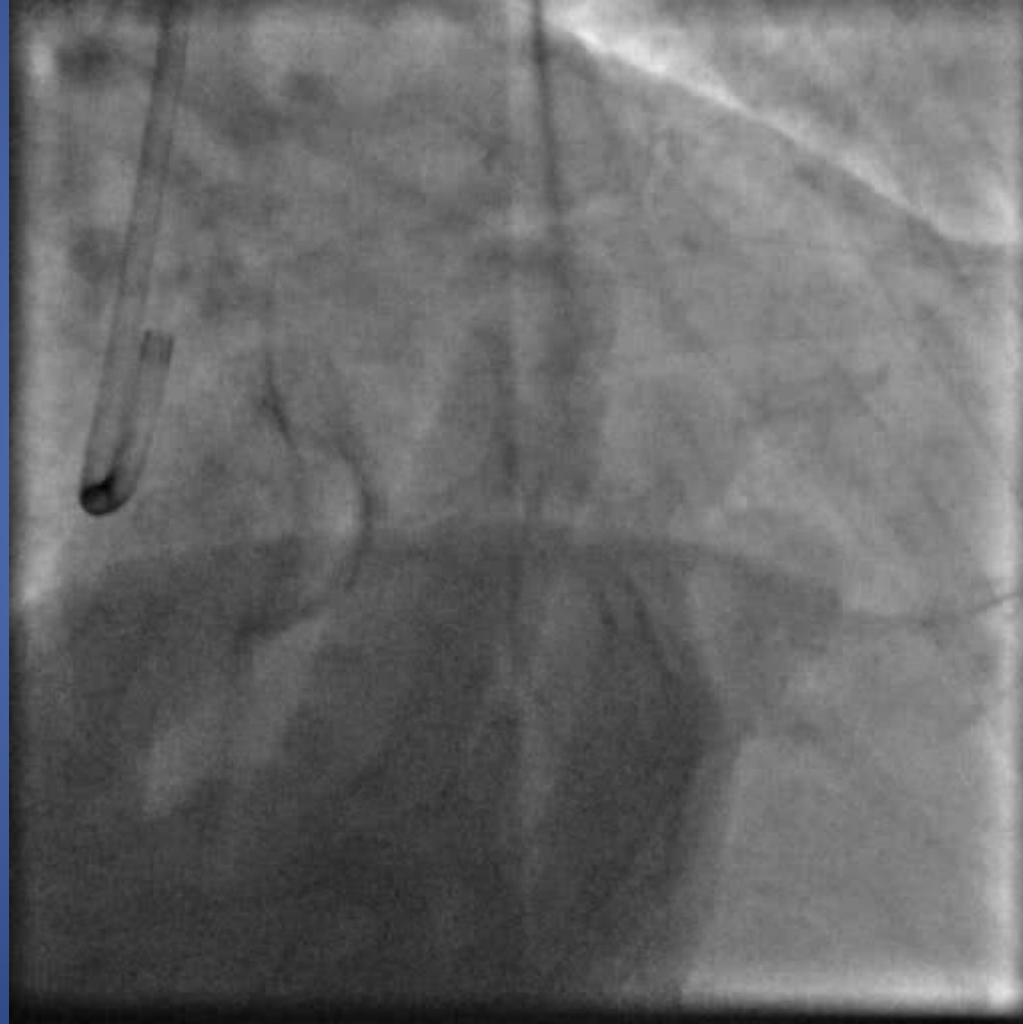
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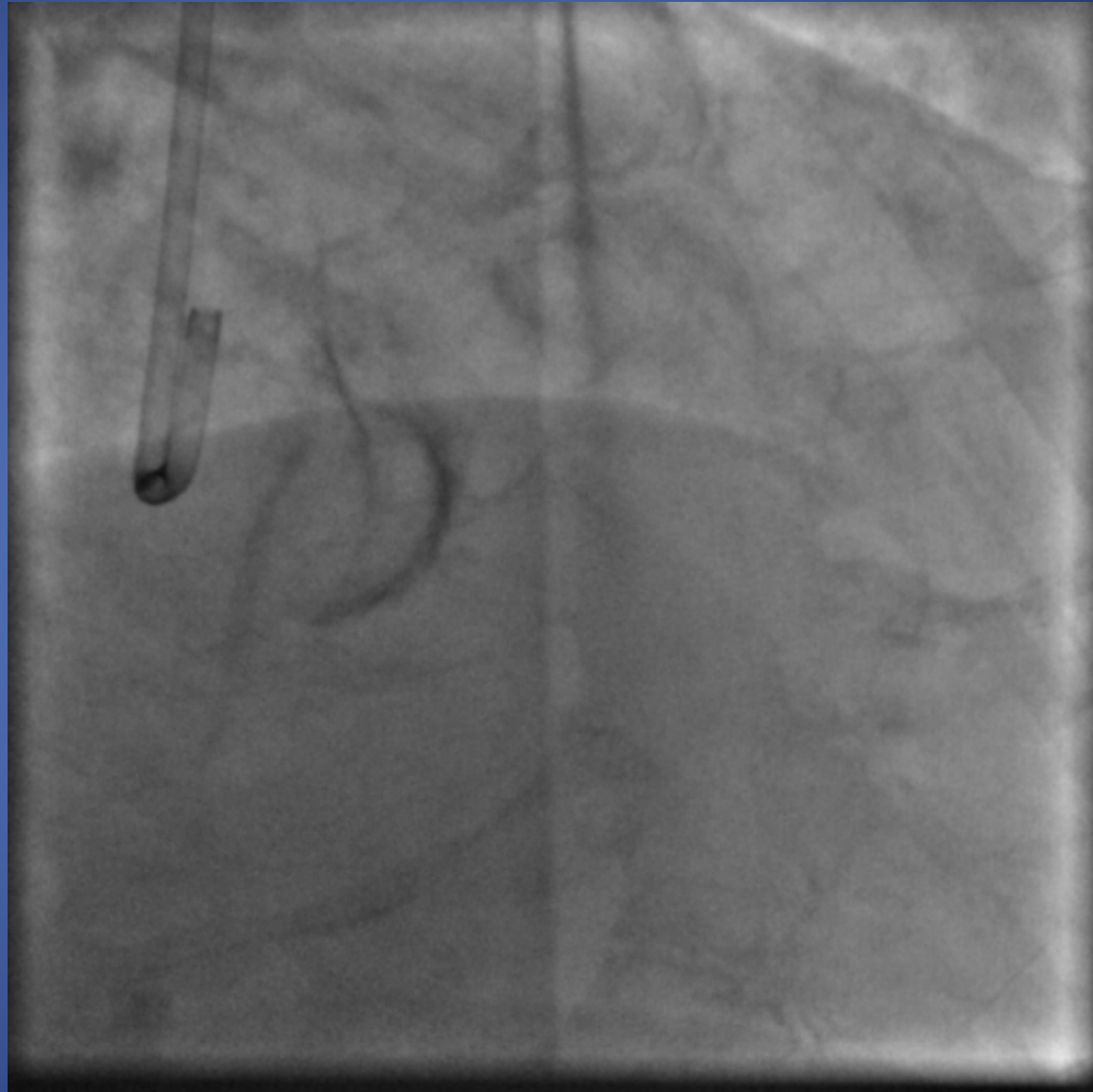
- SYNTAX score = 35
- Euro score = 7
- She declined CABG

