



POLIETHYLEN TEREPHTHARATE STRING IN LEFT HEART AFTER LEFT ATRIAL APPENDAGE OCCLUSION: CASE REPORT

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History and physical:

Left atrial appendage (LAA) occlusion became an alternative for oral anticoagulants (OAC) in stroke prevention. Nevertheless, LAAO still has a significant rate of intraoperative complications. Mainly these are clinical conditions, such as cardiac tamponade, device dislodgment, etc. Device-related complications are rare, and we would like to present one.

We report a case of a 71-year-old woman with atrial fibrillation, high thromboembolic risk (CHADSVASc score of 5), and transient ischemic attack (TIA) while on anticoagulant therapy (warfarin with good INR control). The patient has hypertension with good blood pressure control, a pacemaker, implanted due to sick sinus syndrome, and paroxysmal AF. At the time of TIA patient was prescribed warfarin with good INR control. She was referred to our center to consider pulmonary vein isolation and LAA occlusion due to insufficient effect from oral anticoagulant therapy.

Intervention:

She underwent cryo balloon pulmonary vein isolation and LAA closure with Amplatzer Amulet device 25 mm. Before the disconnection of the delivery system, we saw an unusual echo signal between connecting part of the device and the delivery system. We thought it to be a shadow from a delivery wire. After disconnection, we saw a string that went from the connecting part of the device through the mitral valve, LVOT, and aortic valve to the ascending aorta up to 5 cm from the aortic valve (video #1). It appeared to be a polyethylene terephthalate (PET) fragment, that detached from the occluder's disk. After considering the risks of recapturing the device and implanting a new one versus leaving the old one with this string, we decided that this defect would not require additional antithrombotic therapy. It was decided not to replace the device.

The patient was discharged 3 days after the procedure on apixaban 5 mg twice and aspirin 75 mg daily. 3 months after LAAO transesophageal echocardiography revealed no thrombi, some



suspicious were raised by 3D echocardiography – possible residual string on connecting part of the occluder (video #2). It may be that the PET string attached to the heart wall and epithelized, or detached from the device and migrated without significant embolic complications. However, the first scenario is more possible, due to suspicious echocardiography imaging on follow-up. Apixaban was discontinued. Patients didn't suffer any thromboembolic or hemorrhagic events 6 months after that (at the time of paper submission).

Learning points of the procedure:

- Left atrial appendage occluder may contain defects that may or may not dictate device replacement
- Some non-specific LAAO complications may require an analytical approach rather than an aggressive tactic
- It may be that the original encasement of the old amplatzer cardiac pug was safer than the one we have with an amulet, because it allowed complete inspection of the device before implantation

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