

IMAGES IN INTERVENTION

Novel Percutaneous Septectomy for Left Atrial Myxoma

Barbara A. Danek, MD,^a Joseph Park, MD,^a David Elison, MD,^a Christine J. Chung, MD,^a
G. Burkhard Mackensen, MD, PhD,^b James M. McCabe, MD^a

CASE

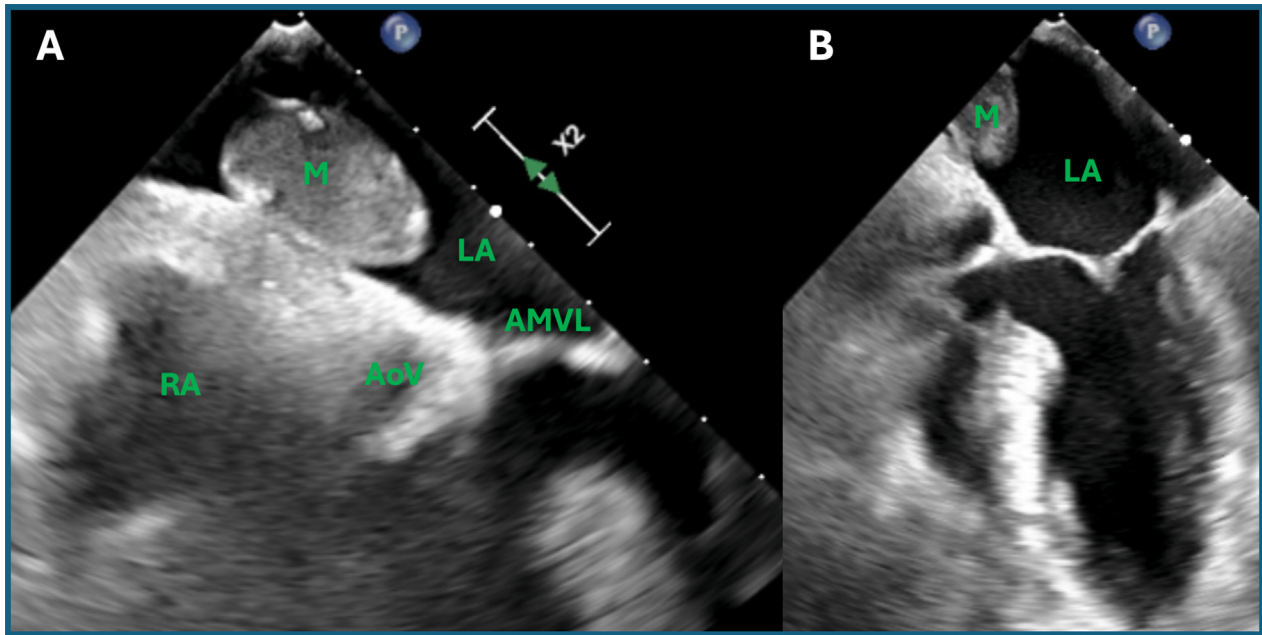
An inoperable 74-year-old woman was referred for treatment of a large left atrial mass. Transesophageal echocardiogram confirmed a 2.7 × 1.6-cm mass with broad-based attachment to the fossa ovalis (**Figure 1**).

A strategy was developed to perform a percutaneous “septectomy” to remove the mass and fossa ovalis en bloc by puncturing the interatrial septum (IAS) at the corners of the mass and then lacerating between punctures. A VersaCross system (Boston Scientific) was used to cross the IAS in inferior-posterior, superior-posterior, and inferior-anterior positions (**Figure 2**). Multipurpose guides were delivered through all 3 punctures. Difficulty imaging the IAS between the mass and aortic cusp delayed the superior-anterior puncture until the IAS was partially mobilized. Serially, a 300-cm Astato wire (Asahi Intecc) was externalized from adjacent guide

catheters (**Figure 3A**), creating a “Flying V” in standard electrosurgical fashion. The posterior and inferior margins of the fossa were cut in sequence using 50 W of electricity (**Figures 3B and 3C**). With improved visualization, a fourth puncture was made superior-anteriorly, and the superior margin was similarly lacerated (**Figure 3D**). A snare and retrieval system were then assembled as described for the SEATTLE (Simplified Extraction of Atrial Tumor With Targeted Loop Electricity) procedure¹ (**Figure 3E**). The mass was snared using a 35-mm loop snare, then encapsulated by an ONO basket (ONOCOR). A 25-mm SnareMaster polypectomy snare (Olympus America) was used to lacerate the residual septal attachment (**Figure 3F**) at 50 W. The sheath, mass, and ONO basket were removed as one (**Figure 3G**). The iatrogenic atrial septal defect (**Figure 3H**) was closed using a 32-mm Gore atrial septal defect device (Gore Medical). Pathology was consistent with myxoma.

From the ^aDivision of Cardiology, Department of Medicine, University of Washington, Seattle, Washington, USA; and the ^bDepartment of Anesthesiology and Pain Medicine, University of Washington, Seattle, Washington, USA.
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 LA Mass

(A and B) Left atrial (LA) mass with broad-based attachment to the fossa ovalis. AMVL = anterior mitral valve leaflet; AoV = aortic valve; M = mass; RA = right atrium.