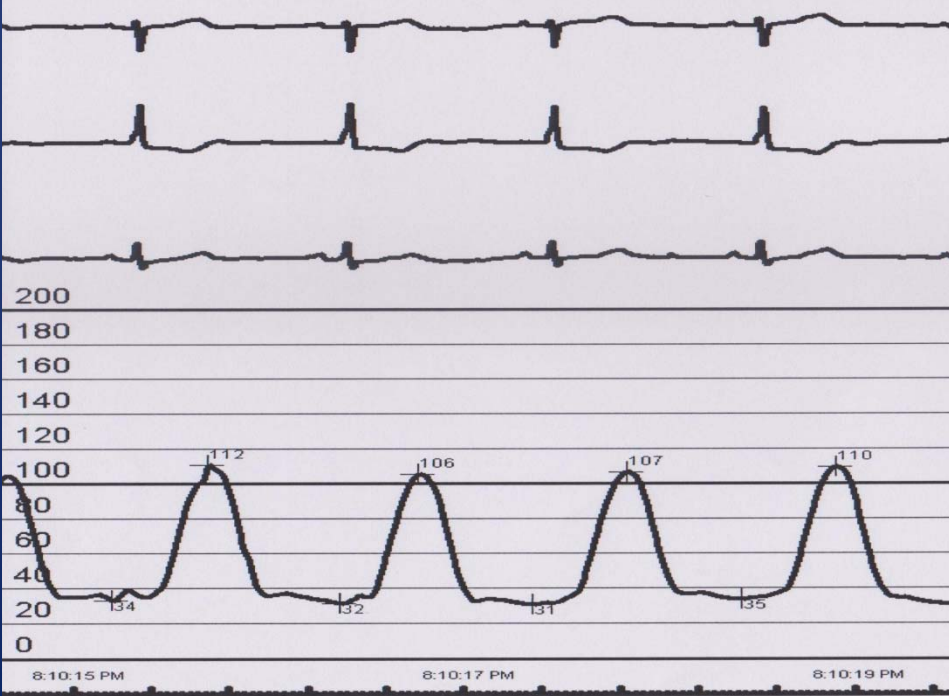
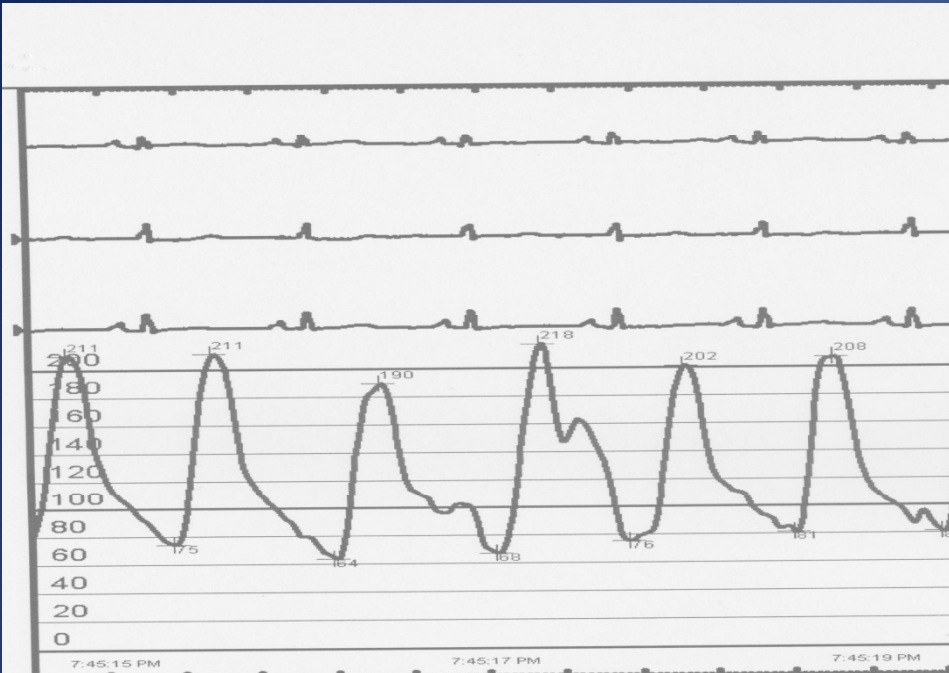
- PCI with the right femoral approach
- 8F extra backup guiding catheter and then change to JL guiding catheter



