A Case of Intramural Hematoma During PCI

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Patient Profile

- 66 YO/ Female
- C/C : typical chest pain for 2 weeks, aggravated pain for 1 day
- CVDRF : HTN (20 yrs)
- Vital sign : 140/87 - 72 - 17 - 36.7
- ECG : NSR, T inversion in V1-6
- Lab : TC/LDL 218/145.6 mg/dl
  - CK-MB/cTnI 28.7/14.31 ug/L
- TTE : 53%, hypokinesia of LAD territory
- Clinical Dx : **NSTE MI**
Baseline CAG
Baseline CAG
POBA for LAD

SeQuent 2.5×15mm
IVUS Finding After POBA
focused ivus images

intramural hematoma

11.7 mm
IVUS Images After Stenting

- Intramural hematoma

 proximal

 MSA 5.8 mm² distal
IVUS Imaging: Post-POBA vs. Post-Stenting

*intramural hematoma after POBA*
IVUS Imaging: Post-POBA vs. Post-Stenting

intramural hematoma after stenting

Post-POBA

Post-Stenting
Medications and Clinical Outcome During 9 Months

- ASA 200 mg
- Clopidogrel 75 mg,
- ISMN 50 mg
- Carvedilol 12.5 mg
- Telmisartan 40 mg
- HCTZ 25 mg
- Atorvastatin 20 mg

- No chest pain / No clinical events
FU CAG @ 9 Months

FFR: 8 Months ago
FU CAG @ 9 Months
THANK YOU FOR YOUR ATTENTION
Coronary Hematoma typically presents as a blood-filled space with a homogeneous appearance of a relatively echo-bright pattern.

Intramural (intravascular) hematoma presents with an echo-dim pattern due to the dilution of red blood cell concentration and dissemination throughout an echogenic adventitia.
Coronary Hematoma

- At the site of blood entry into the adventitia, can be a clue to the presence of a hematoma.

- The position of the hematoma (mural side vs. free wall) can help in deciding which to treat.

- IVUS can assess the severity of lumen compromise and the possibility of extensive expansion (especially on the non-mural side) and guide appropriate treatment.

- Careful attention to antithrombolytic and antiplatelet treatment is important in the setting of an extravascular hematoma.
**Intramural Hematoma**

- crescent – shaped with straightening of IEM
- separation between IEM and EEM ⇒ accumulation of blood
  - usually homogenous & hyperechoic
- also contain distinct echoluent zones within the hyperechoic areas
  - accumulation of contrast or saline within the hematoma space

- a dissection into the media where accumulation occurred because of a lack of re-entry
Intramural Hematoma

- IVUS finding:
  - typically, crescent-shaped with straightening of IEM
- 6.9% of PCIs (69/1025).
- mech: dissection into where blood accumulated because of a lack of re-entry.
- 1/3 of US-identified hematoma: angiographic abnormality (-)
- high rate of:
  - NQMI, sudden death, need for repeat revascularization