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IMAGES IN INTERVENTION

Successful Percutaneous Retrieval of a 33-mm Watchman Left Atrial Appendage Occlusion Device From the Left Atrium

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An 84-year-old man with permanent atrial fibrillation was referred for left atrial appendage (LAA) occlusion with a CHA_2DS_2-VASc score of 3 and a HAS-BLED score of 4. Pre-operative transesophageal echocardiography identified a LAA ostial diameter of 30 mm. A 33-mm Watchman device (Boston Scientific, Marlborough, Massachusetts) was chosen to be implanted into the LAA. During the procedure, the device was detached from the transport sheathing (Figure 1). To recapture the dislocated device, we decided that grasping forceps (Olympus, Solna, Sweden) should be used to grasp the detached device via femoral access. After numerous external attempts, we found that only by clipping the device's hub (and not the basilar part or body) the device be pulled into a 12-F sheath (FlexCath Advance 4FC12, Medtronic CryoCath LP, both Medtronic, Minneapolis, Minnesota) (Figure 2). However, this attempt failed. We then found that the ideal position should be coaxial,

FIGURE 1 The Watchman Device Separated From the Transport Sheathing

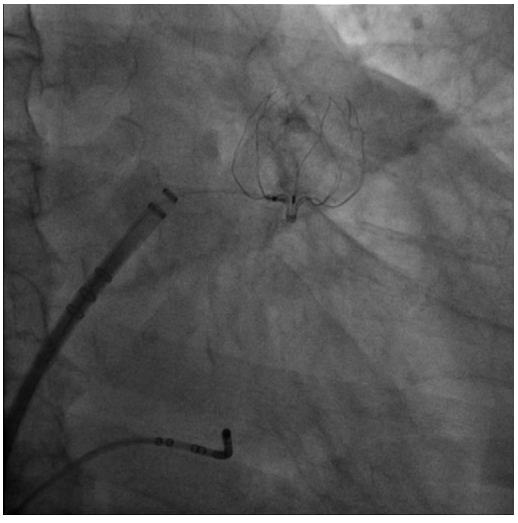

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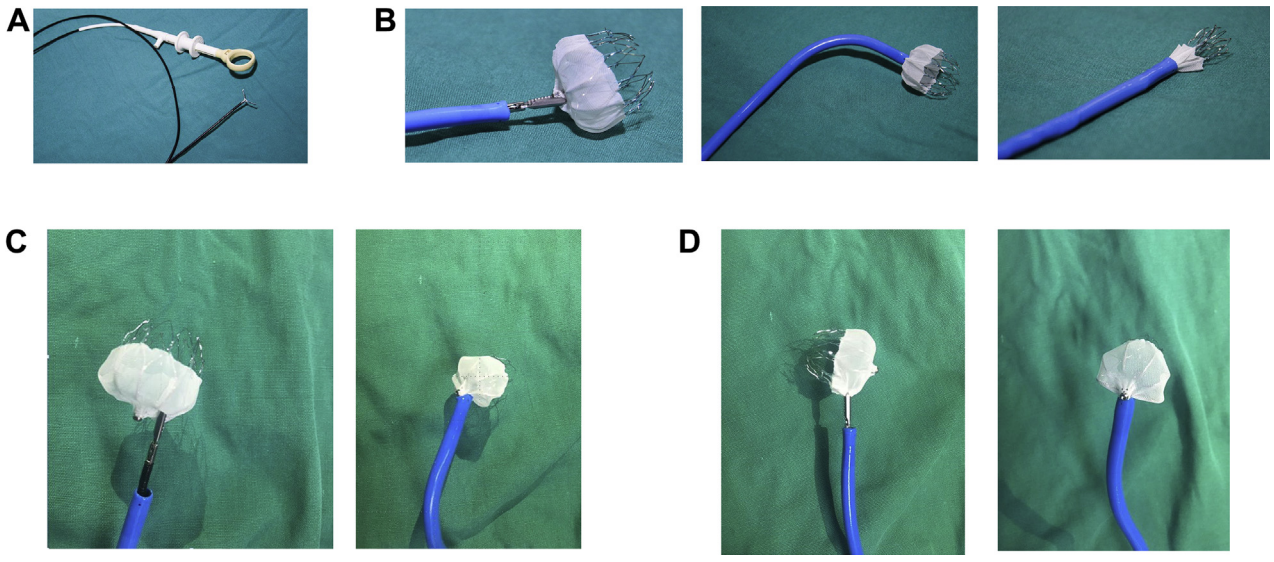
FIGURE 2 Grasping the Watchman Device In Vitro



