Percutaneous removal of embolized Amplatzer occluder from the abdominal aorta: a different type of belly-button

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A 71-year-old woman was admitted 6 months after placement of an Amplatzer septal occluder because of a secundum ASD. Routine echocardiography failed to identify the device in the correct position. Fluoroscopy revealed a dislocation in projection to the abdominal aorta. A contrast-enhanced computer tomography (CT) confirmed the dislocation into the abdominal aorta at the position of the ostium of the superior mesenteric artery (Panels A and B).

The right common femoral artery was surgically explored and punctured, and a 20 F sheath was positioned close to the Amplatzer device. A lasso was used to grab the screw mechanism of the right atrial disk and pull the device into sheath (Panel C).

Macroscopic inspection of the retrieved occluder showed an intact device with signs of neointimal proliferation originating from the sewn-in polyester mesh and partially covering the Nitinol wires (Panel D). Histological examination of the neointimal tissue showed granulation tissue with occasional hemosiderophages, strong infiltration and proliferation of fibroblasts, and deposition of connective tissue around the polyester mesh, all consistent with a strong foreign body reaction (Panel E).

In most cases, embolization of an Amplatzer device occurs in the pulmonary arteries, probably as a result of an undersizing of the occluder device. To the best of our knowledge, embolization and percutaneous retrieval of an Amplatzer occluder in the abdominal aorta close to the superior mesenteric artery have not yet been described.

Panel A and B. Contrast-enhanced CT scan (sagittal and coronal reconstruction) of the abdominal aorta shows dislocation of the Amplatzer occluder into the abdominal aorta close to the superior mesenteric artery.

Panel C. A lasso catheter was used to grasp the screw mechanism of the right atrial disk and to pull the device into the sheath.

Panels D and E. Macroscopic appearance and histological examination (HE, 400× magnification, courtesy Dr. S. Bertz, Inst. of Pathology) of the retrieved Amplatzer device with neointimal proliferation.