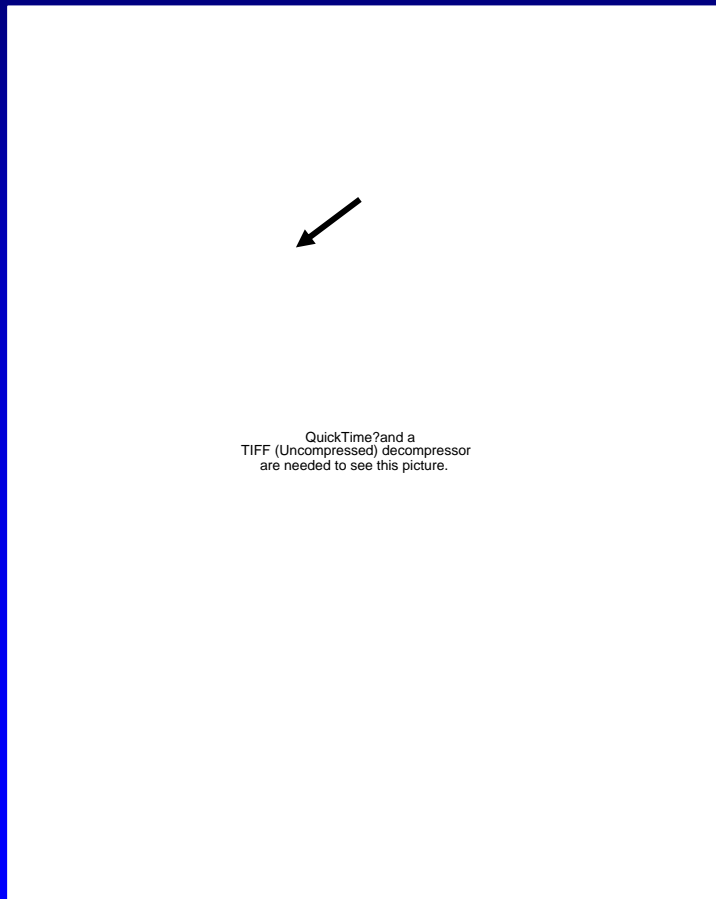


PFO occlusion: Tips and tricks

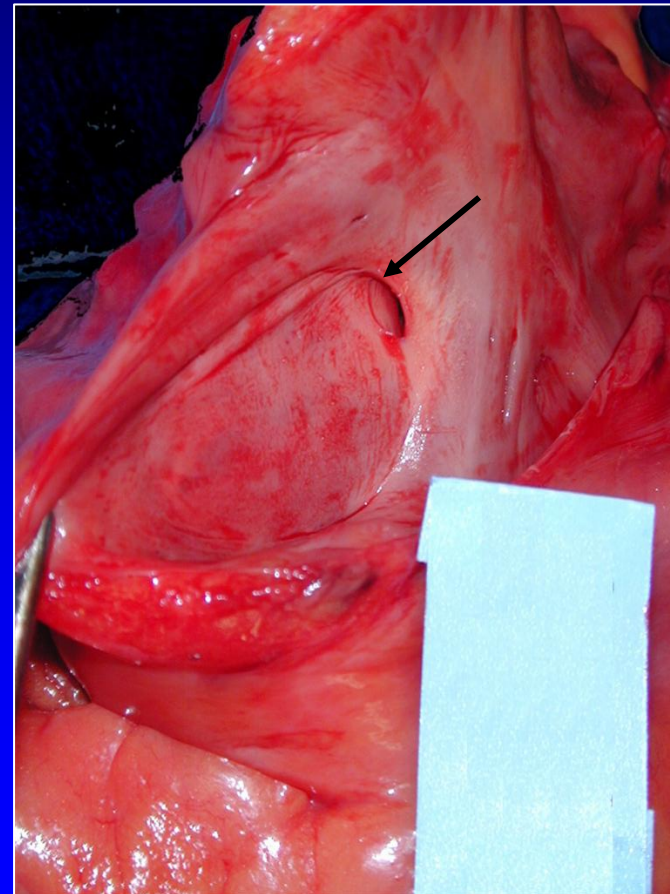
Frank F. Ing, MD
Director, Cardiac Catheterization Laboratory
Texas Children's Hospital
Baylor College of Medicine