(A) Grasping forceps (Olympus); **(B)** success pulling the Watchman device (33 mm) into the 12-F sheath by grasping the device hub; **(C)** failure to pull the Watchman device into the 12-F sheath by grasping the basilar part of the device; **(D)** failure to grasp the device body.

with the grasping forceps and device hub in the same direction. Two alligator cups biopsy forceps (Zhuji Pengtian Medical Instrument Co., Ltd, Zhuji, China) were used. One was used to grasp the device body and prevent device motion; the other was positioned coaxially to grasp the device hub. The coaxial alignment was confirmed by multidirectional projections under fluoroscopy. Finally, the device was retrieved (Figure 3).

To our knowledge, a case of large-diameter (33 mm) Watchman device detachment in the left atrium during the procedure has not yet been described. Furthermore, the detached Watchman device was retrieved though a double sheath and biopsy forceps technique. Perrotta et al. (1) also reported a case of percutaneous retrieval of a dislodged LAA occlusion device (Amplatzer Cardiac Plug, St. Jude Medical, St. Paul, Minnesota) with a diameter of 30 mm using a 24-F steerable sheath with a double-snare technique. If the detached device is trapped in the mitral valve apparatus or embolized to the left ventricular outflow tract, surgical retrieval should be performed as soon as possible. While the detached device is trapped in the left atrium, percutaneous retrieval should be attempted.

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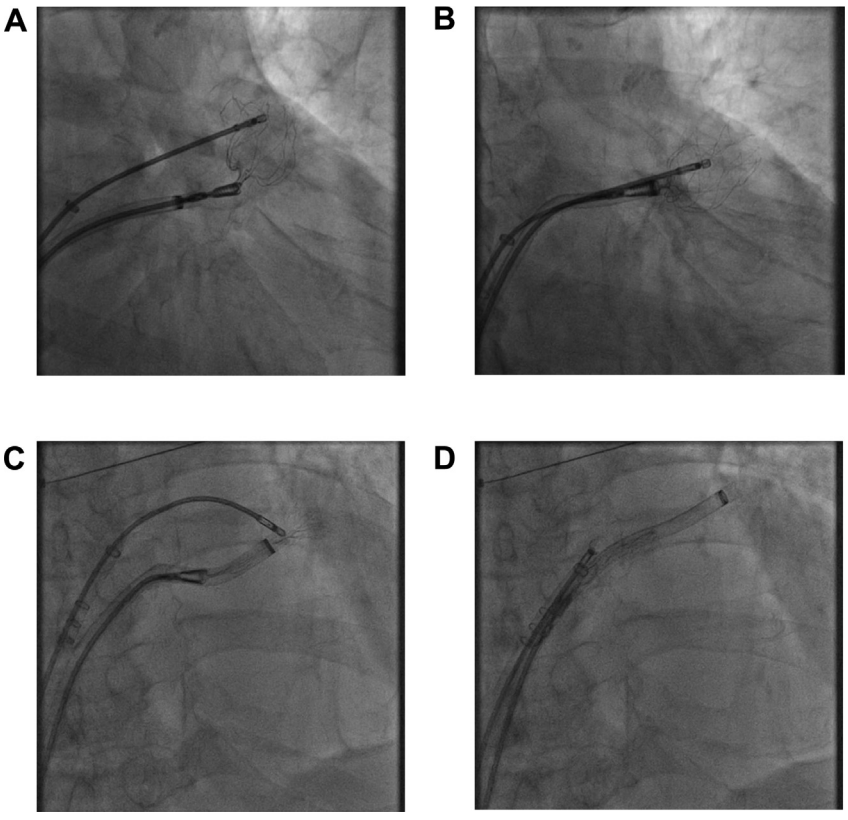
FIGURE 3 **The Procedure of Grasping Watchman Device in the Patient**



We put alligator cups biopsy forceps in one sheath for grasping the device body to prevent moving into the chamber and changing the direction of the device hub **(A and B)**, then a grasping forceps was advanced into the 12-F transseptal sheath clipping the device hub **(A and B)**. The device was retracted into the sheath **(C and D)**.

REFERENCE

1. Perrotta L, Bordignon S, Furnkranz A, Chun JK, Eggebrecht H, Schmidt B. Catch me if you can: transseptal retrieval of a dislodged left atrial appendage occluder. Circ Arrhythm Electrophysiol 2013;6:e64.

KEY WORDS atrial fibrillation, left atrial appendage occlusion, retrieval of a Watchman device