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ANTITHROMBOTIC TREATMENT AFTER PERCUTANEOUS LEFT ATRIAL APPENDAGE CLOSURE: A DIFFICULT CHALLENGE IN PATIENTS AT HIGH RISK OF BLEEDING

Daniele Gemma[1], Guillermo Galeote García[1], Raúl Moreno Gómez[1], Javier De Juan Bagudá[2], Natalia Lorenzo Muñoz[3], Ignacio Plaza Pérez[2], Inés Ponz de Antonio[1], José Luis López Sendón[1]

[1] Hospital Universitario La Paz, Madrid, Spain
[2] Hospital Infanta Sofía, Madrid, Spain
[3] Hospital Infanta Cristina, Parla (Madrid), Spain

Background: Contraindication to oral anticoagulation (OAC) is the main indication for percutaneous left atrial appendage closure (PLAAC). This implies a challenge in deciding the adequate antithrombotic therapy after device implantation.

Objectives: The aim of our study is to assess whether the type of antithrombotic treatment is related to thromboembolic/bleeding risk after PLACC.

Methods: Retrospective observational study including patients with atrial fibrillation who underwent PLAAC with Amplatzer™ device for OAC contraindication in our centre, until April 2015. Major bleeding was defined as intracranial bleeding, decrease in Hb 2 g/L and/or transfusion requirement, and minor bleeding as any other kind of bleeding.

Results: 18 patients were included (mean age 75 years, HASBLED 4). After PLAAC, control transesophageal echocardiography was performed in 14 patients; 12 patients (66.6%) received dual antiplatelet therapy (DAPT), 3 (16.7%) single antiplatelet therapy (SAPT), 3 (16.7%) apixaban for 3 months. No device thrombosis was observed. Bleeding was observed in 5 cases (3 major, 2 minor), 4 of them in the first year, with an annual rate of major bleeding in the first year higher than expected by the HASBLED score (11.1% vs. 8.9%). 2 major bleedings occurred under DAPT, while the 2 minor bleedings occurred under SAPT. No bleeding was observed under apixaban. The only parameter associated with major bleeding was DAPT at discharge (p=0.001).

Conclusions: In our series DAPT after PLAAC was associated with a higher rate of bleeding complications. We didn´t observe device thrombosis. Further studies are needed to find the optimal ant thrombotic regimen after implantation.

Table 1.

	Kind of bleeding	Age	Gender	HAS-BLED score	Time from intervention (months)	Antithrombotic treatment
Major bleeding	Esophageal varices (Exitus)	82	M	5	30	Nothing
	Intracranial (Exitus)	65	M	5	2	M Acetylsalicylic acid 100 mg + Clopidogrel 75
	Intestinal (Transfusions)	74	M	4	1	Acetylsalicylic acid 100 mg + Clopidogrel 75
Minor bleeding	Haematuria	77	M	5	9	Acetylsalicylic acid 100 mg
	Epistaxis	93	F	3	6	Acetylsalicylic acid 100 mg

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Accessible online at:
http://structuralheartdisease.org/

Fax +1 203 785 3346
E-Mail: jshd@scienceinternational.org
http://structuralheartdisease.org/

IMPORTANCE OF CARDIAC CT PRIOR TO A SECOND GENERATION TRANSCATHETER AORTIC VALVE IMPLANTATION

Ines Ponz, Daniele Gemma, Elena Refoyo, Emilio Cuesta, Guillermo Galeote, Zorba Blazquez, Juan Caro, Mar Moreno, Raul Moreno, Jose Luis Lopez Sendon

Hospital Universitario La Paz, Madrid, Spain

Introduction: The LotusTM Valve (LV) is a second-generation transcatheter aortic prosthetic valve. Our aim was to identify predictors of potential complications related to its implantation.

Methods: Prospective study including patients submitted to LV implantation between May 2014 and February 2015. Transthoracic and transesophageal echocardiography and Cardiac Computerized Tomography (CT) was performed before the procedure.

