

Echo-contrast in Pericardial Space

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Faculty Disclosure Information

Disclosures

Nothing to disclose

Case presentation

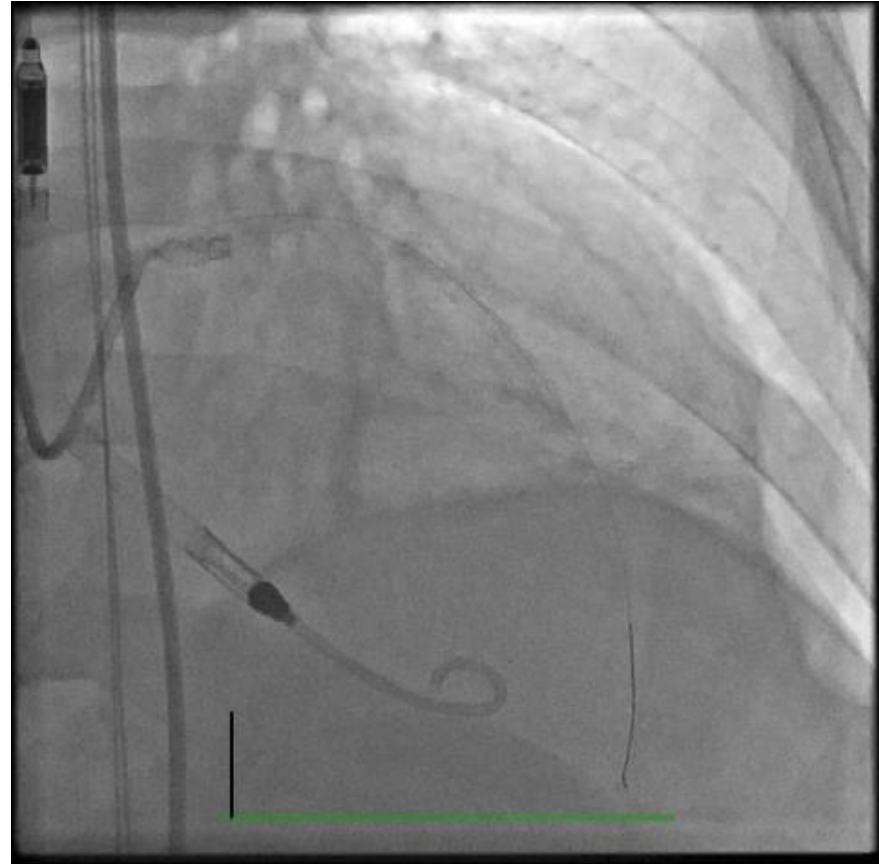
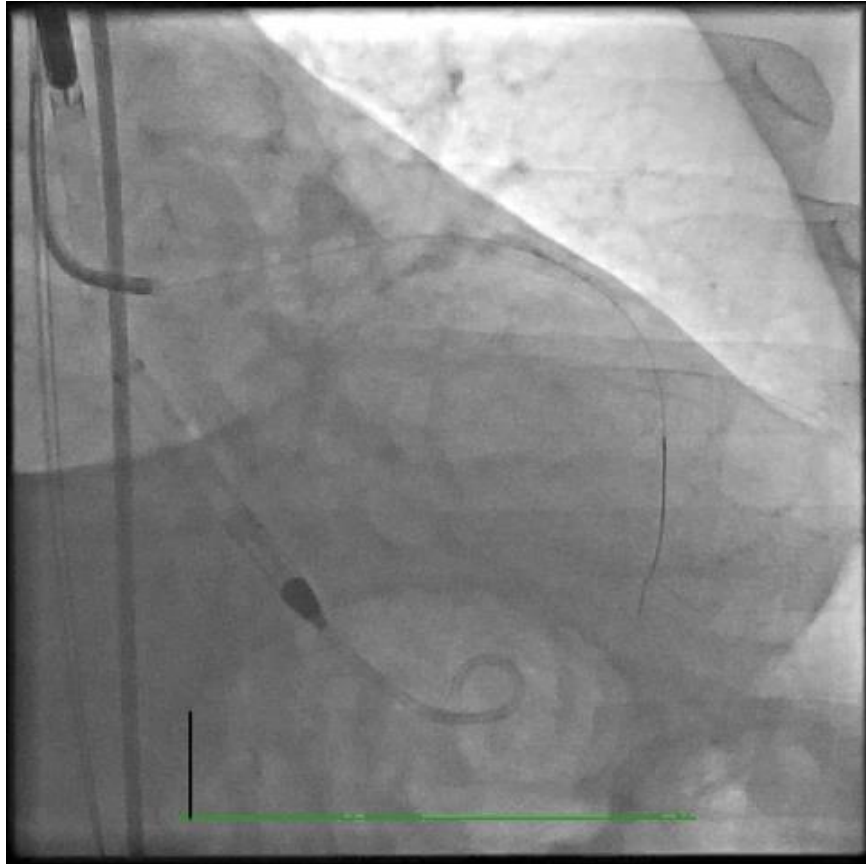
- 64-year male presented to the hospital with worsening chest pain on exertion.
- He was found to have new heart failure with reduce EF 15-20%
- PMHx: DM-2, PVD, ESRD s/p kidney transplant, CKD Stage 4 (of transplanted kidney).
- Coronary angiogram was pursued given the new heart failure with reduced EF.