Pathological specimens of PFO

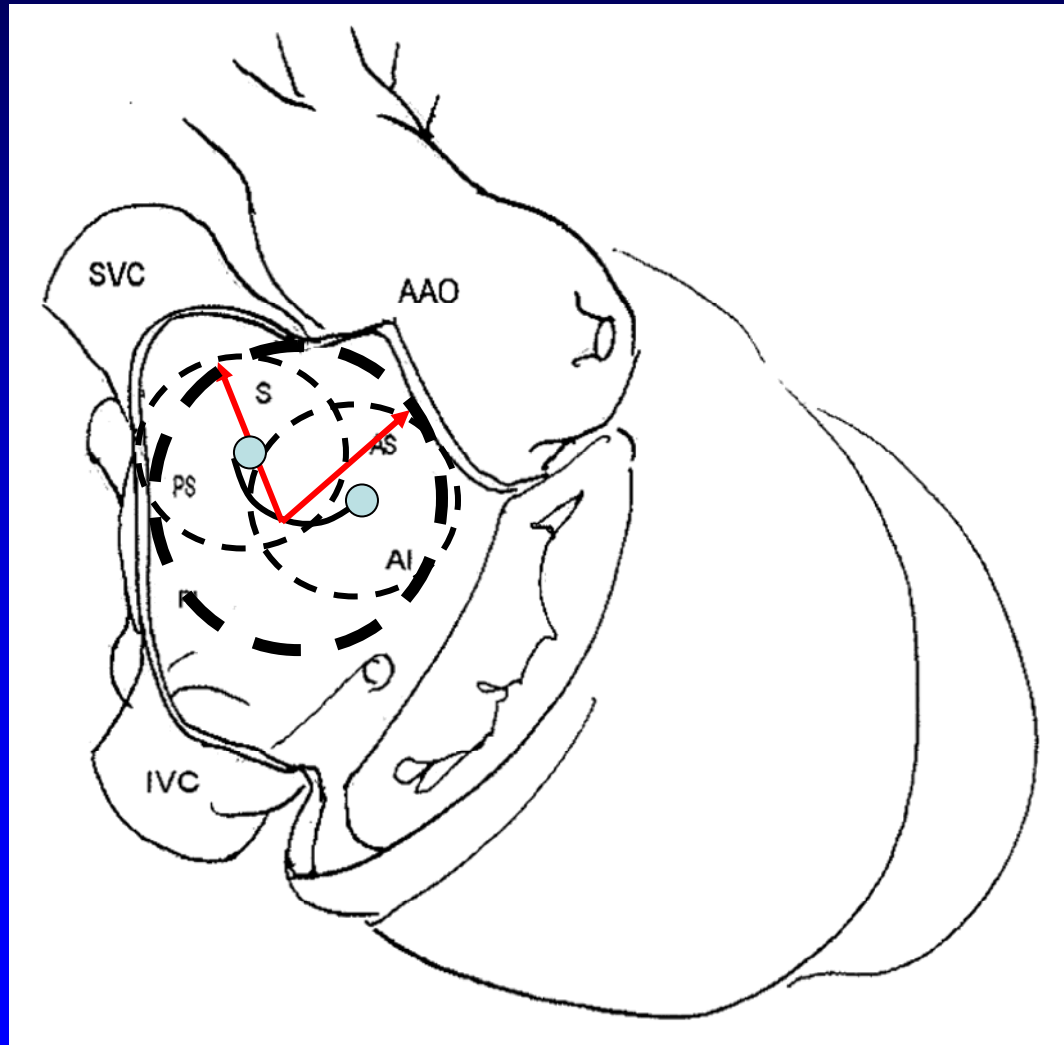
View from right atrium



View from left atrium



Device selection for PFO



Different PFO morphologies

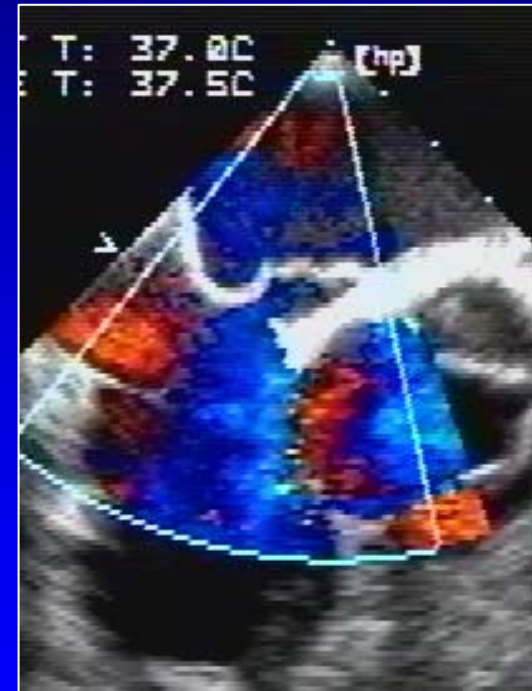
Long tunnel



Additional ASD



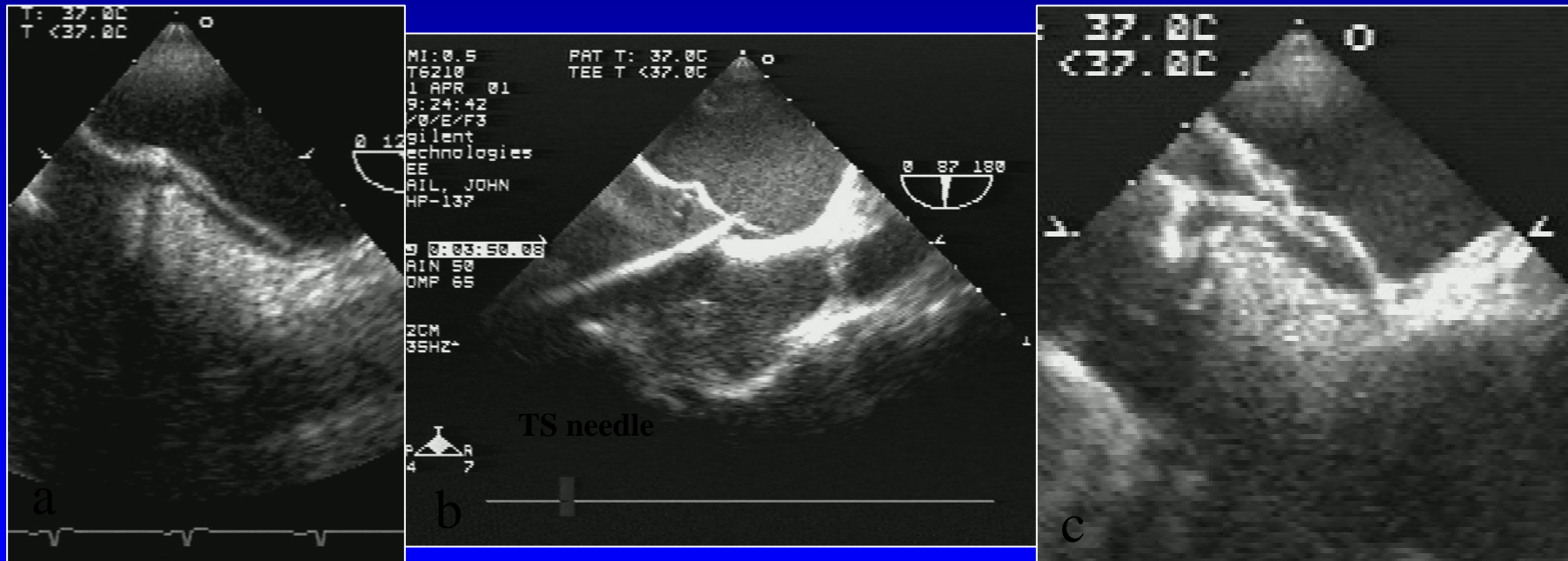
Septal aneurysm



