

Case Report

Hemostasis of Left Atrial Appendage Bleed With Lariat Device

Amena Hussain MD, Muhamed Saric MD, Scott Bernstein MD, Douglas Holmes MD, Larry Chinitz MD

NYU Langone Medical Center, United States

Address for Correspondence: Dr. Amena Hussain, NYU Langone Medical Center, United States. Email: amenahussain2@gmail.com

Abstract

New devices designed for minimally invasive closure of the left atrial appendage (LAA) may be a viable alternative for patients in whom anticoagulation is considered high risk. The Lariat (Sentreheart, Redwood City, CA), which is currently FDA-approved for percutaneous closure of tissue, requires both trans-septal puncture and epicardial access. However it requires no anticoagulation after the procedure. Here we describe a case of effusion and tamponade during a Lariat procedure with successful completion of the case and resolution of the effusion.

Key words: Left Atrial Appendage, Lariat Device

Introduction

New devices designed for minimally invasive closure of the left atrial appendage (LAA) may be a viable alternative for patients in whom anticoagulation is considered high risk. The Lariat (Sentreheart, Redwood City, CA), which is currently FDA-approved for percutaneous closure of tissue, requires both trans-septal puncture and epicardial access. However it requires no anticoagulation after the procedure. Here we describe a case of effusion and tamponade during a Lariat procedure with successful completion of the case and resolution of the effusion.

Case

An 87 year old man with longstanding persistent atrial fibrillation and elevated stroke risk (CHADSVASC score = 3, HASBLED = 2) was felt not to be candidate for chronic oral anticoagulation due to repeated falls associated with orthopedic injury. He was referred to our Electrophysiology Laboratory for percutaneous suture ligation of the left atrial appendage.

A pre-operative CT angiogram was performed to determine the patient's left atrial appendage anatomy. This showed a single lobed appendage 3.3cm in length with a trabeculated distal portion and was deemed suitable for the exclusion procedure. Under general anesthesia, intra-operative 3D transesophageal echocardiography (TEE) demonstrated no left atrial thrombus.

This is an open access article under the [CC BY-NC-ND license](https://creativecommons.org/licenses/by-nc-nd/4.0/).

A Tuohy needle was used to enter the pericardial space via a subxiphoid approach under fluoroscopic guidance. Entry into the pericardial space was anterior-lateral, using contrast and a lateral fluoroscopic view. The access site was sequentially dilated and a 13Fr sheath was placed into the pericardial space. Next, trans-septal puncture was performed using an 8.5 Fr SL-1 sheath and an Extra Sharp Brokenbrough needle, via the right femoral vein. A Heparin drip was initiated to maintain adequate activated clotting time (250-300 sec).

A left atrial angiogram with an occlusive balloon (SentreHeart Endocath) confirmed the LAA size, shape and orientation, consistent with CTA findings. A magnet-tipped guidewire (Sentreheart FindrWIRZ) wire was advanced into the distal portion of left atrial appendage. A second magnet-tipped guidewire was advanced into the subxiphoid space and coupled magnetically to the LAA wire, in the end-to-end configuration. The Lariat suture loop was then advanced into the pericardial space over the magnet guidewire. The suture loop could not be advanced to the base of the appendage due to separation of the guidewire magnets. After manipulation of the suture loop the magnets were often noted to be in the end-to-side configuration, preventing successful positioning of the suture loop.

During manipulation of the magnet-tipped guidewires, the patient became hypotensive to a systolic pressure of 55 mmHg and a new pericardial effusion was noticed on TEE (**Figure 1**). Approximately 200cc of blood was drained from the side arm of the epicardial sheath with some initial improvement in hemodynamics. The effusion reaccumulated and the blood pressure dropped. A pigtail catheter was emergently placed in the pericardial space. A total of 800cc was drained and autotransfused back to the patient. The patient's hemodynamic condition stabilized and the decision was made to continue the case. Hemostasis of the LAA would likely be achieved with successful application of the closure device.