Results: 16 patients underwent LV implantation: number 23 in 56.2%, 25 in 18.8% and 27 in 25% (62.5% female, mean age 80.5 years, mean EuroSCORE 9.65, Table1). After the procedure both mean and maximal gradient improved in all patients (p0.001), finding no predictors of such improvement.

We found a higher incidence of postprocedural complications among patients with a greater ascending aortic diameter by CT (37.9 vs. 32.6mm, p0.011), and with left ventricular dysfunction, particularly with renal failure (p0.001).

Pacemaker implantation (50%) was associated with a greater left ventricular outflow tract (LVOT) perimeter (73.6 vs. 65.2mm, p0.03) and calcification of the mitroaortic fibrosa (p0.001), which was also more frequent among patients developing bundel branch block (62.5%; p0.035).

12.5% suffered a cardiac arrest due to atrioventricular block, which was associated with a greater LVOT area (484 vs. 343mm2, p0.005) and perimeter (82 vs. 68.2mm, p0.002), measured by CT, and also with implantation of a bigger valve (p0.02).

Conclusion: Performing a Cardiac CT prior to a LV implant is useful to predict possible postprocedural complications. A greater LVOT with implantation of a bigger valve and the calcification of the mitroaortic fibrosa associate a greater risk of conduction disorders.

Table 1: Echocardiographic or tomographic/radiographic characteristics

	Mean value
Valvular área (3D planimtry)	0,65 cm2
Pre-procedure maximal gradient	65,2 mmHg
Pre-procedure mean gradient	20,3 mmHg
LVEF	62,3%
Aortic annulus area (CT)	442,4 mm2
Aortic annulus perimeter (CT)	78,9 mm
Calcium Score	3048,6

LOTUS, A NEWSECOND-GENERATION TRANSCATHETER AORTIC PROSTHETIC VALVE EFFICACY AND SAFETY

Daniele Gemma, Inés Ponz De Antonio, Raúl Moreno Gómez, Guillermo Galeote García, Elena Refoyo Salicio, José Luis López Sendón

Hospital Universitario La Paz, Madrid, Spain

Background: Lotus™ Valve (LV) is a second-generation transcatheter aortic prosthetic valve (TAVI), retrievable and repositionable, designed to minimize the risk of complications, particularly periprosthetic aortic regurgitation (AR). Experience with this new TAVI is still limited.

Objective: The aim of our study is to report the results of our initial experience with LV implantation, in terms of safety and efficacy.

Materials: Prospective study including patients with severe aortic stenosis who underwent LV implantation in our centre between May 2014 and February 2015. We report echocardiographic and clinical outcomes until hospital discharge.

Results: 16 patients underwent LV implantation (62.5% female, mean age 80.5 years, mean EuroSCORE 9.65). During the procedure, a patient suffered a thrombotic occlusion of the left main coronary artery, which was corrected by thromboaspiration, without sequelae. No prosthesis embolization was observed. Following LV implantation, both mean and maximal gradient and AR improved in all patients (p0.001), with no cases of periprosthetic AR post TAVI. Pulmonary systolic pressure was reduced in 50% of patients (see Table 1). 8 patients suffered complete atrioventricular block until eight days after the procedure, requiring pacemaker implantation. The average hospital stay was 5 days, without any exitus at discharge.

Conclusion: Lotus is an effective and safe alternative for the treatment of patients with severe aortic stenosis and high surgical risk, despite a relatively high incidence of conduction disorders in our initial experience. Studies are needed to better patient selection for this type of TAVI.

Table 1: Pulmonary Systolic Pressure

	Pre-Lotus	Post-Lotus	P
Maximal Gradient	65,2 mmHg	20,2 mmHg	p 0,001
Mean Gradient	4 20,3 mmHg	10,1 mmHg	p 0,001
Aortic regurgitation	68,8% grade I or II	18% grade I	p 0,001
Pulmonary Artery Systolic Pressure	51 mmHg	39,9 mmHg	p 0,01