Sudden severe chest pain
with drop in BP







What is the Diagnostic ?

Acute Type A (Proximal) Aortic Dissection

- Highly lethal, mortality rate 1-2% per hour after symptom onset
- Most common causes of death: aortic rupture, stroke, myocardial infarction, circulatory failure, cardiac tamponade, or visceral ischemia
- Iatrogenic aortic dissection carries a mortality of 35%
- Surgical emergency !!!
- Mortality:
 - Medical Rx : 20%/24 hrs; 30%/48 hrs; 40%/day 7; 50%/1 month
 - Surgical repair: 10%/24 hrs; 13%/7 days; ≈20%/30 days

Risk Conditions for Aortic Dissection

- Long standing hypertension:
 - Smoking, dyslipidemia, cocaine / crack
- Connective tissue disorders:
 - Hereditary fibrillinopathies:
 - Marfan Syndrome, Ehlers-Danlos Syndrome
 - Hereditary Vascular Diseases:
 - Bicuspid aortic valve, Coarctation
 - Vascular Inflammation:
 - Giant Cell Arteritis, Takayashu arteritis, Behçet's disease, Syphilis, Ormond's disease
- Deceleration trauma (car accident, fall from height)
- Iatrogenic factors:
 - Catheter / instrument intervention
 - Valvular / aortic surgery
 - Side- or cross-clamping/aortotomy, Graft anastomosis, Patch annuloplasty, Cannulation site, Aortic Wall fragility

Clinical

- Acute Chest pain
- Unstable Hemodynamics
(Hypo/Hypertension)
- Neurology deficit, syncope
- Dyspnoea
- Dysphagia

Management

- hemodynamic compromise, mental status changes, neurologic or peripheral vascular changes, and development or progression of carotid, brachial, and femoral bruits.. Beta-blockers (target 60-80 beats per minute). The target systolic blood pressure should be 100-120 mm Hg. decision.
- Urgent surgical intervention .

What would you do ??

1. Neutralize the anticoagulation effect with protamine ?
2. Call the cardiac surgeon ?
3. Check whether the LM is involved in the dissection process ? Put covered stent in the LM ostium ?
4. Consider pericardiocentesis ? Fluoroscopy guided ? Echo-guided ?

Is this the best time to refer the case for surgery ??