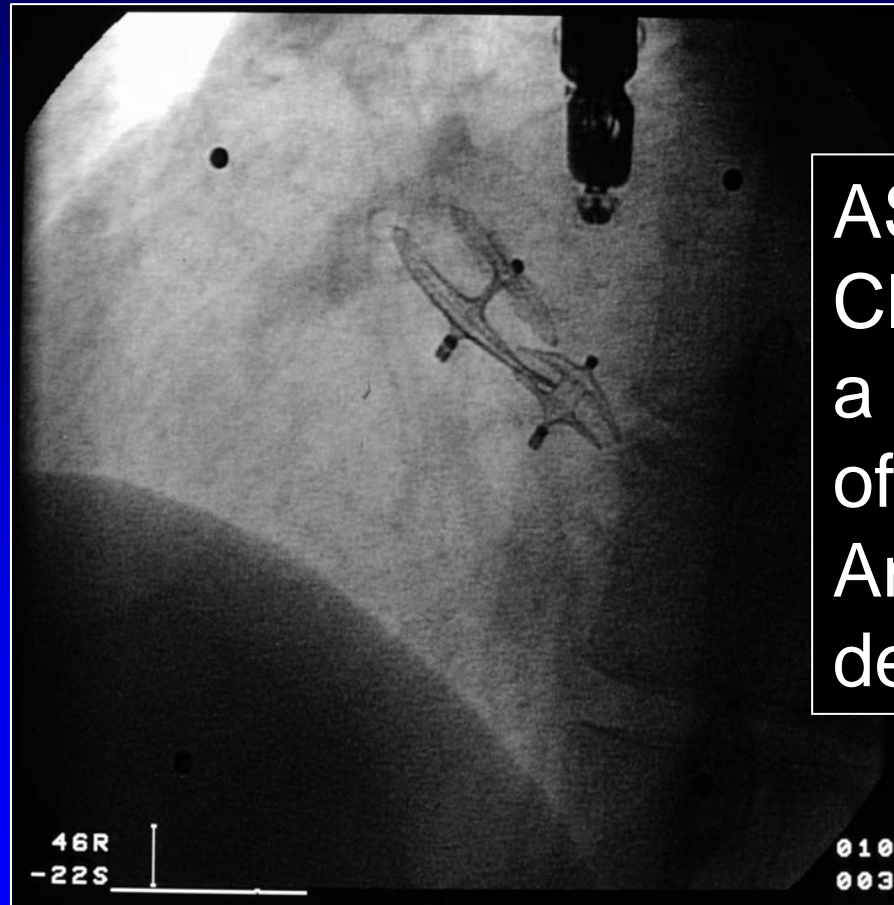
PFO with long tunnel

Option:
transseptal puncture

Cardioseal implanted

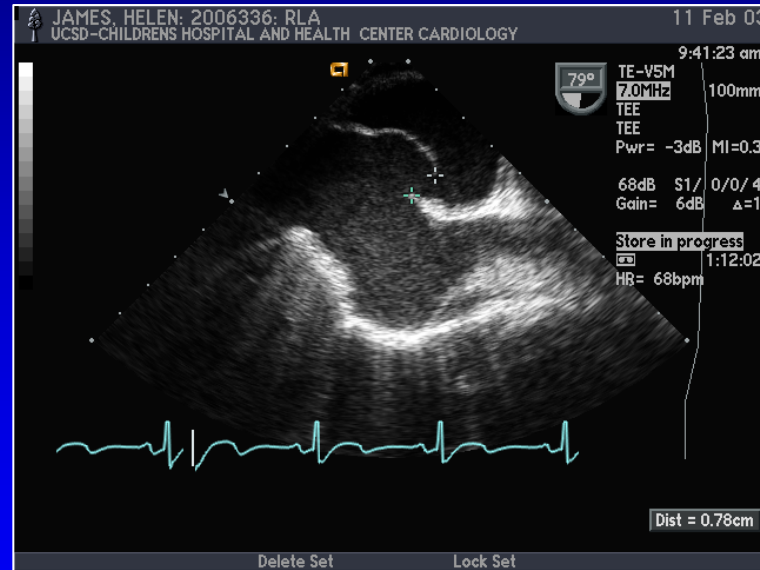


Amplatzer septal occluder PFO / ASD



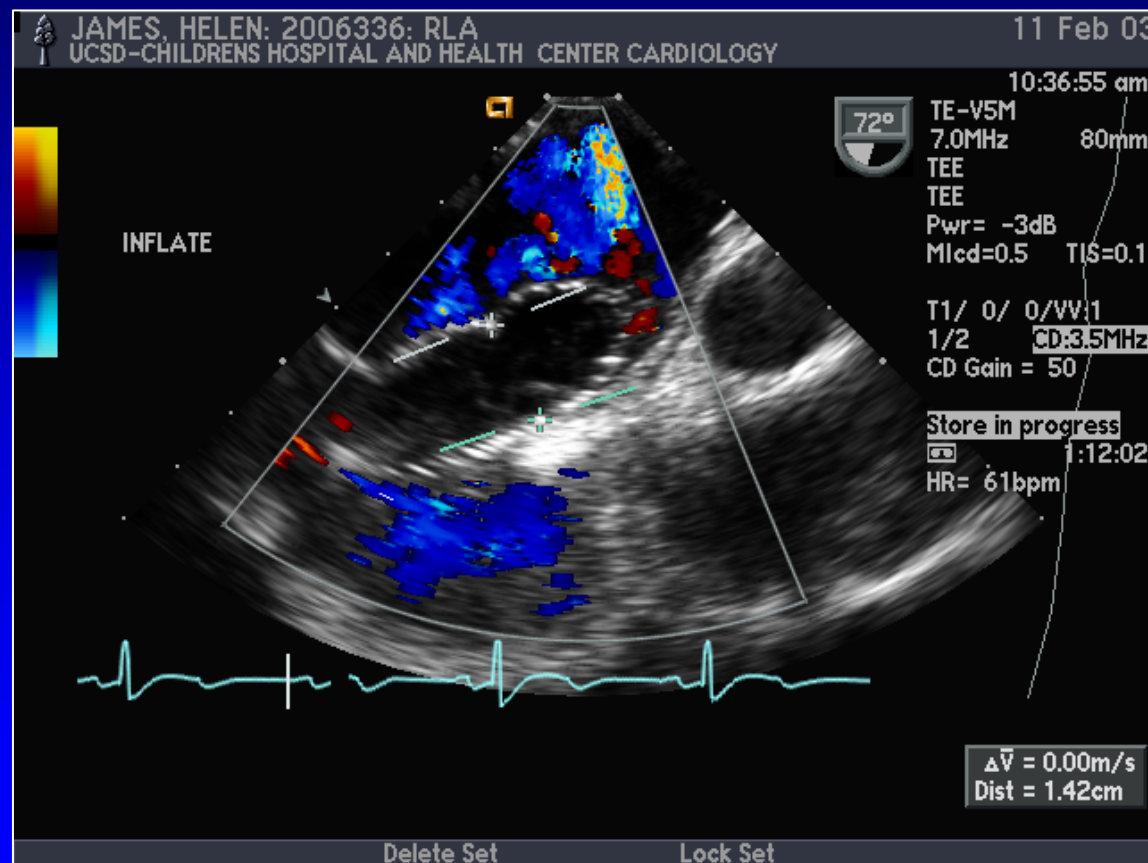
ASD/PFO
Closure using
a combination
of two
Amplatzer
devices

