

Percutaneous Endovascular Retrieval of a Dislodged Left Atrial Appendage Closure Device from the Juxtarenal Aorta

We present a 74-year-old male Who is known to have diabetes, hypertension male and paroxysmal atrial fibrillation. A 21-mm Left Atrial Appendage (LAA) Occluder Watchman Device (Boston Scientific, Maple Grove, MN) was implanted 6 months earlier. The patient presented with asymptomatic device migration diagnosed on follow-up cardiac echocardiography. Computed tomography (CT) angiography showed the device lodged at the juxtarenal

aorta occluding the right renal artery [Figure 1a and b]. Abdominal aortography through left brachial access showed the migrated device at the level of the renal arteries [Figure 1c]. Through the right internal jugular vein, an intracardiac echocardiography catheter was advanced to the inferior vena cava to monitor the aortic lumen during the retrieval procedure. Using a 14-Fr sheath (Cook Medical, Bloomington, IN) through the left common

Yousof Abdulrahman Al Zahrani^{1,2,3}, Mohammad Arabi^{1,2,3}, Abdul Aziz Al Harbi^{1,2,3}, Essam Al Dulaigan^{1,2,3}, Ali Al Ghamdi^{2,3,4}, Mohammed Al Moaiqel^{1,2,3}

¹Department of Medical Imaging, Division of Vascular Interventional Radiology, King Abdulaziz Medical City, ²King Saud Bin Abdulaziz University for Health Sciences, ³King Abdullah International Medical Research Center, Ministry of National Guard Health Affairs, ⁴Division of Adult Cardiology, King Abdulaziz Cardiac Center, King Abdulaziz Medical City, Riyadh, Saudi Arabia

Received: 13-10-2019

Accepted: 13-10-2019

Published Online: 12-12-2019



Figure 1: (a and b) Contrast-enhanced computed tomography scan of the abdomen showing the embolized Watchman device within the juxtarenal abdominal aorta. (c) Conventional abdominal aortography confirming the location of the embolized device (white arrow) and patency of the aorta before retrieval

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Al Zahrani YA, Arabi M, Al Harbi AA, Al Dulaigan E, Al Ghamdi A, Al Moaiqel M. Percutaneous endovascular retrieval of a dislodged left atrial appendage closure device from the juxtarenal aorta. Arab J Intervent Radiol 2020;4:47-8.

Address for correspondence:

Dr. Yousof Abdulrahman Al Zahrani,
Department of Medical Imaging, Division of Vascular and Interventional Radiology, King Abdulaziz Medical City, Ministry of National Guard Health Affairs, Riyadh 11426, Saudi Arabia.
E-mail: yousof1403@hotmail.com

Access this article online

Website: www.arabjir.com

DOI: 10.4103/AJIR.AJIR_28_19

Quick Response Code:



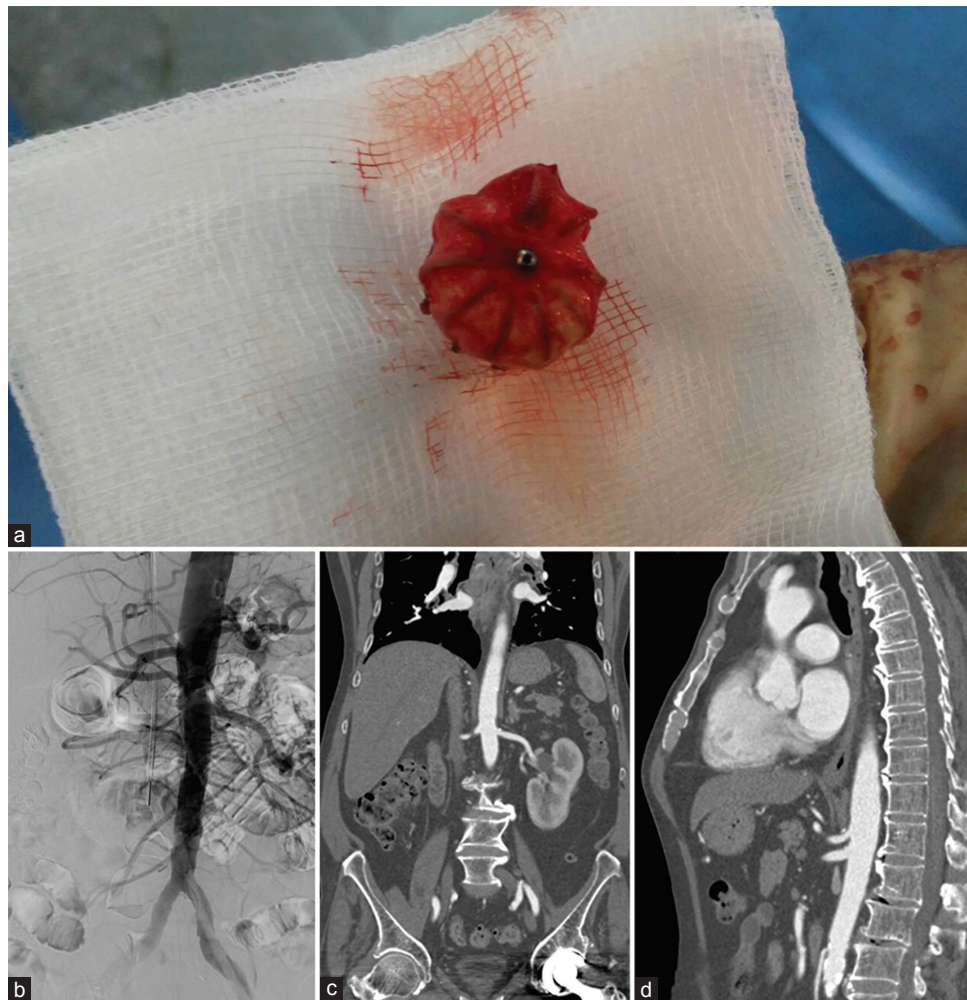


Figure 2: (a) Retrieved Watchman device (b) Postretrieval aortography showing patent intact aorta. (c and d) Follow-up computed tomography scan images showing intact aorta with no signs of vascular injury

femoral artery, the device was captured and removed using alligator forceps [Figure 1d]. Completion aortography showed no extravasation or dissection [Figure 2a]. Femoral access hemostasis was achieved using Prostar® XL closure device (Abbott Vascular Inc, CA, USA). A follow-up CT angiography 1 month later revealed intact and widely patent abdominal aorta [Figure 2b-d].

LAA occlusion is a nonpharmacological alternative embolic protection in patients with nonvalvular atrial fibrillation.^[1,2] LAA device migration is a rare complication that was reported in less than 4% of cases.^[1] LAA closure device migration into the aorta is rare and reported only in seven cases in the literature.^[2,3] Our case demonstrated that percutaneous endovascular retrieval is a safe alternative to major surgery.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Bajaj NS, Parashar A, Agarwal S, Sodhi N, Poddar KL, Garg A, *et al.* Percutaneous left atrial appendage occlusion for stroke prophylaxis in nonvalvular atrial fibrillation: A systematic review and analysis of observational studies. *JACC Cardiovasc Interv* 2014;7:296-304.
2. Perrotta L, Bordignon S, Dugo D, Fürnkranz A, Konstantinou A, Ricciardi G, *et al.* Complications from left atrial appendage exclusion devices. *J Atr Fibrillation* 2014;7:1034.
3. Aminian A, Lalmand J, Tzikas A, Budts W, Benit E, Kefer J, *et al.* Embolization of left atrial appendage closure devices: A systematic review of cases reported with the watchman device and the Amplatzer cardiac plug. *Catheter Cardiovasc Interv* 2015;86:128-35.