Left Atrial Appendage Closure  
**(TCTAP C-169 to TCTAP C-170)**

**TCTAP C-169**
Retrieval of a Displaced and Dislodged LAAO Device with Double Transseptal Sheaths and Bioptome Forceps

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**[Clinical Information]**
Patient initials or identifier number:
WYYCE

Relevant clinical history and physical exam:
A 64-year-old woman with history of paroxysmal atrial fibrillation, old cerebral infarct with haemorrhagic transformation, hypertension and dyslipidaemia agreed for left atrial appendage device closure.

Relevant test results prior to catheterization:
Transophageal echocardiography (TEE) and fluoroscopy revealed an LAA neck size of 24 and 21mm respectively. A 28mm ACP was implanted.

On day 1 TEE surveillance, displacement of the ACP was observed.

**Relevant catheterization findings:**
TEE and fluoroscopy confirmed a displaced ACP from left atrial appendage.

**[Interventional Management]**

Procedural step:
The proximal endscrew of the ACP was caught with a 20mm snare loop guided by a 7F EBU 3.75 catheter. However, the looping of the snare on the proximal endscrew was not strong enough to retrieve the device into a steerable transseptal sheath with an inner lumen size of 12F. The displaced ACP then became dislodged and kept moving constantly inside the left atrium. Double transseptal technique with 2 steerable sheaths of inner lumen sizes of 12F were used. One transseptal sheath was manipulated to stabilize the ACP against the left atrial roof and another transseptal sheath was manipulated to facilitate a biopoptome forcep to grasp the proximal endscrew of the device. The ACP was successfully retrieved with this novel technique and the patient has not suffered from any long-term sequelae.

**Case Summary:**
A 64-year-old woman paroxysmal atrial fibrillation, old cerebral infarct with haemorrhagic transformation underwent left atrial appendage occlusion with an Amplatzer Cardiac Plug (ACP). A 28mm ACP was implanted.

On day 1 TEE surveillance, displacement of the ACP was observed and the patient underwent a retrieval procedure. The proximal endscrew of the ACP was caught with a 20mm snare loop guided by a 7F EBU 3.75 catheter. However, the looping of the snare on the proximal endscrew was not strong enough to retrieve the device into a steerable transseptal sheath with an inner lumen size of 12F. The displaced ACP then became dislodged and kept moving constantly inside the left atrium. Double transseptal technique with 2 steerable sheaths of inner lumen sizes of 12F were used. One transseptal sheath was manipulated to stabilize the ACP against the left atrial roof and another transseptal sheath was manipulated to facilitate a biopoptome forcep to grasp the proximal endscrew of the device. The ACP was successfully retrieved with this novel technique and the patient has not suffered from any long-term sequelae.

**TCTAP C-170**
Transfemoral Aortic Valve Implantation and Percutaneous Closure of Left Atrial Appendage in a Single Procedure

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Hospital Universitario Madrid Montepríncipe, Spain

**[Clinical Information]**
Patient initials or identifier number:
01

Relevant clinical history and physical exam:
A 91-year-old male patient with history of hypertension, hyperlipidemia, renal insufficiency and chronic AF, was admitted with hemoptysis and congestive heart failure. He had suffered repeated episodes of gastrointestinal bleeding on treatment with warfarin and rivaroxaban, with negative endoscopy studies. He also referred progressive chest pain during the last weeks with dyspnea and ortopnea induced by minimal effort before the admission. A transthoracic echocardiogram showed a severe aortic stenosis, with minimal aortic insufficiency and moderate pulmonary hypertensión, with normal left ventricle function. A coronary angiogram demonstrated significant disease of two secondary vessels; second diagonal, and first obtuse marginal.