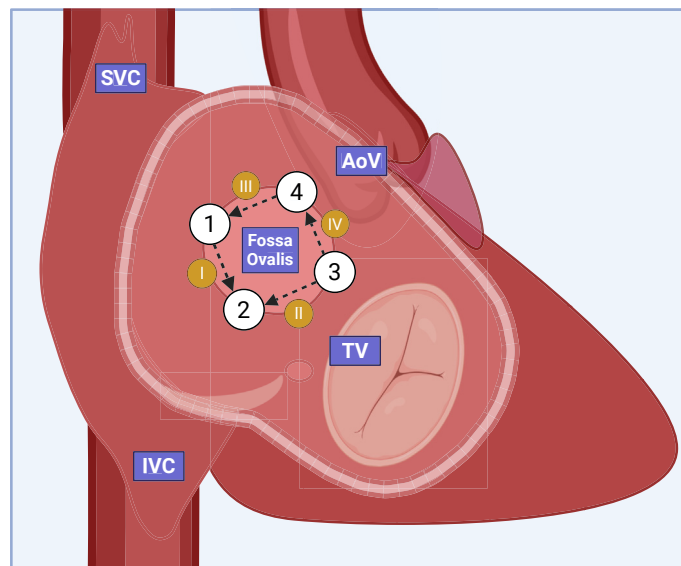
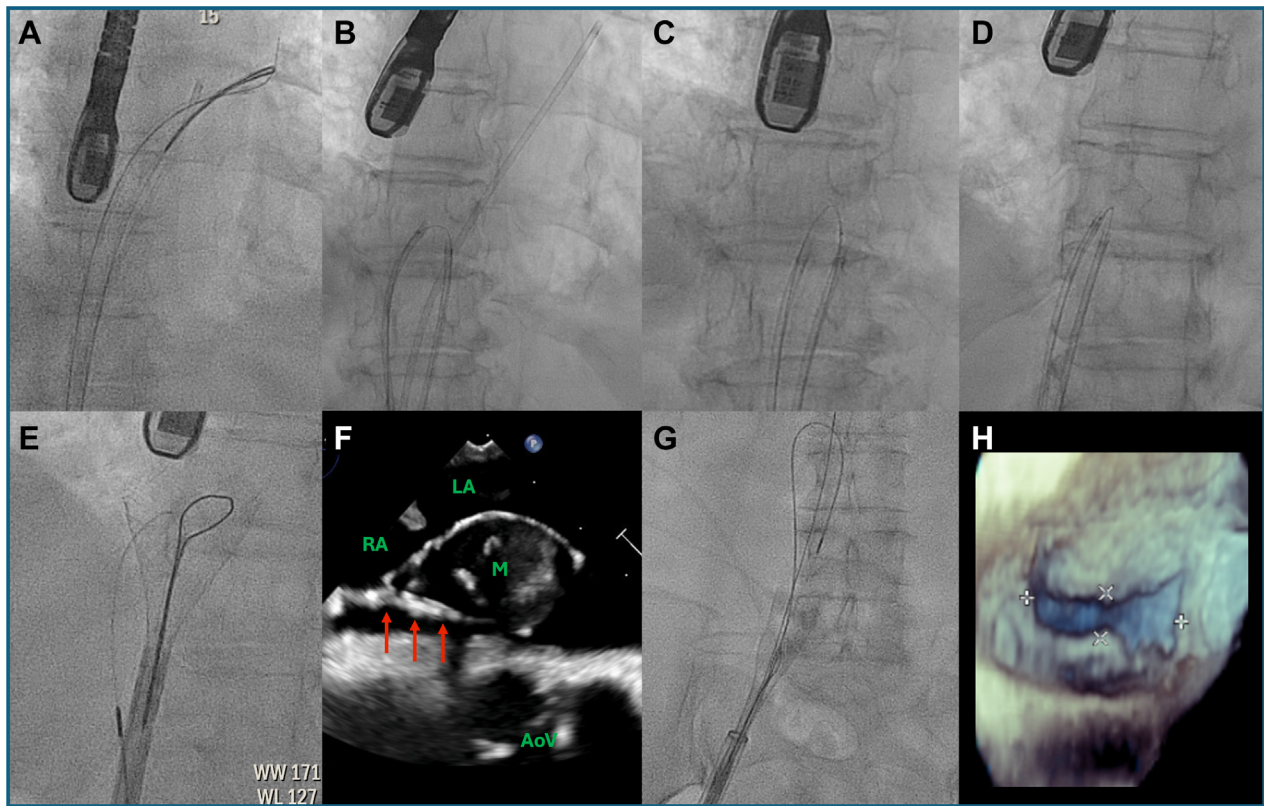
FIGURE 2 Diagram of Punctures and Lacerations

Diagram of punctures and lacerations in relation to the fossa. AoV = aortic valve; IVC = inferior vena cava; SVC = superior vena cava; TV = tricuspid valve.

FIGURE 3 Procedural Steps for Septectomy

(A) Snared wire within the LA. (B, C, and D) "Flying V" lacerating the posterior, inferior, and superior walls of the fossa. (E) Complex snare system. (F) ONO basket (arrows) encapsulating the mass after snaring. (G) Mass retraction within the ONO. (H) Atrial septal defect (17 × 12 mm) after removal of the mass. Abbreviations as in Figures 1 and 2.

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ADDRESS FOR CORRESPONDENCE: Dr James M. McCabe, Division of Cardiology, Department of Medicine, University of Washington Medical Center, 1959 NE Pacific Street, Seattle, Washington 98195, USA. E-mail: jamiemccabemd@pm.me.

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1. Steinberg ZL, Elison D, Vincent LL, Oxorn D, McCabe JM. The Simplified Extraction of Atrial Tumor With Targeted Loop Electricity (SEATTLE) procedure. *JACC Case Rep.* 2023;10:101758.

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