# Percutaneous Closure of Fenestrated Atrial Septal Defect: the usual solution?

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# Clinical Presentation

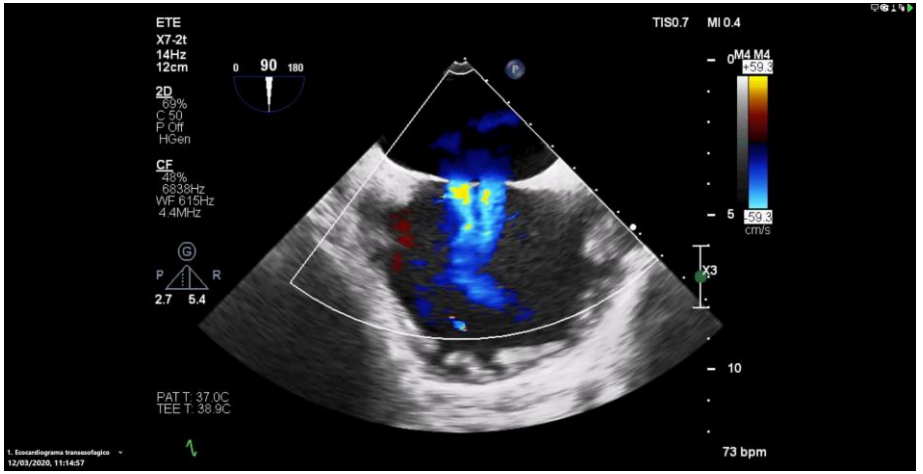
**77 years old female**

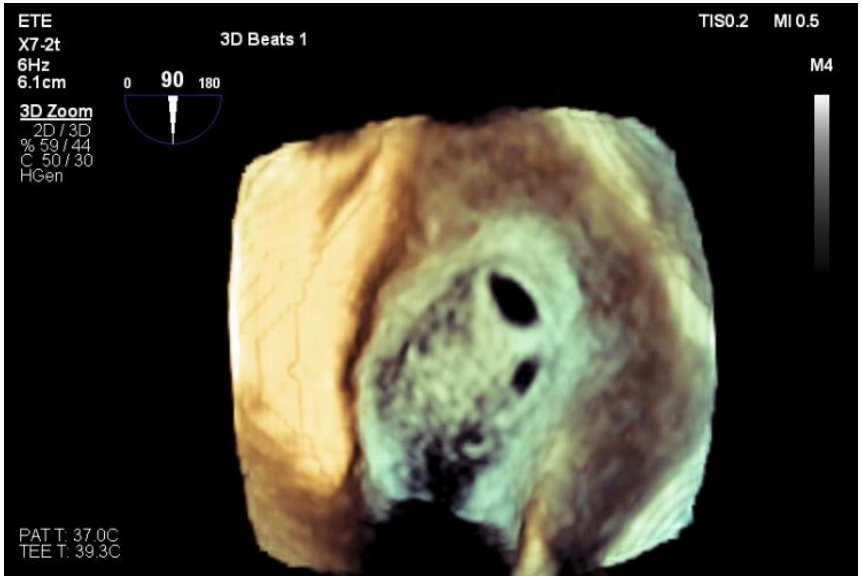
- Complaint of palpitations and **dyspnea on exertion**.
- Clinical history of arterial hypertension and atrial fibrillation.
- Transthoracic echocardiography:
  **Atrial septal defect** with **significant left-to-right shunt**
  **Dilated right cavities.**

# Transesophageal Echocardiography

Transesophageal echocardiography showed:

- **Fenestrated *ostium secundum* atrial septal defect**, with **left-to-right shunt:**
  - ❖ **Antero-superior** defect, oval shape **13x8 mm**
  - ❖ **Inferior defect**, triangular shape **7x8mm**
  - ❖ maximum 5mm between the two communications
- **Right cavities dilation**