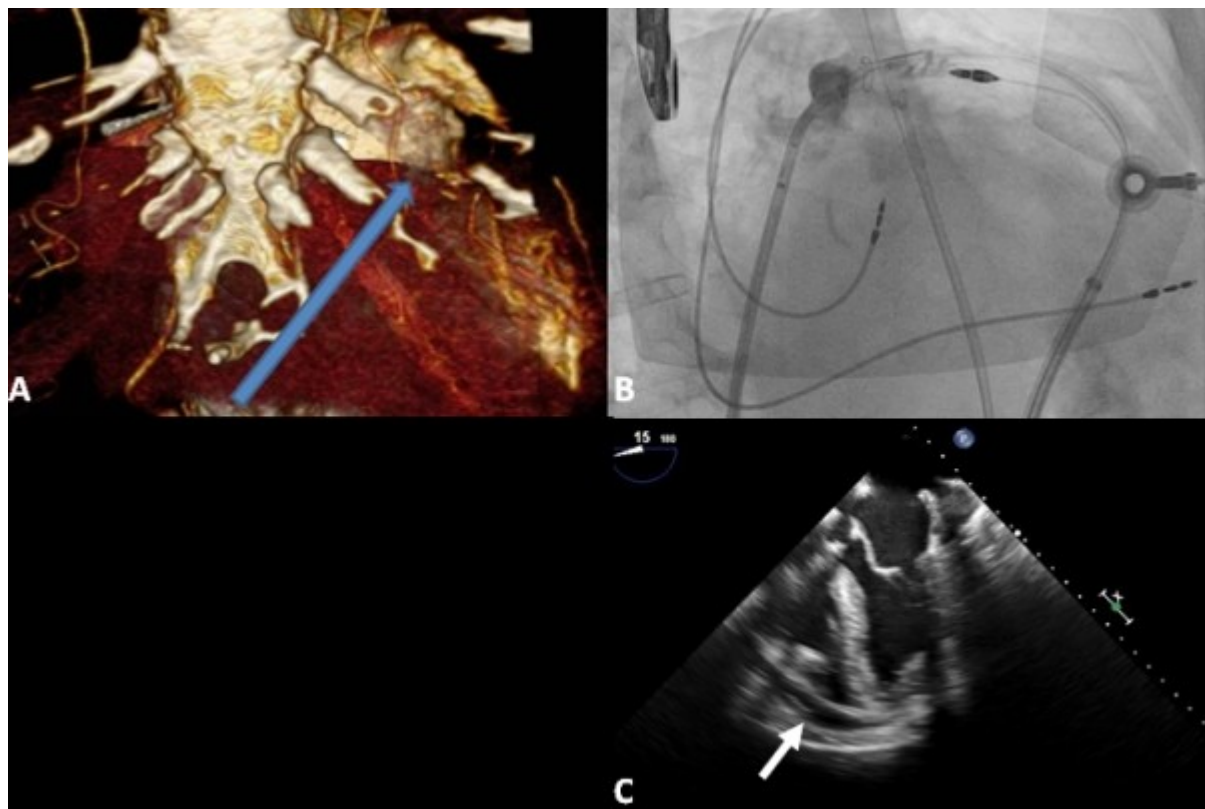


Figure 1: A. Reconstructed CT scan demonstrating anatomic relationship of the LAA and the ideal trajectory of the sub-xiphoid epicardial puncture. B. Contrast injection into the LAA os after closure of the Lariat suture showing no flow into the appendage. C. Intra-operative TEE prior to LAA closure demonstrates pericardial effusion.

With the pigtail catheter in place, a second subxiphoid epicardial access was obtained,

Download English Version:

<https://daneshyari.com/en/article/2928438>

Download Persian Version:

<https://daneshyari.com/article/2928438>

[Daneshyari.com](https://daneshyari.com)