63 yo (s/p CVA x2) w/ PFO & aneurysmal septum

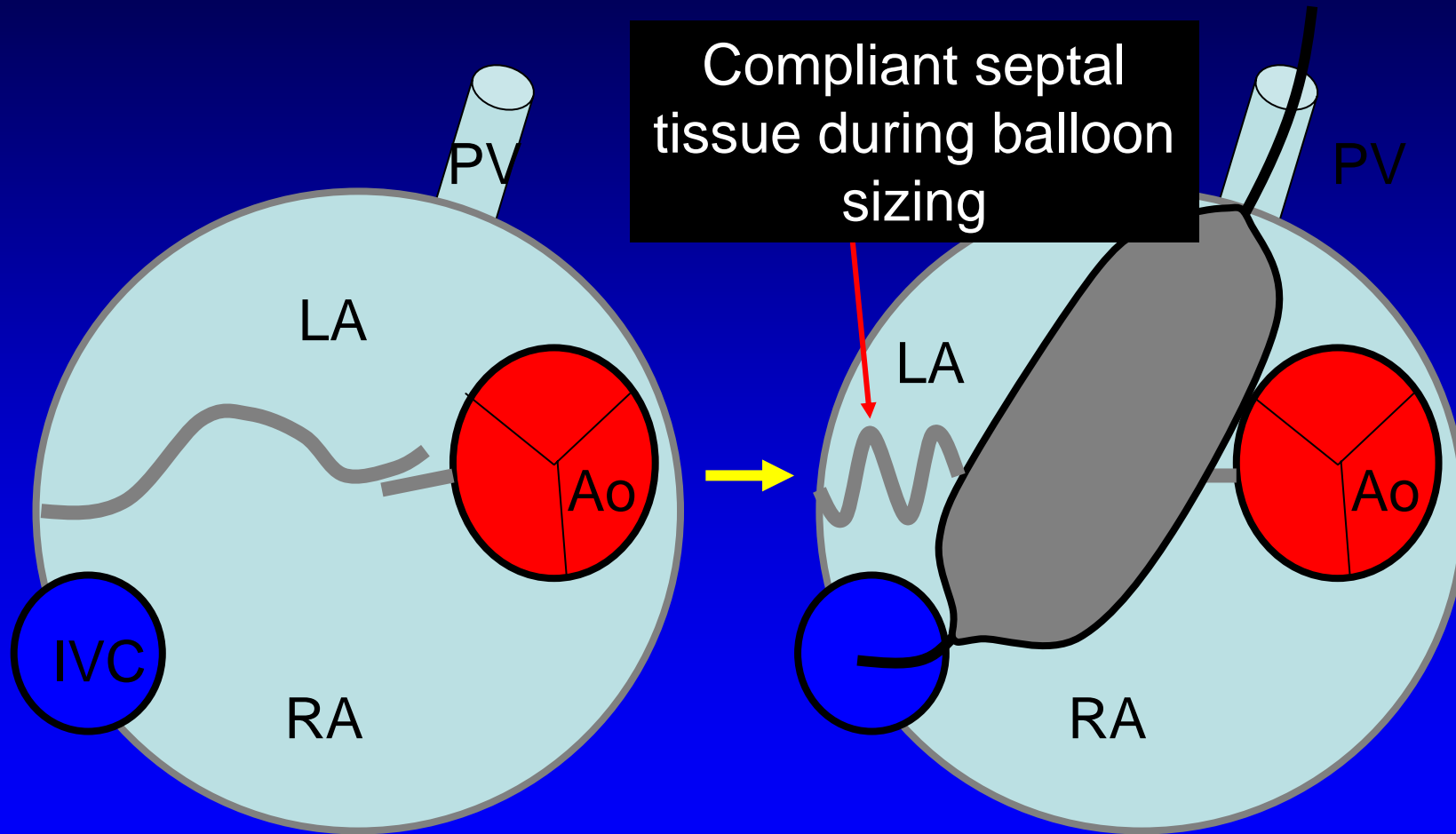


Test balloon occlusion

Stretched
diameter
14.2 mm

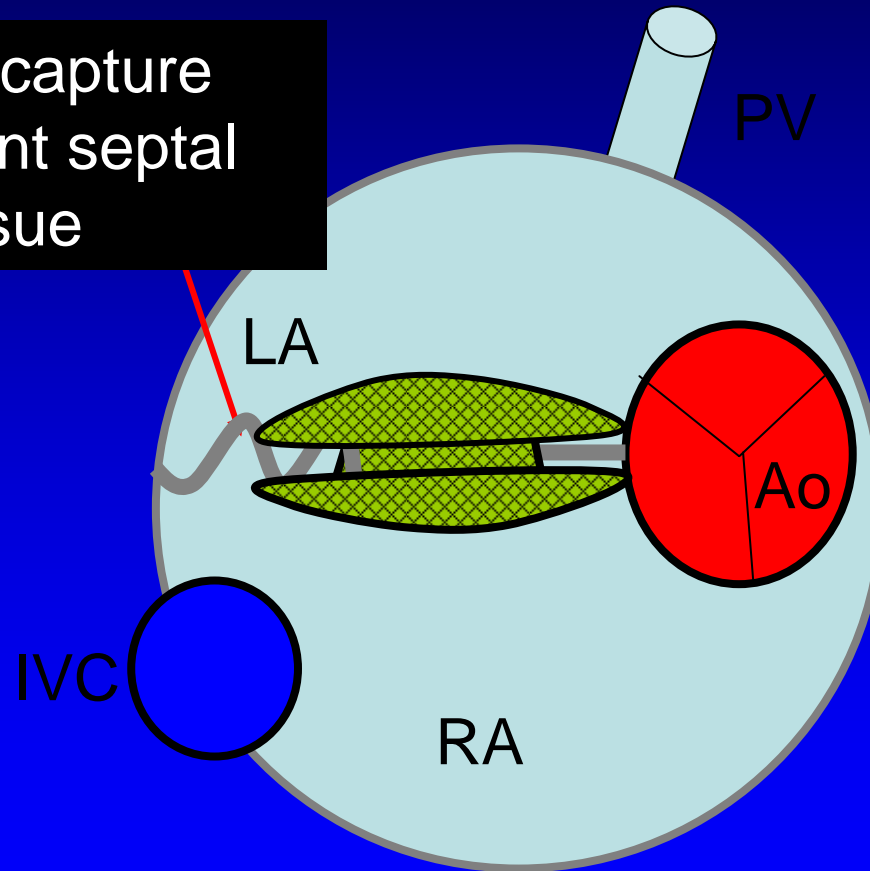


Septal aneurysm