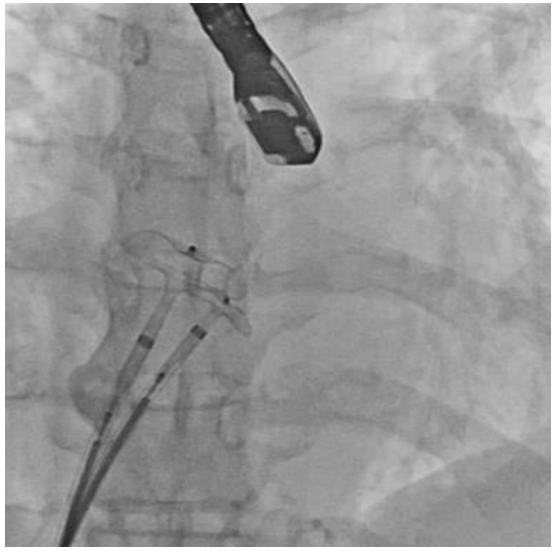



## What about now??

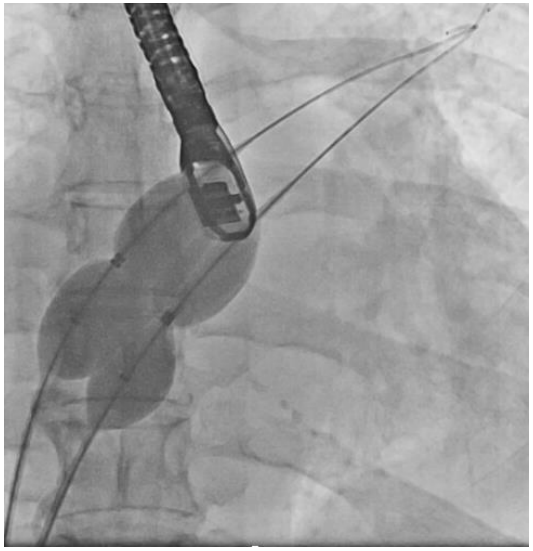
- Transcatheter closure with single Multifenestrated Septal Occluder?
- Transcatheter closure with two Septal Occluders?
- Surgery?

# Atrial septal defect closure procedure

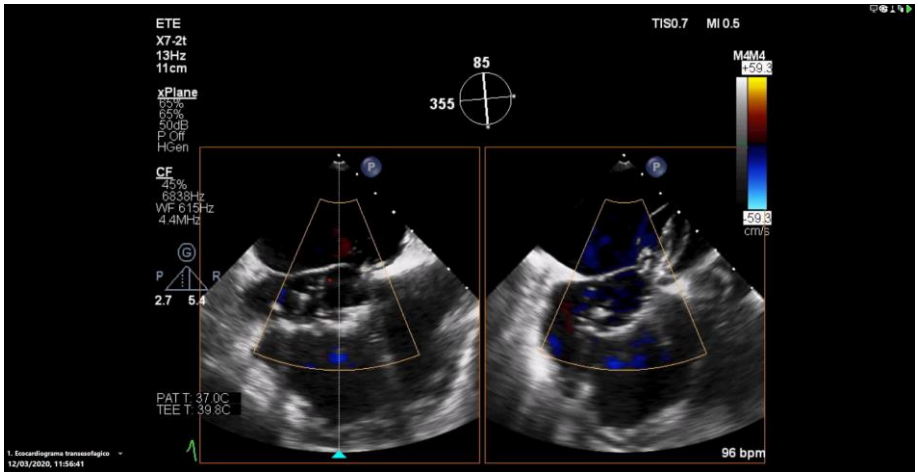
- Transfemoral access.
- Delivery sheath placed in the pulmonary veins.



- Under fluoroscopic and echocardiographic guidance, a **16 mm** and a **6 mm Amplatzer atrial septal occluders** were put in place.



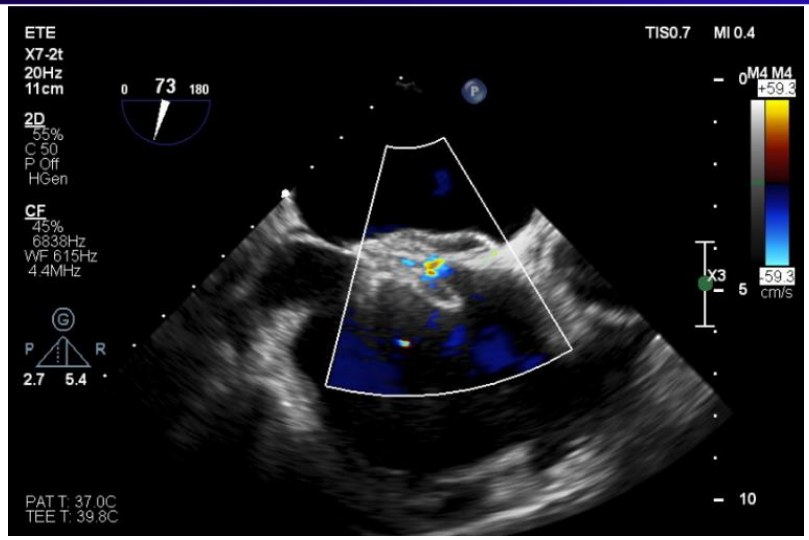
Defects **measured** with **two 24mm sizing balloons.**

