

## Percutaneous retrieval of an embolized occluder device from the aorta using a goose-neck snare

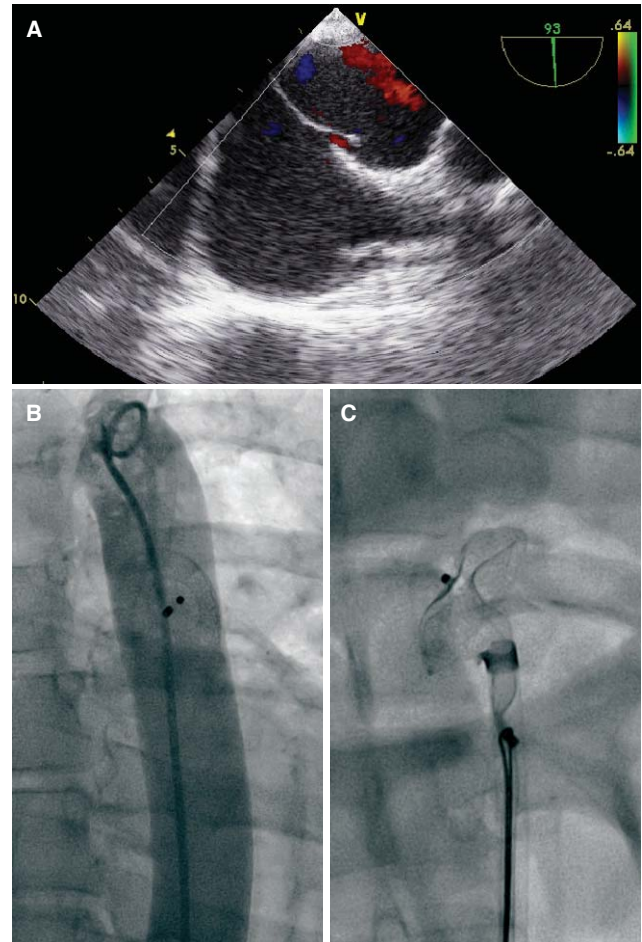
### Aortta embolize kapatma cihazının bir kaz boynu kementi kullanılarak perkütan alımı

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A 45-year-old female patient was referred to our Cardiology Out-patient Clinic after an embolic cerebrovascular event. Echocardiographic examination revealed a tunnel type patent foramen ovale (PFO), and transesophageal echocardiography (TEE) confirmed the presence of the PFO with a left to right shunt (Fig. A, Movie 1). Her other echocardiographic findings were normal, with the exception of minimal aortic and tricuspid regurgitation. Complete neurological and laboratory investigations were performed including immunologic, rheumatologic, and genetic studies, which did not show any underlying pathology for cryptogenic stroke other than the PFO. Therefore, percutaneous closure of the PFO was planned with an Amplatzer PFO occluder (AGA Medical Corporation, Golden Valley, MN) device. After a diagnostic left and right heart catheterization, the procedure to close the PFO was planned under general anesthesia with the guidance of TEE and fluoroscopy. A 25 mm PFO closure device was selected. It took three attempts to position the device and three retrievals into the introducer sheath, but at each attempt the device could not be placed in an appropriate position. Therefore, a 15 mm ASD occluder device (AGA Medical Corporation, Golden Valley, MN) was selected, and after confirmation of its localization by TEE and fluoroscopy the device was released. In a few seconds after release, the device was embolized to the left atrium, the left ventricle, then to the aorta, where it was stabilized in the descending aorta in a vertical position (Fig. B). Aortography with a pigtail catheter confirmed the location and position of the embolized device in the descending aorta distal to the left subclavian artery (Movie 2). To rescue the device, a 12 F long introducer sheath was placed into the contralateral femoral artery and a 6 F guiding catheter was advanced.

With a goose-neck snare (Amplatz GooseNeck Snare kit, ev3, MN) the embolized device was first captured from its discs and pulled until it reached the abdominal aorta. However, to get the device safely into the introducer sheath the snare should capture the device from the screw site. After several attempts, the device was captured from the screw site and completely taken into the introducer sheath (Fig. C, Movie 3). The system was removed from the femoral artery and the bleeding could be controlled with manual compression.



**Figures–** (A) Intraprocedural transesophageal echocardiography confirming the presence of the PFO with a left to right shunt. (B) The embolized device in the descending aorta in a vertical position. (C) The capture of the embolized device from the screw site using a goose-neck snare. \*Supplementary video files associated with this case can be found in the online version.