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Catheter-directed Thrombolysis of a Massive Pulmonary Embolism

Patient History

- 70-year-old male presented with increasing SOB and syncopal episodes.
- Chest CT Angiogram: Extensive bilateral pulmonary emboli more significant on the right compared to left (See Fig. 1).
- Physical Exam: Mild Respiratory distress, tachycardia, elevated troponin, elevated BTNP indicating right ventricular strain.

Treatment

- Right brachial vein access.
- *Option* IVC filter placed.
- Pulmonary angiogram revealed massive pulmonary emboli in the main pulmonary artery extending into the right pulmonary artery (See Fig. 2).
- Initial main pulmonary artery pressures was 85/53 .
- Patient required endotracheal intubation.
- Place a 12 cm Ekos Catheter into right lower lobe and extending into the right pulmonary artery.

Results

After 12 hrs. of lysis and 14 mg rTPA

- Complete resolution of all pulmonary emboli in both left and right lungs (Fig. 3 & 4).
- Pulmonary artery pressures decreased from 85/53 to 35/21.

Fig. 1



Fig. 2

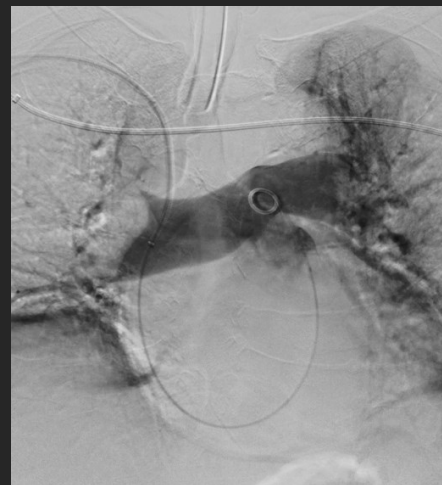
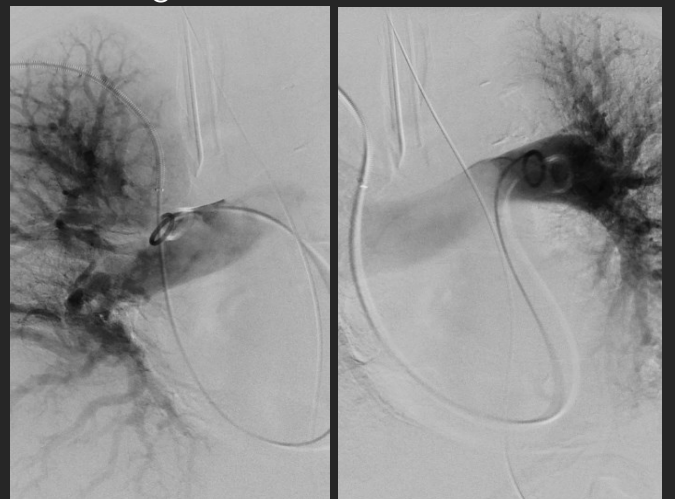


Fig. 3

Fig. 4



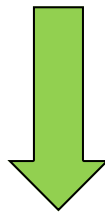
Pulmonary Embolism Response Team

Large Pulmonary Embolus?

- ◆ PE with abnormal vital signs (Tachycardia or Hypotension)
- ◆ Evidence of right heart strain (Echo, EKG, or Positive Biomarkers)
 - ◆ Dyspnea
 - ◆ ↓BP, ↑HR, ↓O₂Sat, Chest Pain
 - ◆ Central or Saddle PE

Please order (unless already done)

- ◆ Stat Echocardiogram (RV Strain)
 - ◆ EKG
- ◆ CBC, PT/PTT, Creatinine
- ◆ Troponin, and NT-ProBNP
 - ◆ Type and Screen
 - ◆ CT (PE Protocol)



**Contact Interventional Radiology for
Consult**