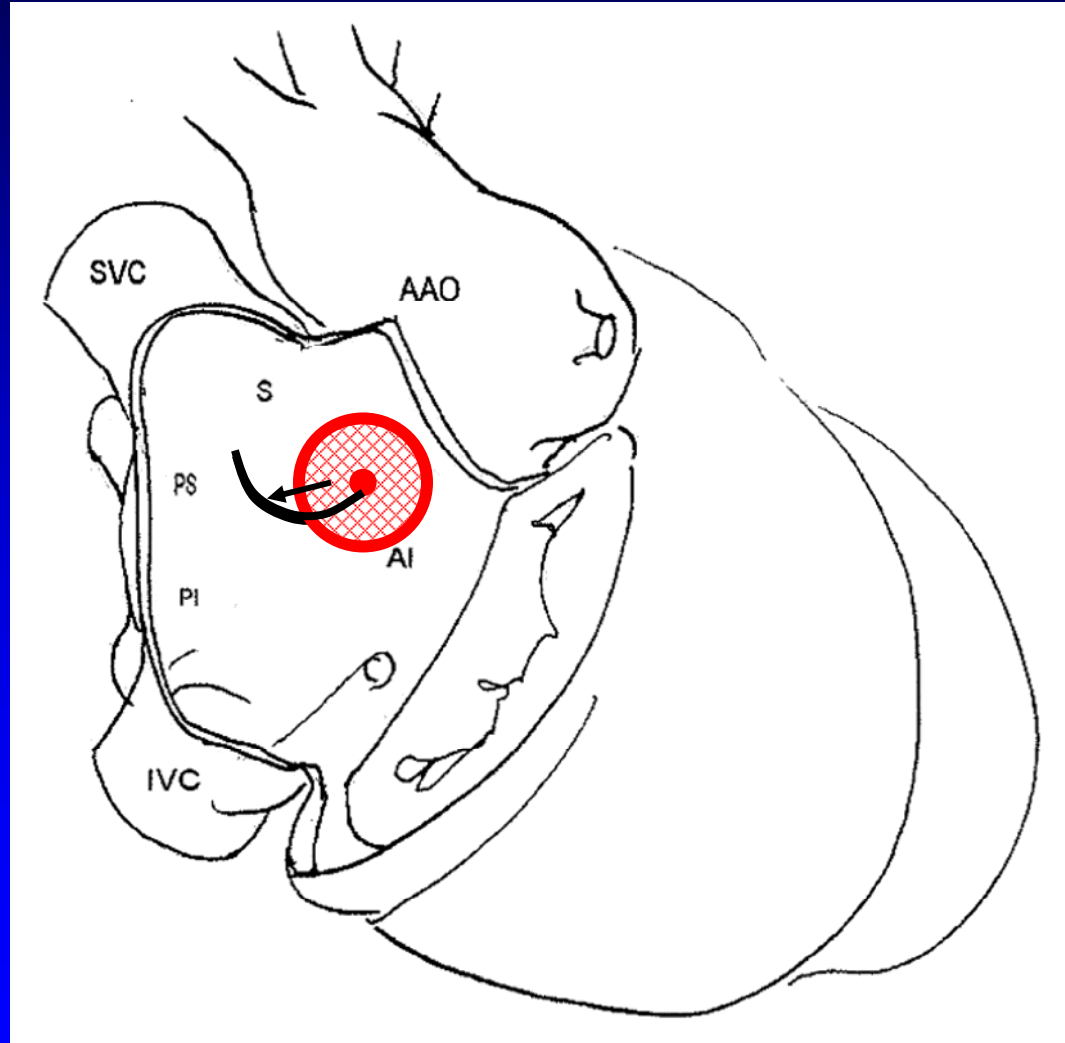
Septal aneurysm

Device capture
redundant septal
tissue



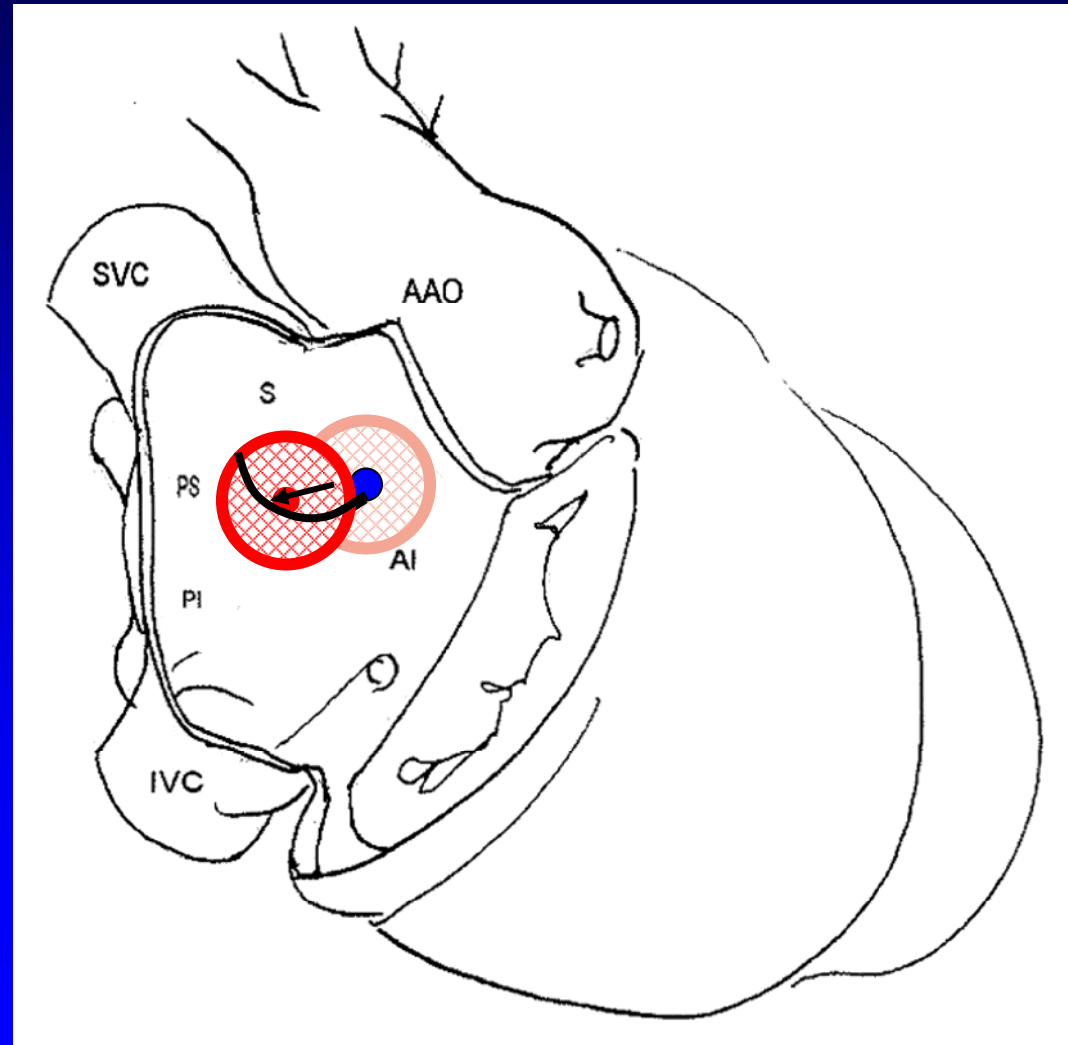
Mechanism of device embolization

Device slid
posteriorly
along crest
of PFO