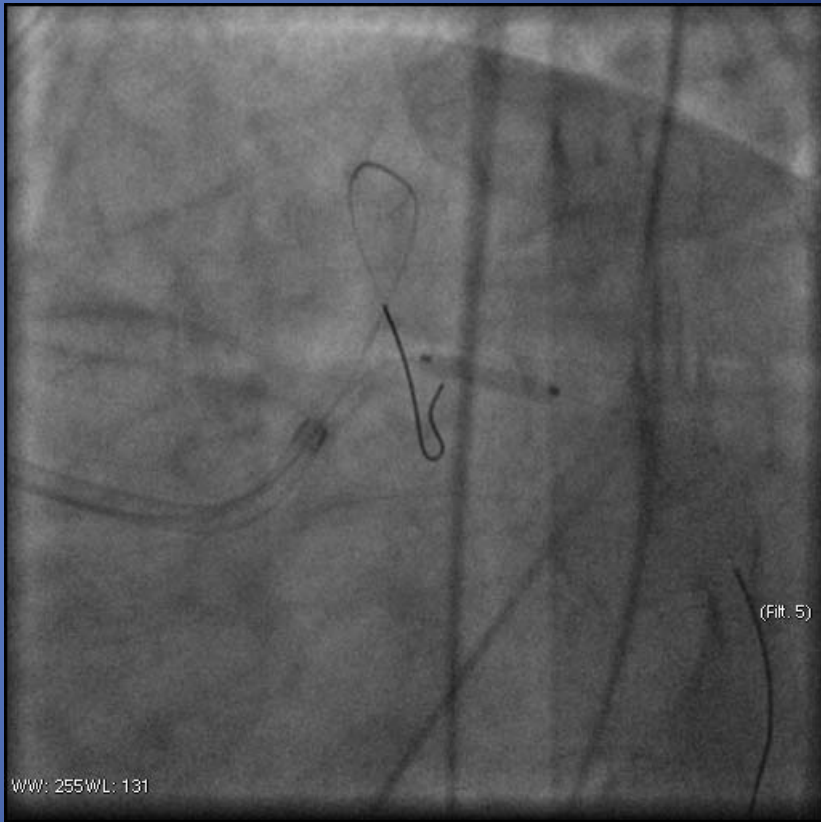
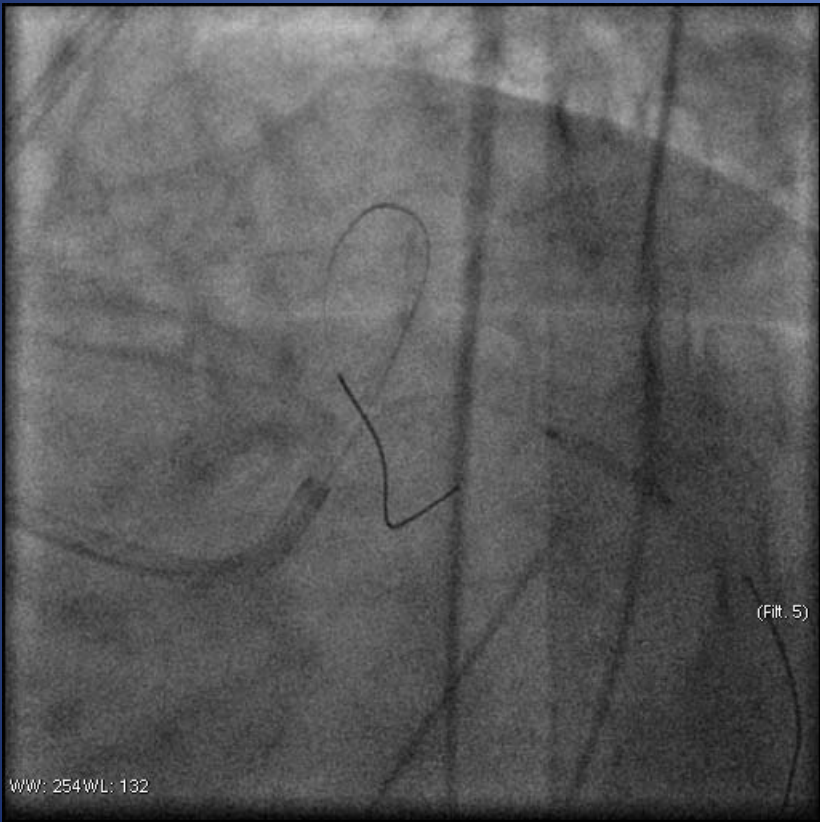
Surgery is generally advised without delay !!

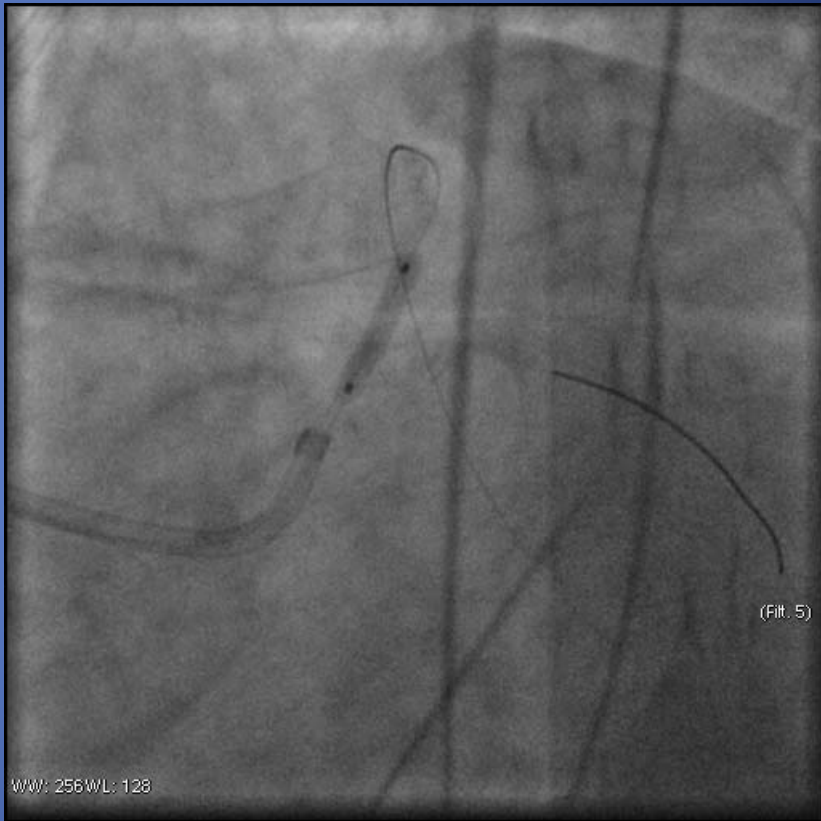
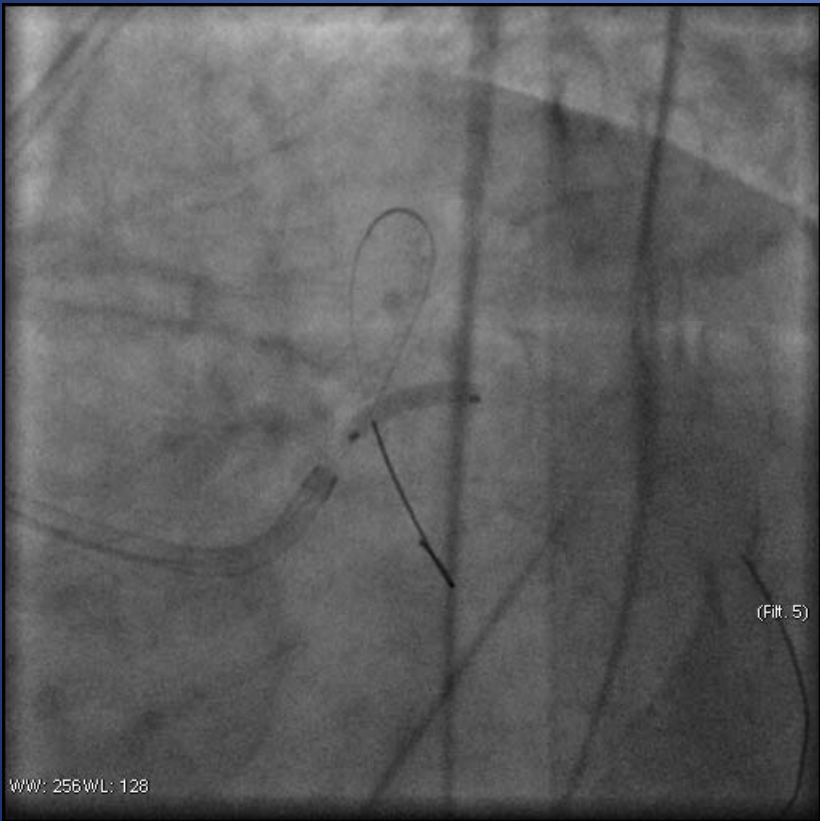
- The aim of surgery is to prevent or treat complications (rupture, pericardial effusion, coronary or cerebral flow obstruction, relieve of aortic regurgitation, etc)
- Implantation of a composite graft in the ascending aorta with or without implantation of the coronary arteries
- Operative mortality rate is 15-35% even in centers of excellence*
- Mortality may be much higher in this case (antiplatelet & anticoagulation therapy)