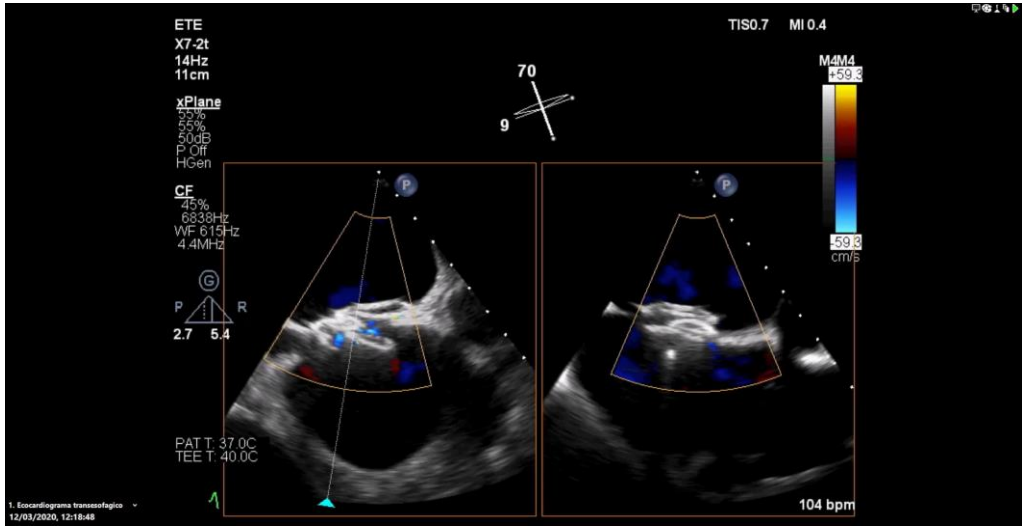


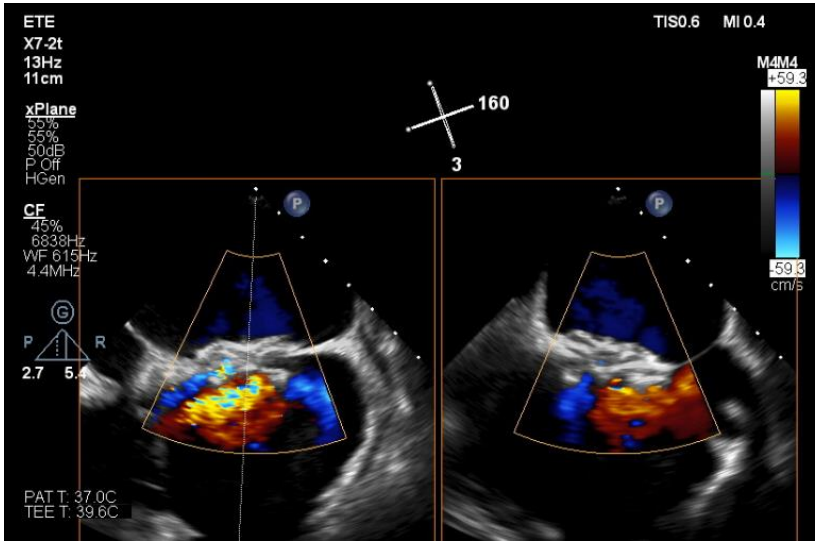
# Atrial septal defect closure procedure

- **Final result** with **two stable Amplatzer devices** with **cessation of interatrial shunt**

- A **small intradevice shunt** was noted.