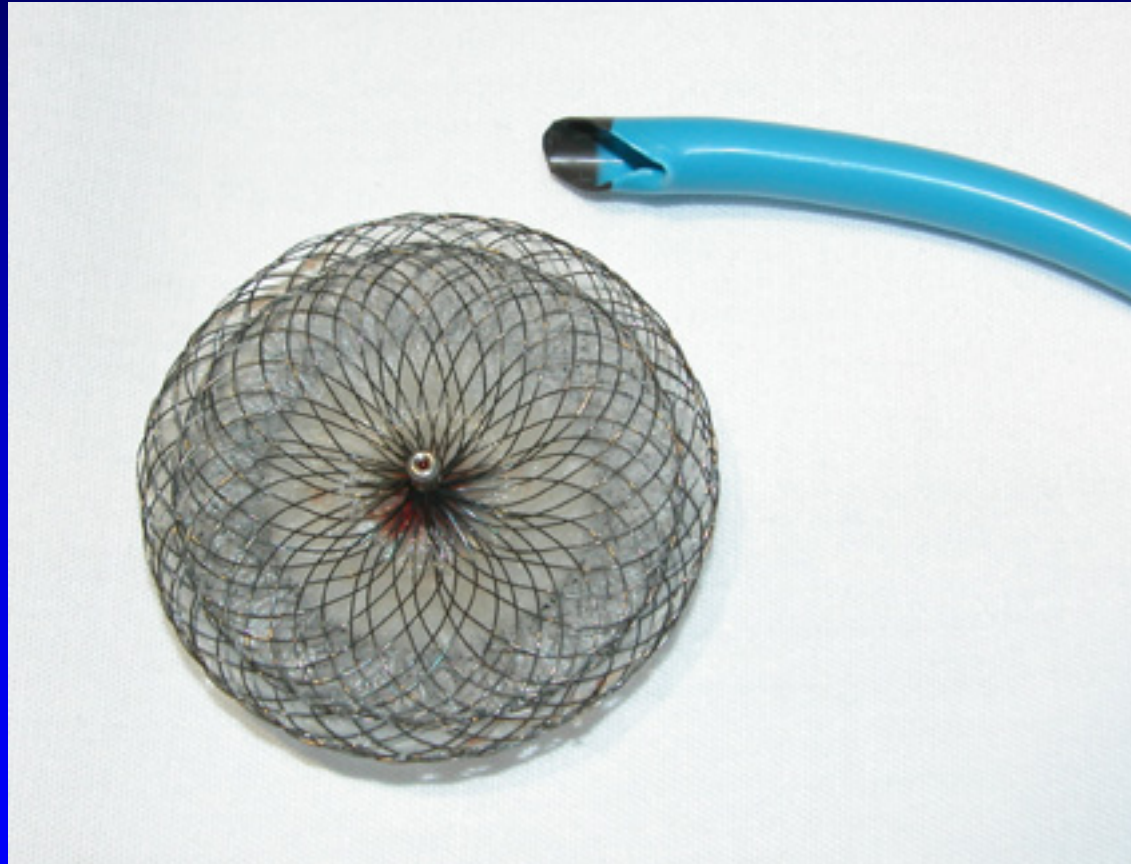


Mechanism of device embolization

Device
embolize
to LA

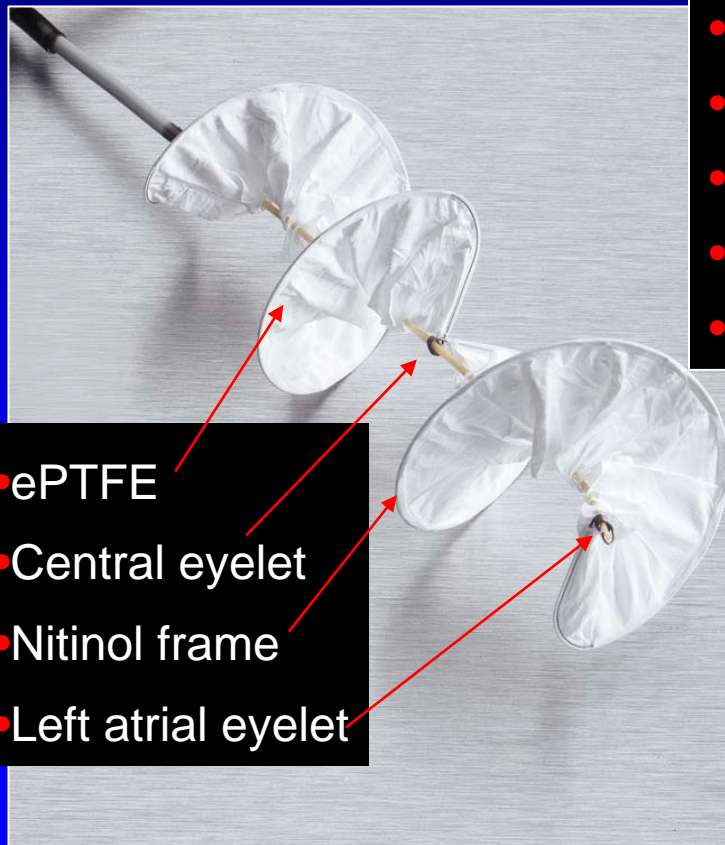


Bevel-cut sheath to enlarge entrance



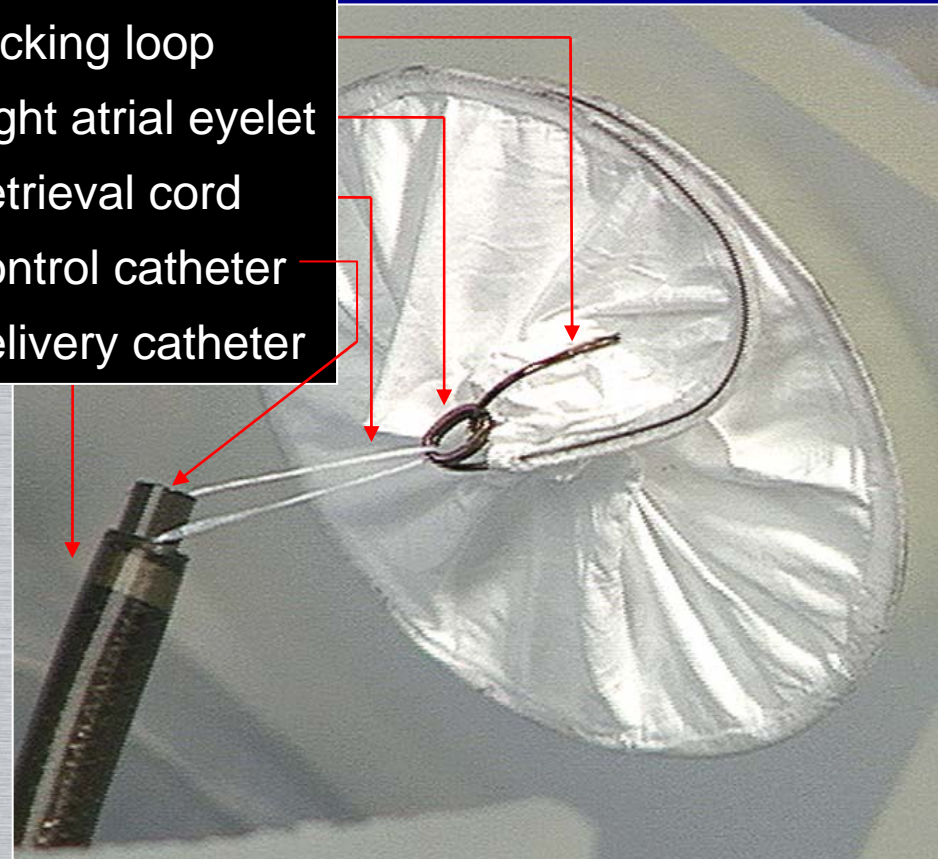