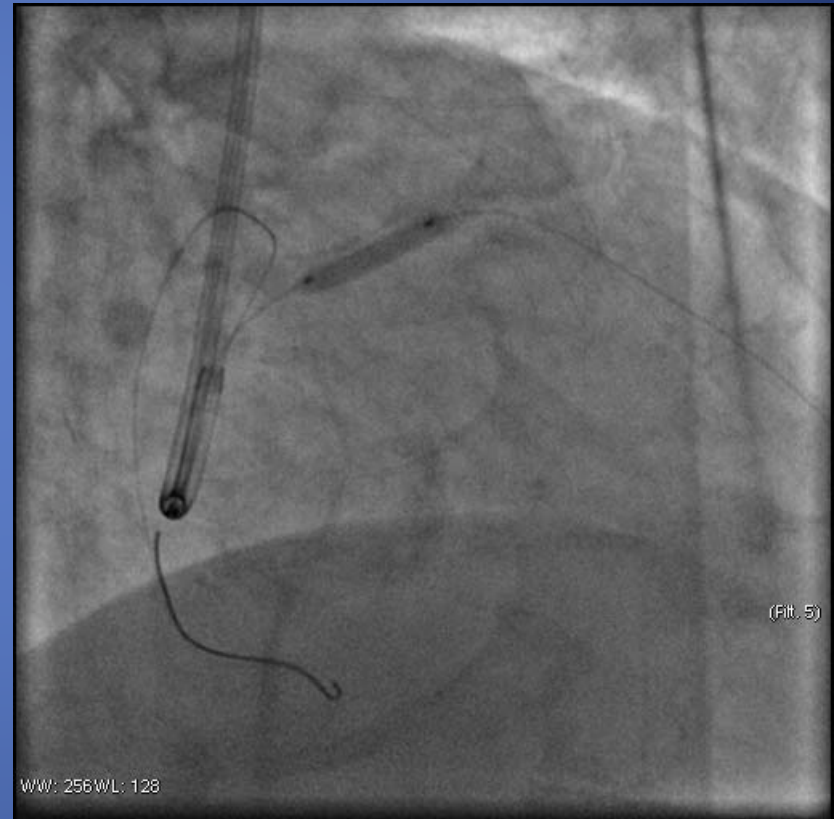
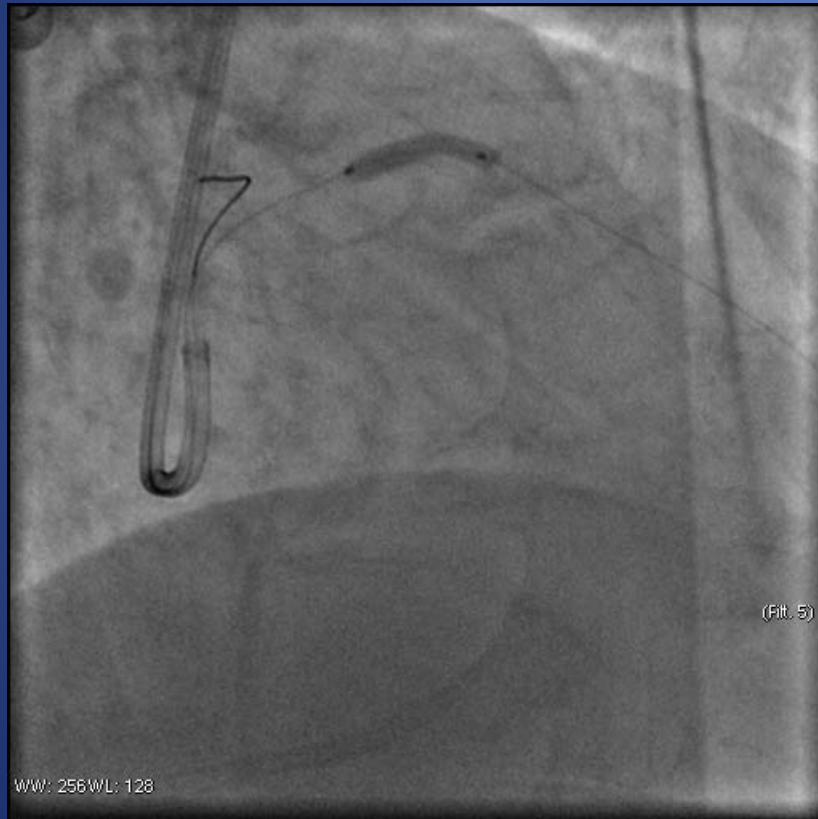
**Nienaber CA, Eagle KA, Circulation 2003;108:7732-8*

