

CARDIOVASCULAR FLASHLIGHTS

<https://doi.org/10.1093/eurheartj/ehae935>

Online publish-ahead-of-print 8 January 2025

Giant left atrial appendage aneurysm: a source of multiple thrombotic events despite medical therapyJacopo Lin ¹, Francesco Maisano ^{1,2}, and Michele De Bonis ^{1,2,*}¹School of Medicine, Vita-Salute San Raffaele University, Via Olgettina 58, Milan 20132, Italy; and ²Department of Cardiac Surgery, IRCCS San Raffaele Hospital, Vita-Salute San Raffaele Scientific Institute, Via Olgettina 60, Milan 20132, Italy*Corresponding author. Tel: +39 02-26437118, Email: debonis.michele@hsr.it

A 62-year-old male presented with a medical history including ischaemic heart disease and long-standing atrial fibrillation. Diagnosed with polycythaemia vera in 2018, he has been on hydroxyurea (Onco-carbide) and rivaroxaban (DOAC). In 2022, routine cardiological evaluation revealed a left atrial appendage aneurysm (LAAA) with thrombosis, prompting the replacement of rivaroxaban with warfarin. Despite ongoing anticoagulation therapy, he suffered a Non-ST-Elevation Myocardial Infarction in August 2022, which necessitated the addition of clopidogrel. Unexpectedly, he later experienced a stroke.

Transoesophageal echocardiography revealed a large LAAA with low intra-appendage velocities suggesting altered haemodynamics, with no thrombi detected (Panel A). The left atrium (LA) was non-dilated, and the LV was normal in size and function. A CT scan with 3D volume-rendering reconstruction further characterized the LAAA, measuring $7.8 \times 5 \times 9$ cm, and impinging on the LV base (Panels B–E), with the ostium situated near the circumflex artery (Panel C, arrow).

After Heart Team discussion, LAAA surgical exclusion with an AtriClip (Atricure Inc., Westchester, OH, USA) and atrial fibrillation ablation via median sternotomy was performed. Pre-operative CT showed adhesions to the LV epicardium (Panel D), which were confirmed intraoperatively, revealing the LAAA's extremely thin, fragile walls. This case highlights the unique radiological findings and therapeutic challenges in managing high-risk LAAA patients.

Since the procedure, the patient was discharged in sinus rhythm, free from thromboembolic events, and continued with regular follow-up. The optimal management of LAAA remains debated, with no established guidelines.¹ Options include conservative monitoring or surgical intervention, particularly in symptomatic patients or those unresponsive to medical therapy.^{2,3}

F.M. has received grant and institutional research support from Abbott, Medtronic, Edwards Lifesciences, Biotronik, Boston Scientific Corporation, NVT, Terumo, Venus, and Roche. He has received consulting fees and honoraria, both personal and institutional, from Abbott, Medtronic, Edwards Lifesciences, Xeltis, Cardiovalve, Occlufit, Simulands, Magenta, Mtex, Venus, Squadra, Valgen, and Croivalve. He holds royalty income and intellectual property rights from Edwards Lifesciences and Occlufit. He has also received support for attending meetings and travel from Abbott, Medtronic, Edwards Lifesciences, Biotronik, Boston Scientific Corporation, NVT, Terumo, and Venus. Furthermore, he holds equity or stock options in Magenta, Transseptal Solutions, and 4Tech. Other authors declare no disclosure of interest for this contribution.

No data were generated or analysed for this manuscript.

1. Fakhri G, Obeid M, El Rassi I, Tabbakh A, Bitar F, Alameddine M, et al. Large congenital left atrial wall aneurysm: an updated and comprehensive review of the literature. *Echocardiography* 2020;**37**:965–70. <https://doi.org/10.1111/echo.14687>
2. Coraducci F, Barbarossa A, Coretti F, Belleggia S, Guerra F. Giant aneurysm of the left atrial appendage: a case report. *Eur Heart J Case Rep* 2024;**8**:ytac099. <https://doi.org/10.1093/ehjcr/ytac099>
3. Itaya H, Aoki C, Hatanaka R, Fukuda I. Resection of left atrial appendage aneurysm and full maze procedure as curative management for stroke recurrence. *Gen Thorac Cardiovasc Surg* 2020;**68**:295–7. <https://doi.org/10.1007/s11748-018-1048-1>

© The Author(s) 2025. Published by Oxford University Press on behalf of the European Society of Cardiology. All rights reserved. For commercial re-use, please contact reprints@oup.com for reprints and translation rights for reprints. All other permissions can be obtained through our RightsLink service via the Permissions link on the article page on our site—for further information please contact journals.permissions@oup.com.