Helex septal occluder

- Double ePTFE patch supported on helical nitinol wire frame
- Delivered via 10 Fr sheath

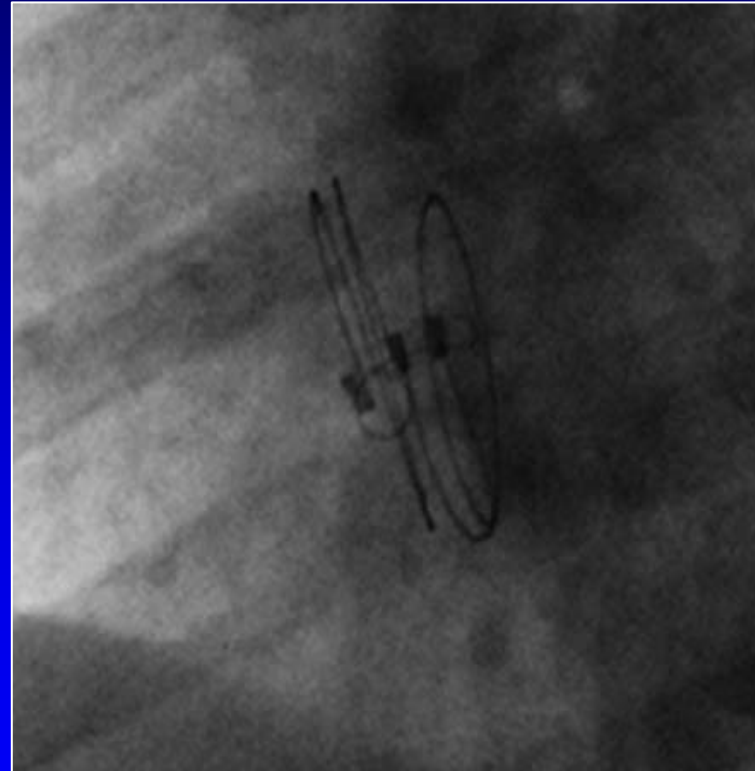
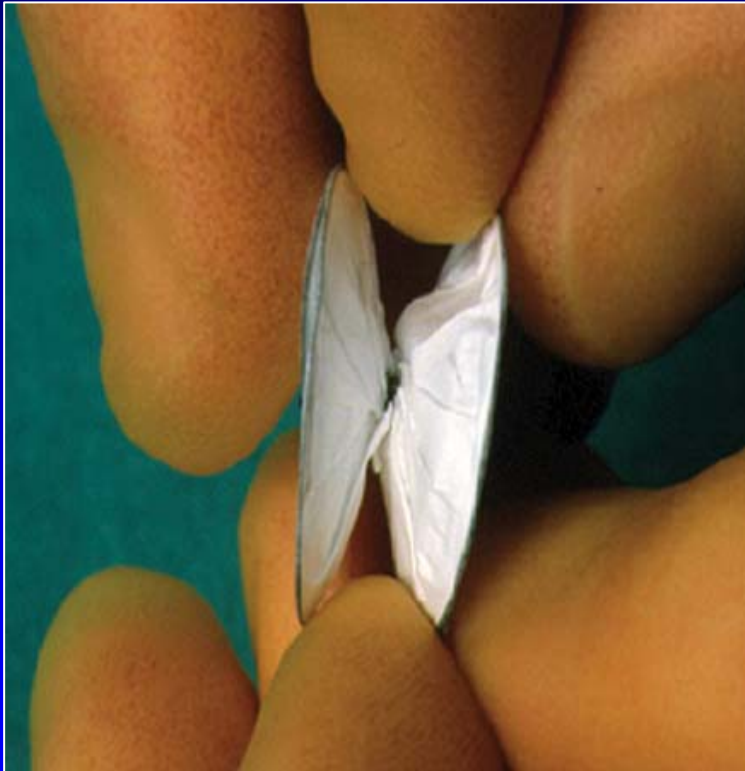


