TITLE: Percutaneous Removal of Unraveled HELEX Septal Occluder 4 months post deployment

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ABSTRACT

Percutaneous closure of the patent foramen ovale (PFO) is indicated in selected patients for specific indications. Various techniques and devices have been used successfully. Because of the low profile and ability of the device to conform to the length of the PFO tunnel, our institutional preference is to use the GORE® HELEX® Septal Occluder (HSO: W.L. Gore & Associates, Inc.; Flagstaff, AZ). Additionally, there have been no reports of cardiac erosion with this device following closure of either PFO or atrial septal defect. Adequate deployment of the device requires capture of 3 sequential eyelets by the locking loop. At times the right atrial eyelet is not caught, particularly when a long tunnel PFO causes too much separation between the discs. Unlocked devices have been uneventfully left in the atrial septum with no untoward events provided they appear stable in the catheterization laboratory and the shunt has been eliminated. When necessary the device can be removed during the same procedure and a different technique or device used to close the PFO. Retrieval of a device from the atrial septum after it has been in place for an extended period of time has not been described. We report a patient in whom an unlocked, but otherwise well positioned HSO subsequently unraveled with the RA disc migrating through the tricuspid valve while the LA disc remained well apposed to the left atrial side of the septum. The PFO was closed prior to liver transplantation to prevent an embolic event during the transplant. The patient required placement of several central lines prior to liver transplant, and this instrumentation in the right atrium may have caused unraveling of the device. The HSO was successfully removed percutaneously 15 weeks after implantation. The PFO was closed with the same size HSO during the same procedure with successful locking of the device by capture of all 3 eyelets.