

IMAGES IN INTERVENTION

Percutaneous Retrieval of a Large Muscular VSD Occluder Using a Novel Retrieval Device

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A 23-year-old woman with large patent ductus arteriosus underwent percutaneous closure of her patent ductus arteriosus using an 18-mm Amplatzer (Abbott) muscular ventricular septal defect occluder (MVSDO). The device was found to be embolized to the right pulmonary artery by echocardiography 4 hours later.

The device was successfully retrieved with the help of the ŌNŌ retrieval device (ŌNŌCOR Vascular).¹⁻³ The retrieval device consists of a wire basket with a central lumen that is specifically designed to help facilitate device retrieval by radial compression. A coaxial system of the retrieval system, a 16-F long DrySeal sheath (W.L. Gore and Associates), and 2.6-mm Olympus (Olympus America) rat tooth alligator jaws forceps were advanced and grasped the device waist. The MVSDO was partially withdrawn into the DrySeal sheath through the retrieval system. However, the device would not collapse completely given that the microcrew protruded through the retrieval device basket and “hung up” at the sheath tip (Figure 1). The entire system with the partially

recaptured MVSDO was pulled back into the inferior vena cava. The MVSDO was intentionally released, and the basket was opened so that the occluder was reformed within the inferior vena cava. Once the occluder was reoriented, it was grasped at the waist, and the MVSDO was successfully retrieved (Figure 1). Careful attention to the microcrew position in relation to the basket and the sheath is important when the occluder cannot be withdrawn; reorientation maneuvers and straightening the system may help in such scenarios.

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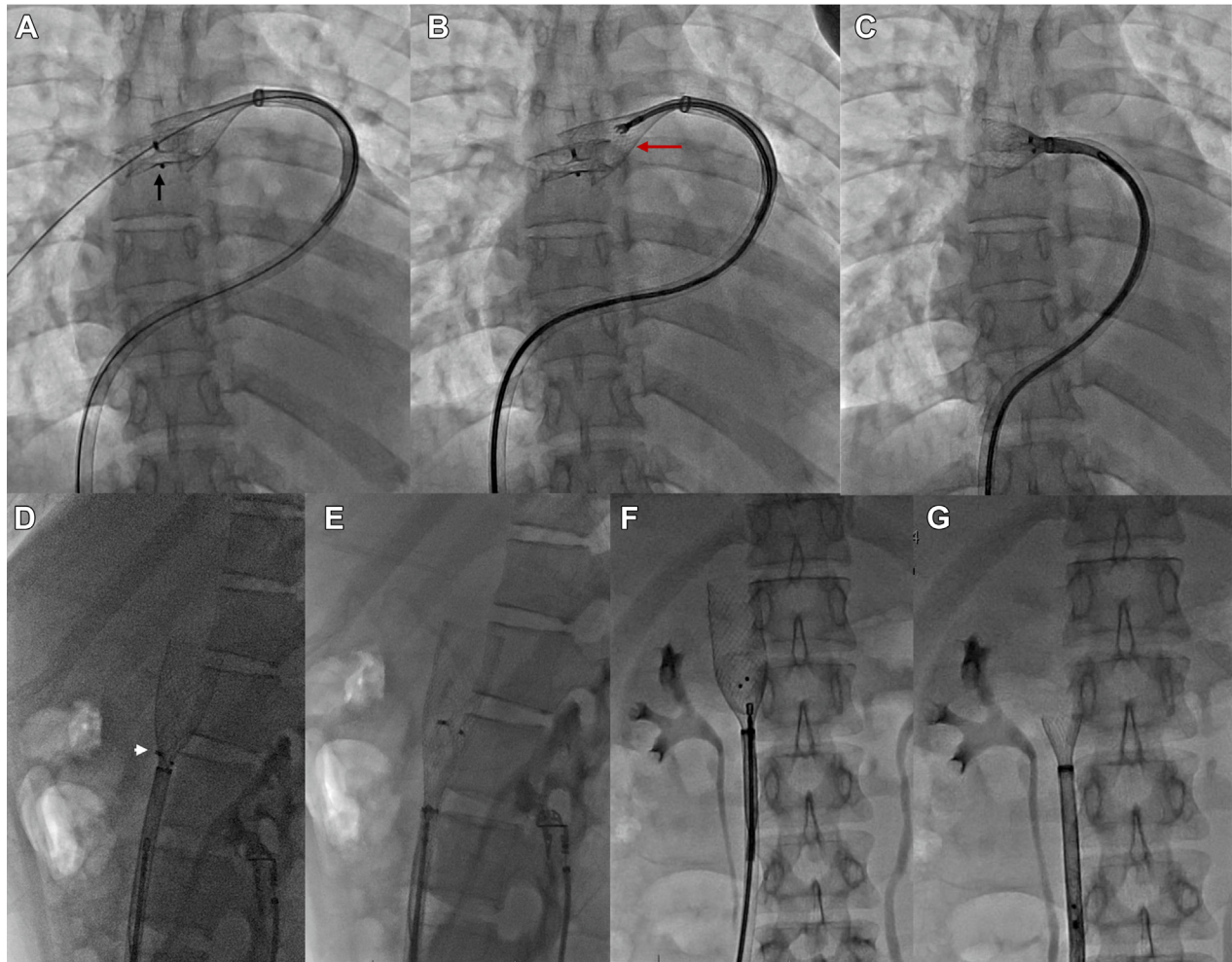
The authors have reported that they have no relationships relevant to the contents of this paper to disclose.

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The authors attest they are in compliance with human studies committees and animal welfare regulations of the authors' institutions and Food and Drug Administration guidelines, including patient consent where appropriate. For more information, visit the [Author Center](#).

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FIGURE 1 Retrieval of MVSDO Using the Retrieval Device

(A-C) A series of images showing the removal of an 18-mm muscular ventricular septal defect occluder (MVSDO) (black arrow) from the right pulmonary artery using alligator grasping forceps through a retrieval system (red arrow) over a 16-F long sheath. (D-G) The protruded microcrew (white arrow) through the retrieval basket, which had to be reoriented and recaptured in the inferior vena cava before successful retrieval.

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