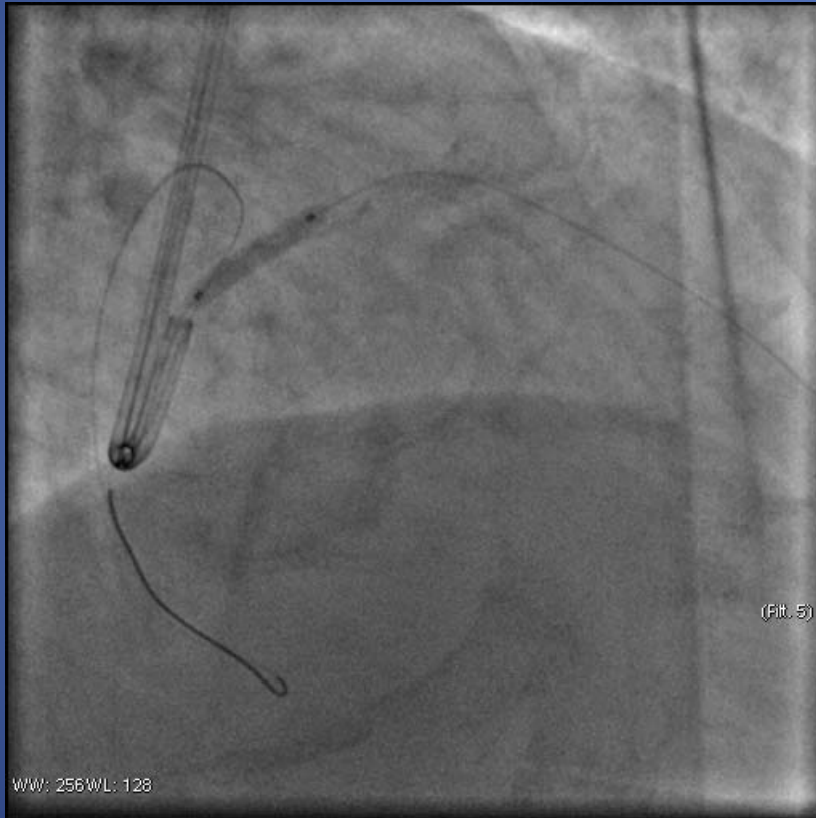
Strategy

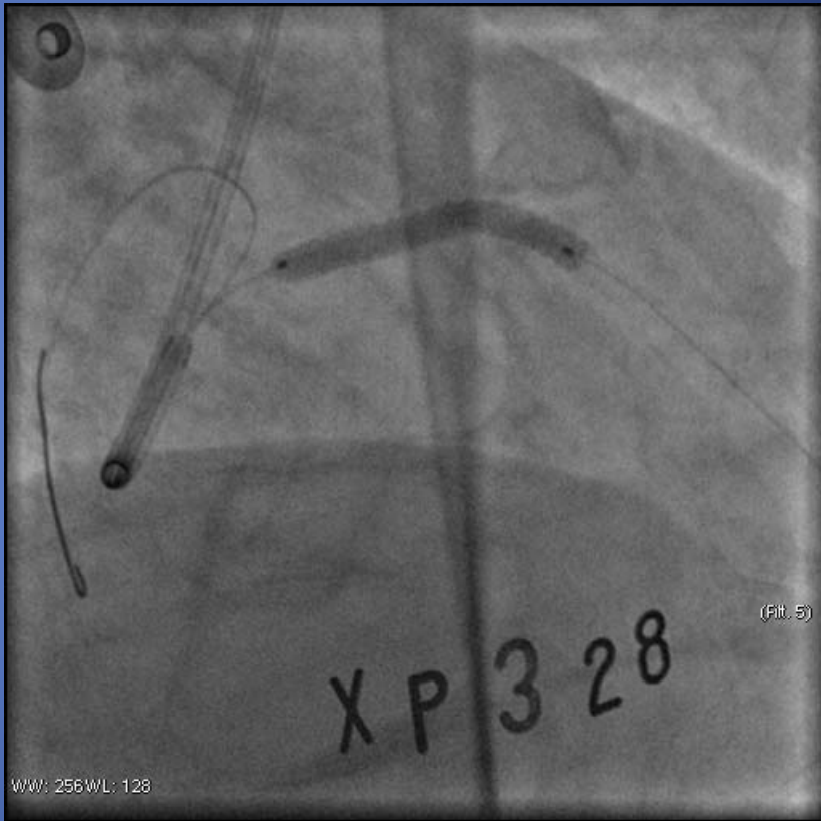
- stabilization the hemodynamic (inotropic, fluid etc)
- Inserted the wire in LM-LAD and LM-LCX
- Try to fix the ostium LM,(entry point) but the stent could not be advanced cross the LM

