Case Presentation - ASD/PFO

SCAI 2015 Fellows Course
Cosmopolitan Hotel
Las Vegas, Nevada
December 6-9, 2015

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Disclosure

- Consultant/Proctor for St. Jude Medical
- I will be discussing off-label use of device
Beware:
The Physician-As-Patient sign
Combined with + Nice Guy sign

- 79 year-old retired radiologist with stroke and PFO
- Told by his neurologist that he either had to have his PFO closed, or stay on warfarin
- PMH includes migraines - \( \sim 1X/\) week
He certainly has a large shunt

ICE imaging
Challenging anatomy for PFO closures

- Thick septum secundum – difficult to “grab” with device – splays out discs
- Atrial septal aneurysm – device motion
- Long tunnel – limits device opening and places tension on device
- Extra tissue (tendon of Todaro, Eustachian valve, Thebesian valve) – may block device discs
Thick septum
secundum
Floppy atrial septum primum
Long tunnel
Thick septum secundum
My Friend’s case

- Thick Septum Secundum
- Very floppy atrial septal aneurysm
- Long tunnel

My Case
PFO closure procedure

- Balloon sized at 11-12 mm

Length of tunnel = 15 mm
• Due to atrial septal aneurysm, elected to try an Amplatzer septal occluder –
  – 13 mm (27 mm left atrial disc, 23 mm right atrial disc) – balloon sized at 11-12 mm

• Due to concern that there was inadequate capture of thick septum secundum, removed device and changed
  – 14 mm septal occluder (28 mm left, 24 mm right)
14 mm Septal Occluder – multiple wiggle tests
After release of 14 mm ASO
Device stayed in LA so attempted to recapture, but then embolized to descending aorta.
After 3 deep breaths...

Preclose groin

After placing a long 10 French sheath... Doh!
Snared device in middle – and cannot release

Kind of stuck....  Yep, it’s stuck
3 more deep breaths... and upsizing to a 14 French sheath
Even more deep breaths...

- A normal femoral angiogram
- Successful perclose of arterial access
- Patient wishes to continue procedure
17 mm ASO device - wiggle

Been there- done that
19 mm ASO (33 mm & 29 mm)
Wiggle, wiggle, wiggle
A really deep breath! Release!
Bubble study with val-salva
My friend’s case
My Friend’s case

- Thick Septum Secundum
- Very floppy atrial septal aneurysm
- Long tunnel

My Case
Follow-up

- Telephone 1 week later: “Hello Dr….. I am just calling to see how you are doing.” (I figured he would have PTSD)
- “There’s the doctor that saved my life!”
- “Huh? We had a complication! How did I save your life?”
- “You didn’t send me to surgery. And now – no coumadin”
- After 3 years – device stable, no strokes, and notes improvement in his migraines
Conclusions

- Closure of PFO to prevent strokes remains controversial and no FDA approved device.
- Beware a PFO with thick septum secundum, floppy septum primum and a long tunnel.
- If device embolizes – capture and remove in the cath lab.
- Don’t forget to breathe!
Thank you!