**[Interventional Management]**

Procedural step:
The left femoral artery was canialized with a 7 French introducer, and a 0.018” wire (SteelCore, Abbott Vascular Inc., Santa Clara, California, USA) was advanced to the
contralateral femoral artery. A selective angiography of the right femoral artery was performed to guide the puncture (Fig 1C) keeping the 0.035” Steelcore wire distal to the puncture therapeutic zone, up to the end of the procedure. The left and right femoral veins were then canulized advancing a temporal pacemaker through the left one and performing a transeptal puncture though the right. A medium support Amplatzer 0.035” wire was placed in the left upper pulmonary vein during the TAVI procedure (Fig 1A). After performing an aortogram and thoughtful analysis of the transesophageal echocardiogram (TEE) findings of the native aortic valve and left ventricle (Fig 1A), a direct implantation (without valvuloplasty) of a 26 mm- Edwards Sapien XT valve was performed (Fig 2A &C), obtaining a good valve expansion and apposition confirmed by 3D-TEE, and no perivalvular aortic regurgitation in the final aortogram (Fig 2D). The Novaflex delivery catheter was retrieved and the 18 French introducer was left in place. With the help of a pigtail catheter, the left atrial appendage was canulized and the pigtail was exchanged for a double curved 13 French Amplatzer sheath. After performing a dye injection in the left atrial appendage in two orthogonal views and analyzing the size and shape characteristics of the left atrial appendage, a 28 mm Amplatzer Cardiac Plug® (ACP) (AGA Medical Corporation, Plymouth, MN, USA) device was advanced through the sheath and implanted in the LAA with a good final position assessed by angiography and TEE (Fig 3). To finalize the double device single procedure, the sutures of the Prostar XL were knitted, and a 8mm peripheral angioplasty balloon was inflated at 1 atm at the puncture site with good hemostatic and angiographic result (Fig 1D). The procedure was finished without complications and the patient was discharged on dual antiaggregation therapy.

Other (Unclassified)

TCTAP C-171

Intercoronary Communication in a Patient with Non-obstructive Coronary Arteries

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Manila Doctors Hospital, Philippines

[Clinical Information]

Patient initials or identifier number: SM

Relevant clinical history and physical exam:

This is a case of a 47-year-old male admitted in a foreign country due to regular and progressive atypical angina for two weeks. It was described as 5/10 in the visual pain scale, squeezing and non-radiating. There was no associated diaphoresis nor shortness of breath, not related to exertion, and was relieved spontaneously. He had no known comorbidities. He denied smoking and rarely engaged in alcoholic beverage drinking. Family history was unremarkable. The patient was admitted in a hospital in Middle East with a consideration of acute coronary syndrome versus acid peptic disease. Work-ups showed normal cardiac enzymes. Patient underwent treadmill exercise test (TET) using Bruce Protocol. He was able to complete 6 minutes and 43 seconds of TET and achieved 8.10 mets at 87% of his peak maximal heart rate. TET was terminated because of squeezing chest pain, which began at Stage II and worsened at Stage III. No significant ST segment changes or arrhythmias were noted. Blood pressure response was physiologic. He was discharged with a diagnosis of ischemic heart disease and was sent home on nitrates, beta-blockers, and an antiplatelet. Further work-up was advised for visualization of coronary arteries, either a CT angiogram or a coronary angiogram.

Due to the history of progressive atypical anginal pain and stress-induced angina during stress test, the patient was repatriated and was admitted in this institution for coronary angiogram.

On admission, the patient had stable vital signs. Cardiac examination was unremarkable, as well as the rest of the physical examination.

Relevant test results prior to catheterization:

The 2Dimensional echocardiogram and Doppler studies done prior to the coronary angiogram showed normal left ventricular dimensions with adequate wall motion and contractility and a preserved systolic function, with ejection fraction of 80%. No diastolic dysfunction was also noted.

Relevant catheterization findings:

Coronary angiogram using Judkins technique showed no pressure damping upon cannulation of both ostia. It revealed normal epicardial coronaries with an incidental finding of intercoronary communication between the right coronary artery and left circumflex artery.

[Interventional Management]

Procedural step:

A JL-4 Fr6 catheter was used to cannulate the left main coronary artery. Visualization of the left anterior descending and left circumflex arteries were done.