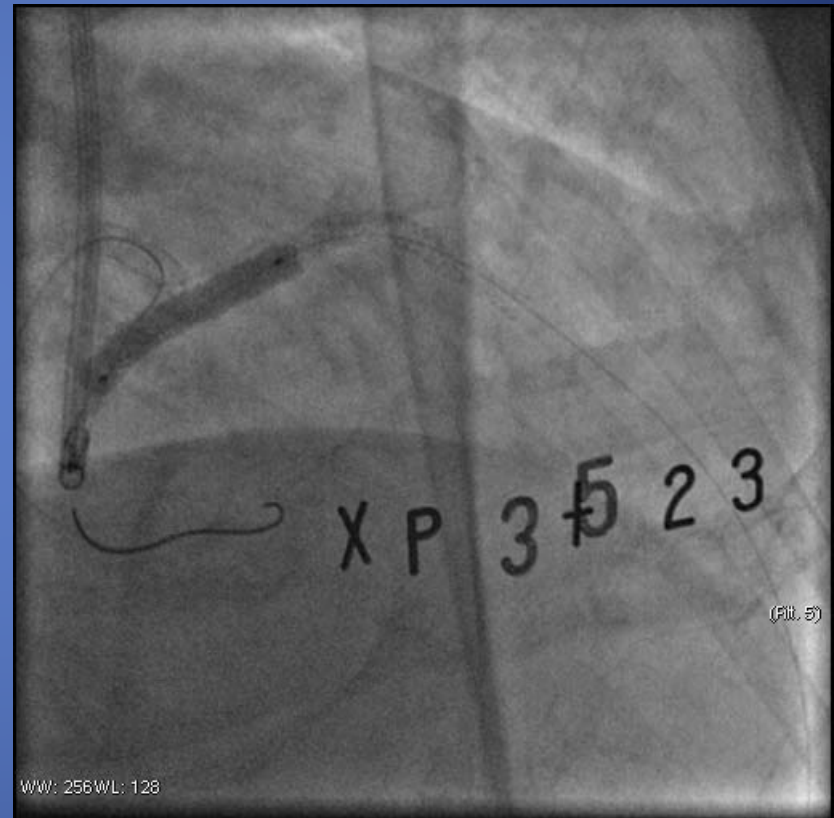


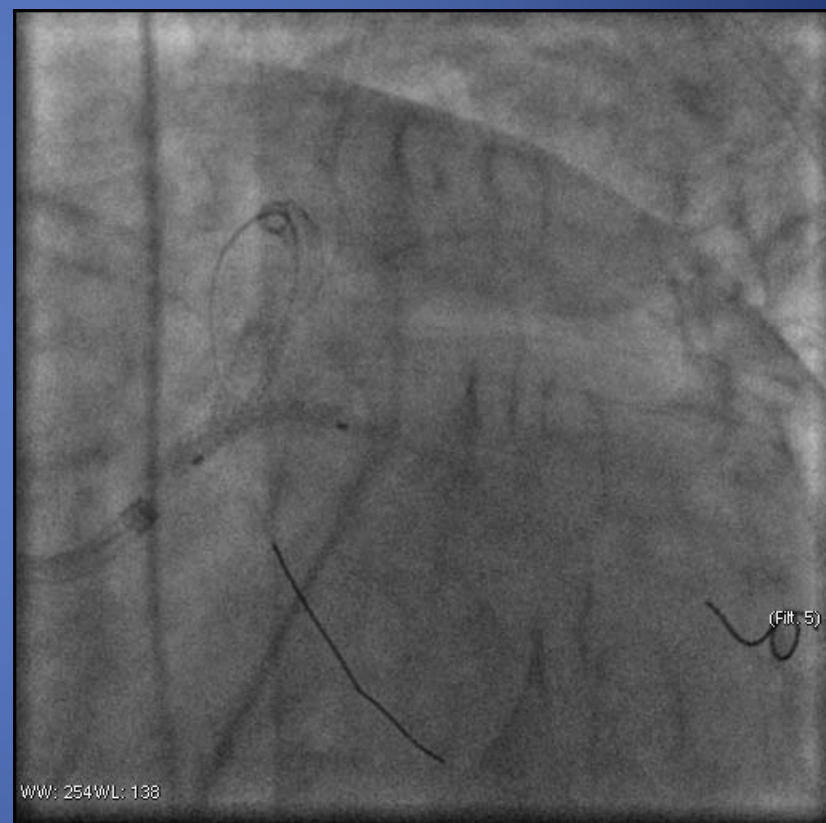




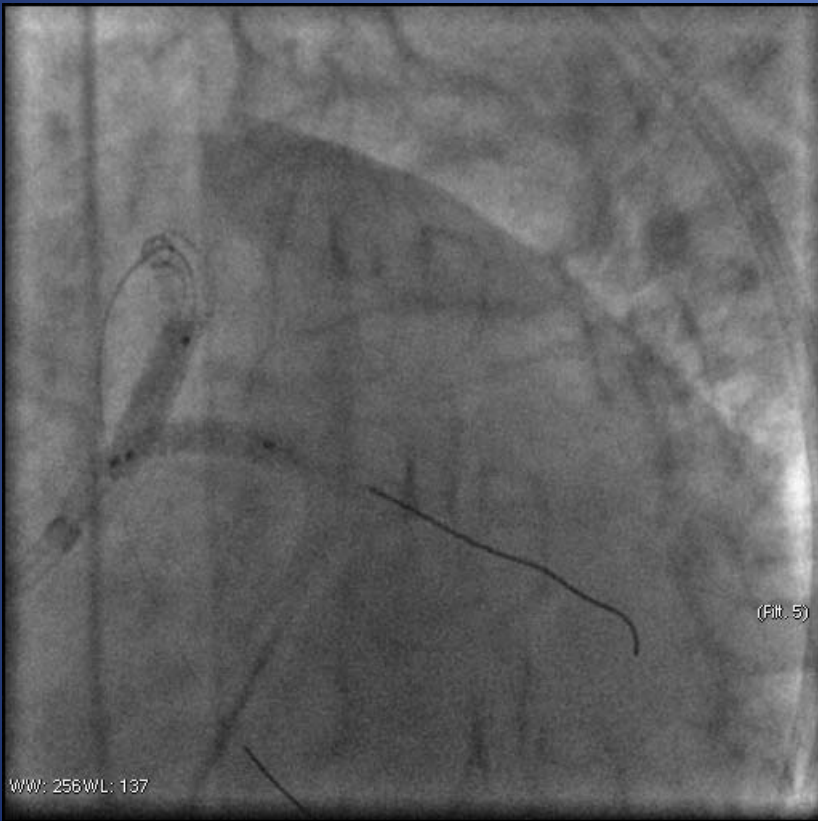




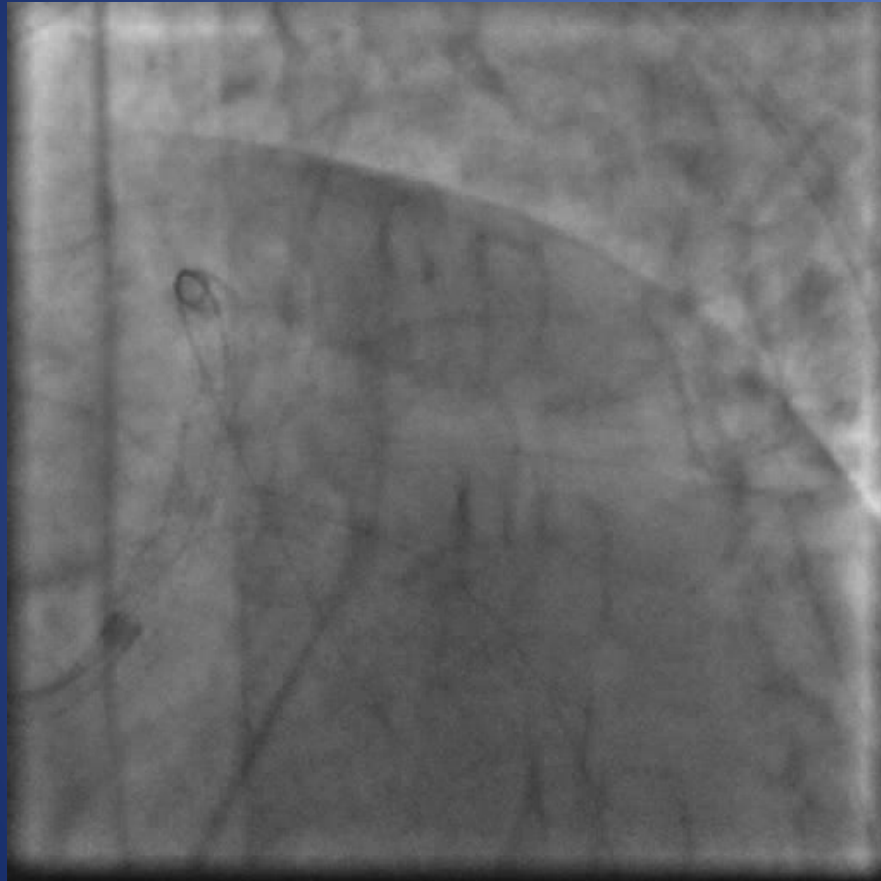








Final Result





Take home message

- Acute aortic dissection is highly lethal & should always be considered as a surgical emergency
- In case of catheter-induced aortic dissection, always try to immediately fix all potential complications with PCI as much as possible
- Immediate stenting of the entry point may control all potentially lethal complications
- Meticulous attention to BP control during PCI is important