Incomplete surgical exclusion of the left atrial appendage

Alberto Pozzoli¹*, Patrizio Mazzzone², Stefano Benussi³, and Ottavio Alfieri¹

¹Cardiothoracic Surgery Department, San Raffaele University Hospital, Via Olgettina 60, Milan 20132, Italy; ²Arrhythmia Unit and Electrophysiology Laboratories, San Raffaele University Hospital, Milan, Italy; and ³Division of Cardiovascular Surgery, University Hospital Zurich, Zurich, Switzerland

* Corresponding author. Tel: +39 02 26435316, Fax: +39 02 26437125, Email: albertopozzoli@gmail.com

The left atrial appendage (LAA) represents one of the major sources of cardiac embolism, responsible for either transient or permanent cerebrovascular accidents in patients with atrial fibrillation (AFib). The LAA morphologies are variable, according to the shape of the neck and the body. Leaks following incomplete surgical and transcatheter left atrial appendage occlusion are an emerging topic which should be adequately visualized. The effective exclusion represents still nowadays a challenge and could be misdiagnosed at conventional imaging. We report the image of an incomplete LAA exclusion, documented several years after mechanical mitral valve replacement, and AFib surgery. The 57-year-old gentleman underwent percutaneous radiofrequency touch-up for relapsing tachyarrhythmias and thanks to the fusion of the electroanatomic mapping (CARTO 3 mapping system—Biosense-Webster® Diamond Bar, CA, USA—Panel A) images and the cardiac CT reconstruction, a patent LAA with residual neck at the base was diagnosed. This iatrogenic pathology was misdiagnosed at classical bidimensional transoesophageal echo imaging, in which evident signs of flow were not detected at the colour-Doppler analysis (arrow—Panel B). Oral anticoagulants management should be carefully evaluated in this clinical setting with persistent flow in the LAA, because of the invariable high risk of stroke in the patients with incomplete exclusion (see Supplementary material online).

Supplementary material is available at European Heart Journal online.