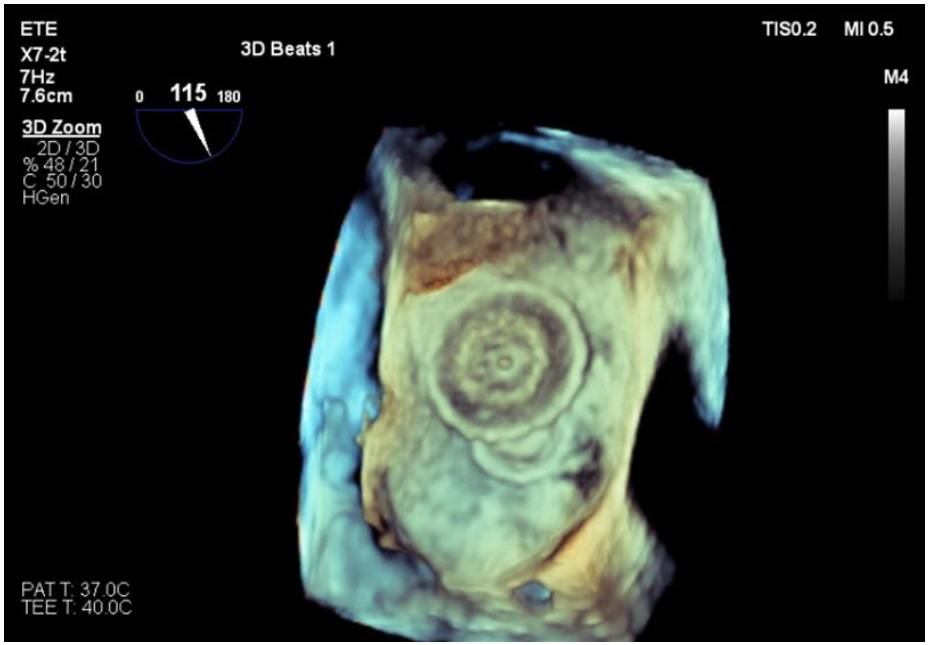


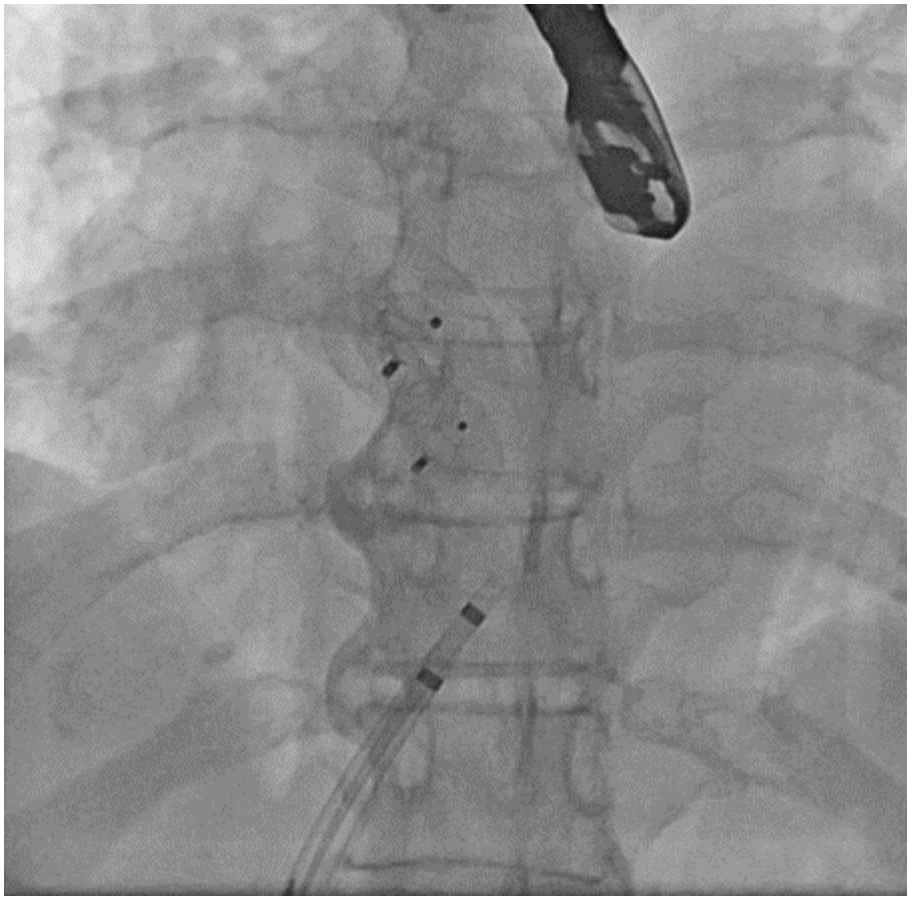



# Atrial septal defect closure procedure

- Procedure **completed without any complications**.



After 6-months:

Post procedure transthoracic echocardiography:

- **Closure devices well apposed**
- **No shunt after agitated saline contrast** was noted, even after Valsalva manoeuvre.

# Conclusion

- We present a case of a **fenestrated *ostium secundum***

**Atrial septal defect successfully occluded with two Amplatzer devices.**

- Under fluoroscopic and transesophageal echocardiography guidance, the **procedure was safe and effective.**

- **Transesophageal echocardiography and 3-D imaging play a major role in procedure guidance.**

- **No complications** were noted on long-term follow-up.