Coronary angiogram

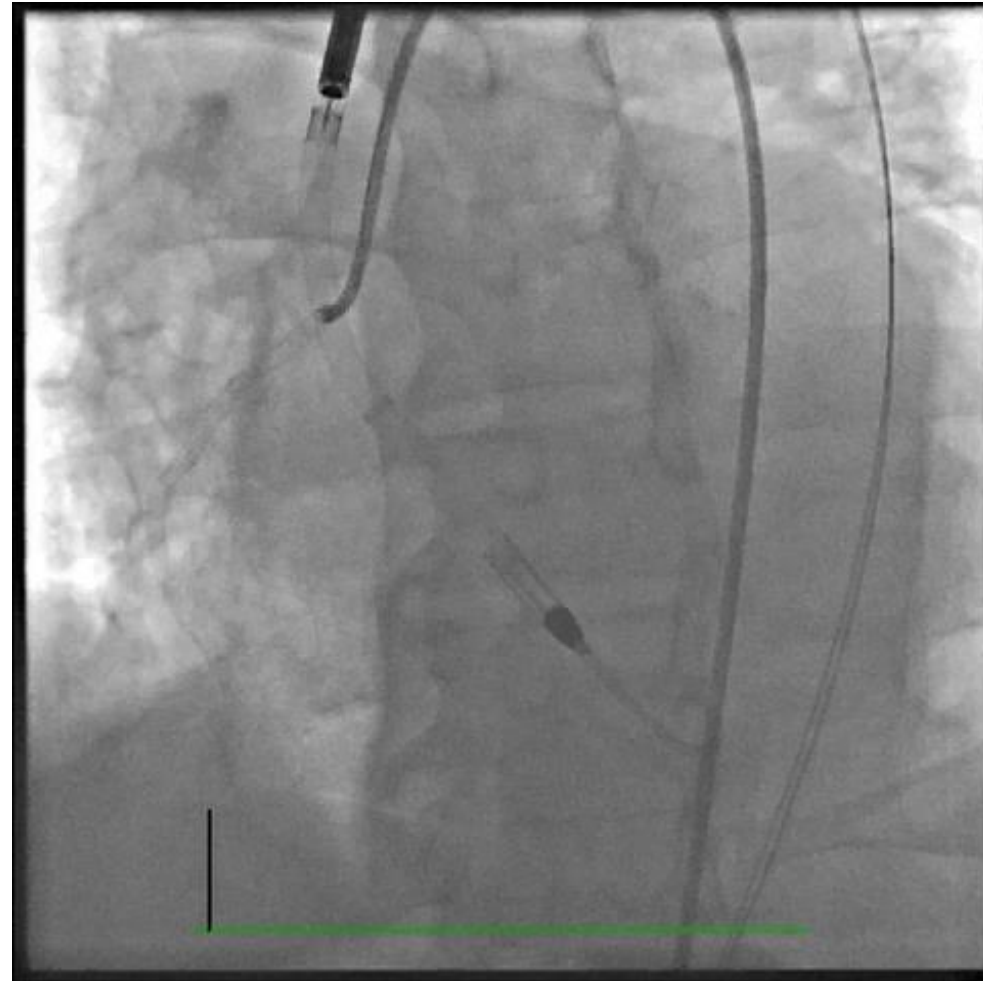
- Left main: Patent
- Left anterior descending coronary artery: proximal LAD 20-30% stenosis, mid LAD 70-80% diffuse disease, distal LAD has mild luminal irregularities.
- Left circumflex: non-dominant vessel. proximal LCX 20-30% stenosis, mid LCX 60-70% and distal LCX 70-80%.
- Right coronary artery: 100% proximal stenosis.

