

## CRYPTOGENIC STROKE IN A 14-YEAR-OLD BOY WITH PATENT FORAMEN OVALE AND UNRECOGNIZED MULTIPLE ATRIAL SHUNTS

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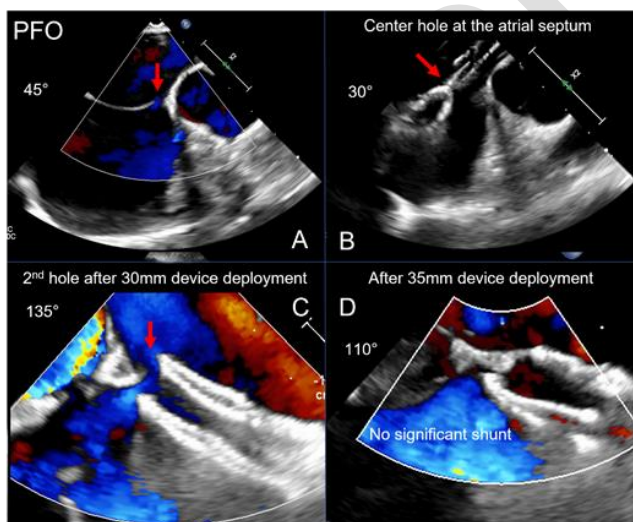
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### **History and physical:**

14-year-old healthy boy presented with headache, dizziness and nausea. MRI revealed an acute cerebral infarction in the area of left posterior inferior cerebellar artery. Coagulation tests were normal. No atrial fibrillation. Trans-esophageal echo (TEE) revealed patent foramen ovale (PFO) with right to left (R-L) shunt.

### **Imaging:**



### **Indication for intervention:**

A history of brain infarction due to paradoxical embolism via PFO.



**Intervention:**

At first, atrial shunt appeared to be just only PFO by TEE (tunnel length 10mm, height 4mm, balloon sizing 8mm, no atrial septal aneurysm). We initially planned PFO closure using 25mm PFO device. But the guidewire was accidentally passed at the center of atrial septum. Since we recognized additional shunt, 30mm device was deployed to cover both shunts. However, another R-L shunt was noticed after deployment. Then, 35mm device selected and eventually covered all defects.

**Learning points of the procedure:**

The hole contributing R-L shunt in the fossa ovalis is not always one. Close check on the atrial septum before and after the procedure is mandatory.

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