LAA closure with embolic protection device

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History and physical:

86-year-old male, the past medical history reported hypertension, dyslipidaemia, permanent atrial fibrillation, single-lead pacemaker implantation for symptomatic bradycardia, previous radiotherapy for prostate cancer. Recent transcatheter aortic valve replacement (Evolute 34 mm, Edwards Lifesciences) for severe aortic stenosis and PCI with drug eluting stent implantation to left anterior descending and right coronary artery. The patient was referred to our division for recurrent ischaemic stroke during oral anticoagulant therapy with apixaban 5 mg bid.

Imaging:

the carotid ultrasound excluded significant atherosclerotic disease.
The transthoracic echocardiogram showed a dilated left ventricle (TDV 104 ml/m^2) with a moderate systolic dysfunction (EF 41%), normal doppler signals on the aortic bio prosthesis, severe secondary mitral regurgitation. The pre-operative trans-oesophageal echocardiography (TOE) revealed a windsock left atrial appendage (LAA) morphology with a severe spontaneous smoke effect.

Intervention:

First, right femoral vein 8F and right femoral artery 8F accesses were obtained. Unfractionated heparin was given in order to achieve an activated clotting time >250 sec. Under fluoroscopic guidance, after performing an aortic arch angiogram, a TriGUARD 3 embolic protection device was positioned in the aortic arch to cover all three major cerebral arteries (Video 1). Subsequently, the standard procedure of percutaneous LAA closure was followed, and the Amplatzer Amulet LAA occluder, 28 mm, was successfully implanted under echocardiographic guidance. Good result at the final ultrasound and fluoroscopic control (Video 2).
The patient was discharged after 2 days, with acetylsalicylic acid and dabigatran 110 mg bid.

Learning points:

- Always planning interventional procedures in the safest setting possible
- Use an innovative embolic protection device in a pre-thrombotic left atrial appendage closure