- ePTFE
- Central eyelet
- Nitinol frame
- Left atrial eyelet

- Locking loop
- Right atrial eyelet
- Retrieval cord
- Control catheter
- Delivery catheter



Flat profile & low metal mass



Easily retrievable

- After release, retrieval cord maintains connection between device and delivery system
- Allows tension-free confirmation of device position after lock release and easy retrieval if needed.

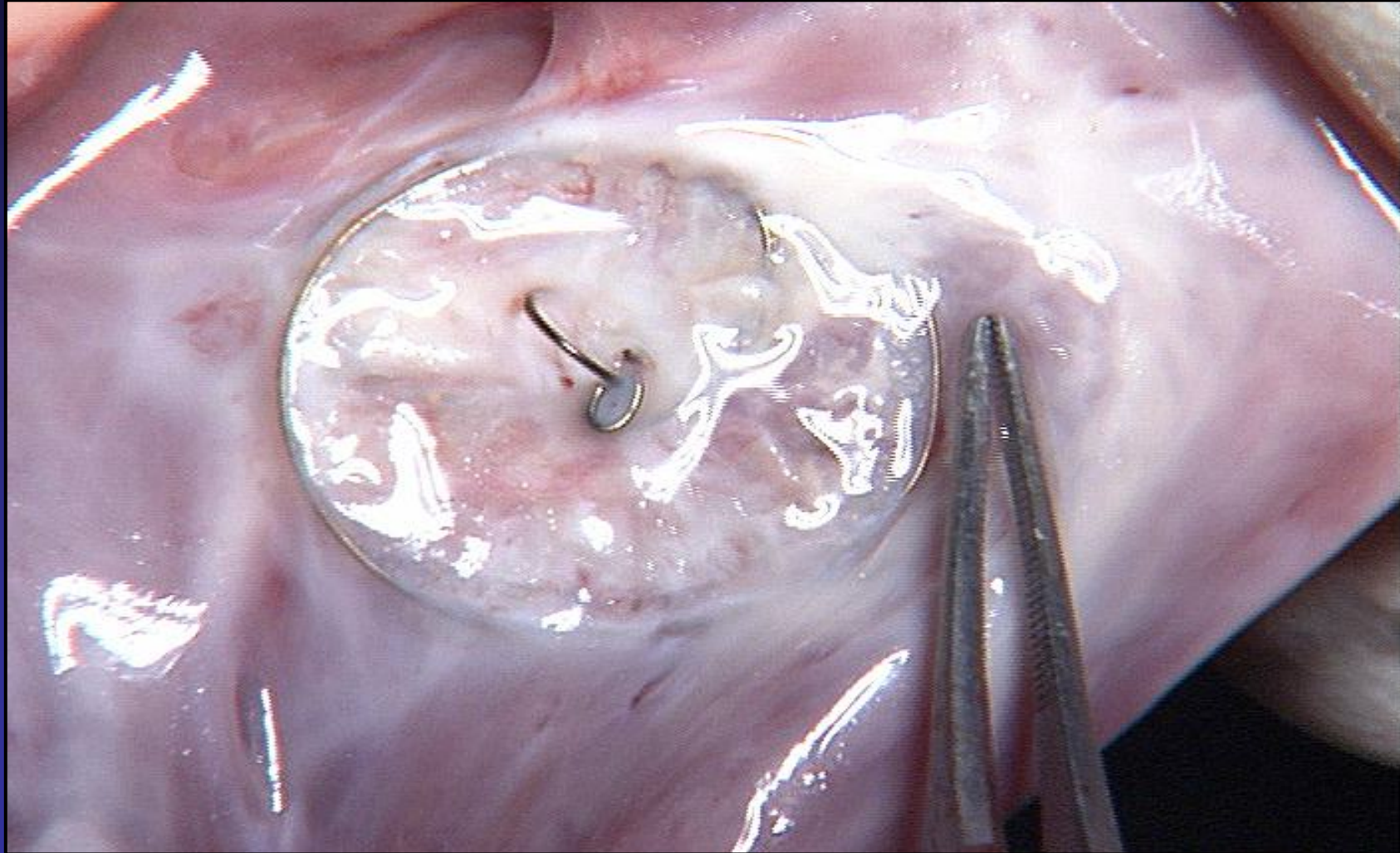


Hydrophilic coating

- Hydrophilic coating facilitate immediate wetting of membrane
- Clear echo visibility of device



Helex septal occluder Gross Pathology-12 month post-implant



Summary

- Occlusion of most PFOs are straight forward
- But some have unusual anatomy such as a long tunnel, aneurysm and additional communication that need special attention and technique
- Need to learn how to retrieve an embolized device