



PERCUTANEOUS PFO CLOSURE FOR ESUS PATIENT WITH ANOMALOUS LCA FROM NON-CORONARY SINUS: SPECIAL CONSIDERATIONS REQUIRED

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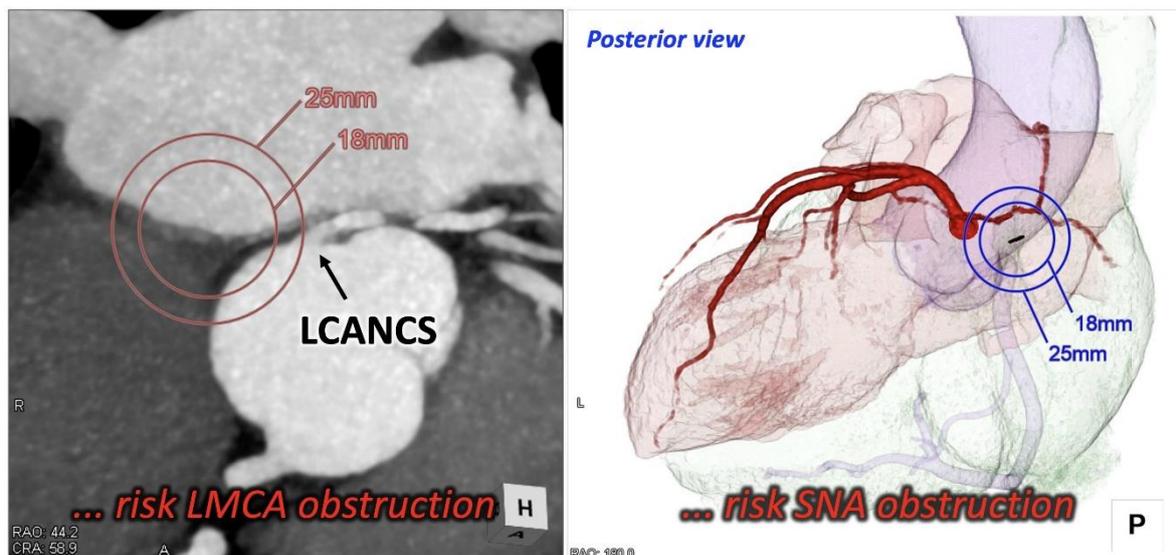
History and physical:

A 55-year-old female noted apraxia while lifting her disabled daughter and was diagnosed with embolic stroke of undetermined sources by a stroke specialist.

Imaging:

As TEE demonstrated a high-risk patent foramen ovale (PFO) for stroke, a percutaneous PFO closure was planned. From echocardiographic features including a long tunnel with a hypermobile interatrial septum (IAS), a 35 mm Amplatzer PFO occluder (APO) could have been the preferred choice over a 25 mm APO. However, pre-procedure CT demonstrated an anomalous LCA arising from the non-coronary sinus (LCANCS), which was close to the PFO with the distance measuring 11.3 mm and could potentially be compressed by the 25 mm LA disc of a 35 mm APO if selected (Figure). In addition, there was another concern that her sinus nodal artery (SNA) could be compromised from the mechanical compression by the two atrial discs even if the smaller 25 mm APO with a 18 mm LA disc was selected. The patient rejected surgery and consented to a percutaneous APO placement with left main coronary artery (LMCA) protection and a provisional pacemaker implantation.

Cardiac CT



INDICATION FOR INTERVENTION:

PFO-associated stroke.

Intervention:

Balloon sizing measured 7.1 mm resulting in the selection of a 25 mm APO. Fortunately, the 18 mm LA disc of the device did not reach the LMCA and the SNA was not compromised by the discs after releasing the device from the cable (Video). Her post-procedure course was completely uneventful.

Conclusion:

- This is the very first reported case of a percutaneous PFO closure for a patient with anomalous LCA from non-coronary sinus (LCANCS).
- LCANCS is a rare coronary anomaly.
- PFO closure in LCANCS patients carries a unique risk of coronary obstruction by atrial discs.
- Pre-procedural CT is crucial for planning a safe and secure procedure.
- Coronary CT angiography has a significant role in reducing unexpected complications during PFO closure.