- He underwent elective PCI few days later via RFA with Impella support.
- Successful angioplasty with rotational of RCA, LAD and LCX.

Left heart catheterization



Left heart catheterization



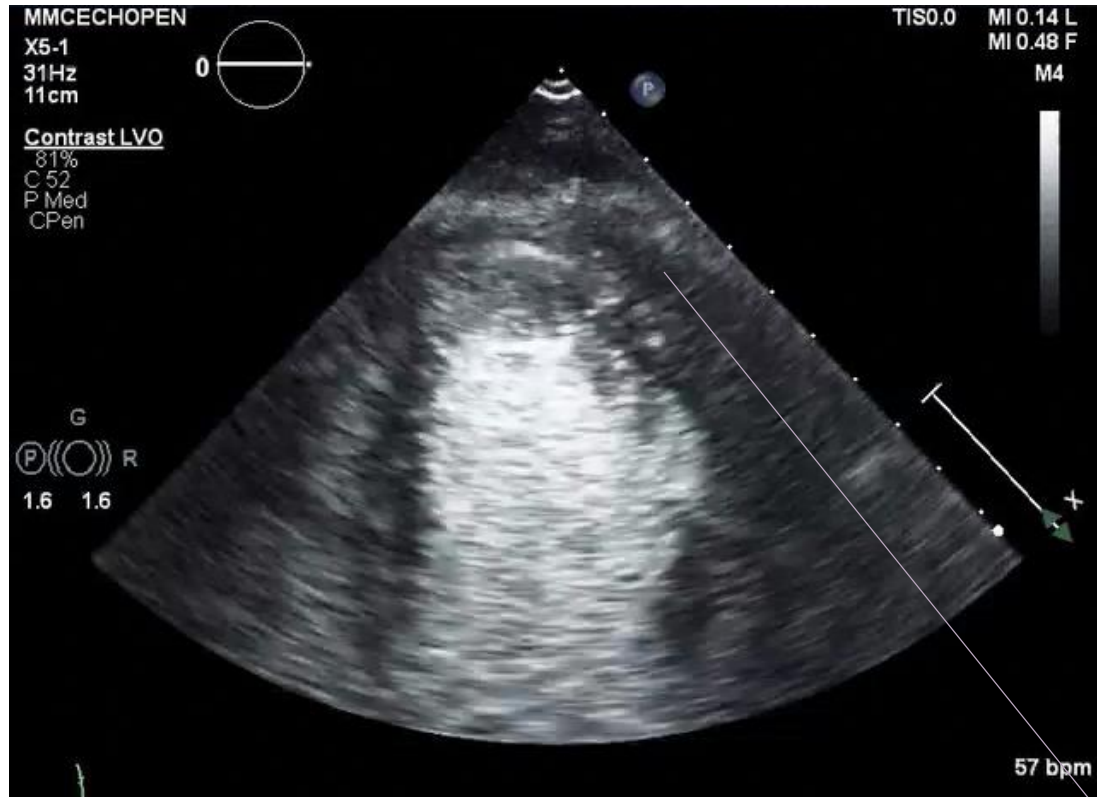
Cath Lab

- At the end of the procedure patient had laminar blood flow with minimal phasic activity.
- Dobutamine infusion was started.
- Patient had return of biphasic flow with dobutamine and the Impella was weaned and removed.
- Bedside echocardiogram performed immediate post procedure, moderate pericardial effusion which was not seen on prior study.
- Lumason contrast microbubbles was noted extravasating onto the pericardial space.

Trans-thoracic Echocardiogram



Trans-thoracic Echocardiogram



Lumason bubbles in
pericardial space

Differential diagnosis

- Myocardial perforation
- Coronary perforation
- In our patient – likely secondary to coronary microperforation

Patient course

- Due to the patient's history of kidney transplant and abnormal renal function a decision was made not to pursue repeat LHC and monitor with serial echocardiogram.
- Repeat serial echocardiogram showed stable effusion with no evidence of contrast extravasation into the pericardium.
- Patient was discharged home after few days.
- He continued to do well in outpatient follow up.

Thank you

