TRANSESOPHAGEAL AND TRANSTHORACIC ECHO INTEGRATED APPROACH IN PERCUTANEOUS PFO CLOSURE PROCEDURE COMPLICATION MONITORING

Carla Manca,[1], Gabriele Lombardi,[2], Gian Piero Perna,[3]

[1] Cardiology Division; Ospedali Riuniti "Umberto I - Lancisi - Salesi" - Torrette - Ancona (An) - Italy; Cardiovascular Sciences Department, [2] Cardiology and Arithmology Clinic; Ospedali Riuniti "Umberto I - Lancisi - Salesi"; Cardiovascular Sciences Department, [3] Cardiology Division; Ospedali Riuniti "Umberto I - Lancisi - Salesi"; Cardiovascular Sciences Department

Correspondence: Carla Manca, horsec@libero.it

History and physical:

Patient with CADASIL syndrome diagnosed with genetic exam. Clinical history characterized by left Sylvian territory stroke, one year earlier. The patient had immediately undergone thrombolysis.

Imaging:

Patient anatomy characterized by extreme mobility of the septum primum with fluctuating kinetics and foramen ovale canal wide diastasis.

Indication for intervention:

To reduce the overall risk of ischemic stroke, it was decided to proceed with percutaneous closure of the PFO in order to reduce the risk of cardioembolic stroke.

Intervention:

A first Amplatzer Multifenestrated Septal Occluder 25 mm “Cribiform” device initially appeared as correctly positioned. A following transesophageal echo control device revealed to be not adequately anchored to the septum secundum. So it was removed and replaced with the Amplatzer PFO Occluder 30 mm device. Second device appeared correctly positioned at initial echo check, so it was released. Subsequently device appeared to have lost the connection with the septum secundum due to the large excursions of the septal aneurysm. It was highlighted by significant residual shunt at control bubble test. It was therefore decided to recover the device with a goose neck. During the recovery attempts, there was a sudden disappearance of the device from the region of the oval fossa and from the left atrial cavity. Transthoracic echo with suprasternal section was performed in the hypothesis of a migration of the device in the

aortic arch. Using the best spatial resolution of the transthoracic method, the device was located near the emergence of the subclavian artery. The right femoral artery was then cannulated, permitting the recovery of the embolized device through the goose neck, in the absence of complications of the atrial and ventricular walls and of the aortic wall which appeared intact.

Learning points of the procedure:

A transthoracic echoscopy and transesophageal echocardiography integrated approach made it possible to effectively monitor a hazardous complication.