

First Iberian Meeting on Non-Valvular Structural Interventions: participant's notes

Primera Reunión Ibérica de Intervencionismo Estructural no Valvular: apuntes de un partícipe

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Organized by the Spanish and Portuguese Societies of Cardiology, the 1st Iberian Meeting on Non-Valvular Structural Interventions was held on October 20 and 21, in Lisbon, Portugal. It was attended by more than a hundred renowned specialists from both countries, who commented on such important topics as: percutaneous treatment of paravalvular leaks, septal ablation in hypertrophic obstructive cardiomyopathy, left atrial appendage closure, renal denervation, peripheral arteriopathies, aortic coarctation, and other adult's congenital heart diseases.

Undoubtedly, these new –though not that novel– forms of treatment have invaded the Departments of Interventional Cardiology, for the sake of the patient, as part of the usual practice in developed countries; however, those with less economic resources are

still waiting for their undeniable benefits, due to the high price of the devices used. Nevertheless, it is important to mention that there has raised that some of these procedures are cost-effective, such as the closure of the left atrial appendage, to prevent stroke in selected patients¹.

Until just a few years ago, about 80% of the budget of Interventional Cardiology was used for the treatment of coronary artery disease, which represents approximately 80% of the activity of any of these departments. Today, about 80% of those resources is reserved for 20% of the diseases we assist, because although coronary artery disease remains majority, interventionism on structural heart diseases has considerably increased².

This first meeting was addressed to non-valvular structural intervention, i.e. the transcatheter aortic valve implantation (TAVI) and the treatment of mitral failure (MitraClip) were untreated subjects, demonstrating the variety of percutaneous therapeutic procedures currently performed³.

Left atrial appendage occlusion for minimizing thromboembolic risk, disregarding anticoagulation in patients with non-valvular atrial fibrillation, is one of

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the most widespread and accepted procedures⁴. The consequences of an embolic stroke are disastrous, thus, any effort to reduce its incidence is well valued; furthermore, it has been suggested that the strokes occurring after the implantation of an occluder device at that level are rare, and mostly, not incapacitating⁵.

However, despite all these good opinions, in a recent commentary, Mandrola⁶ literally says that "the left atrial appendage closure should stop now" because there is no scientific evidence to support the use of such devices; on the contrary, it is contraindicated. For example, in the PREVAIL study⁷, where the Watchman occluder was compared with warfarin, the occurrence of the composite of ischemic or hemorrhagic stroke, systemic embolism and unexplained cardiac death was similar: 6.4% vs. 6.3%; in short, it means that the device was inferior to the conventional treatment. In addition, there were six episodes of ischemic stroke or systemic embolism in 269 patients (2.23%), whereas only 1/138 (0.72%) was present in the control group. One does not have to be a mathematician to realize that with the use of the Watchman, these three complications were double.

Later, the author himself states that⁶ "the occlusion of the left atrial appendage with the Watchman device does not protect against ischemic events" and peridysrhythmic leaks have been shown to appear in 20% of cases⁸. Moreover, this occlusion "does not reduce" the aforementioned episodes, only bleeding, but not by the closure of the atrial appendage or excellence of the device, but because it dispenses the anticoagulation⁶.

Alcohol septal ablation in hypertrophic cardiomyopathy is an established treatment with demonstrated favorable results^{9,10}; nevertheless, little is known about the possible deleterious effects of this substance in circulation, which is one of the reasons that the volume of injection has been significantly reduced^{11,12}, and for more than a decade, coils have begun to be used instead¹³. Paradoxically, some authors consider the lower volume of alcohol injected as an independent predictor of cardiac death and progression to a poor functional class¹⁴.

Special mention deserves the paravalvular leaks treatment^{15,16}, with dissimilar proposals which are, mostly, accepted or sometimes difficult to assimilate. It is true that an iterated surgery has risks, much more when the leak produces manifestations of heart failure, but surgical treatment is of choice in

the clinical practice guidelines, i.e. any alternative needs a logical and scientific basis capable of demonstrating that it is effective. But, what if the leak is a TAVI –recent situation generated by the justified use¹⁷– and this therapeutic strategy was chosen because the patient comorbidities rose surgical risk until contraindicating it? What to do? To implement valve-in-valve? Closing the leak at "any price"?

The American guidelines (AHA/ACC) 2014¹⁸ advises that the percutaneous repair of these paravalvular leaks is "reasonable" in patients with intractable hemolysis or functional class III/IV of the New York Heart Association (NYHA), who are at high surgical risk and have anatomic features suitable for catheter-based therapy when performed in centers with expertise in the procedure (class IIa, and level of evidence B).

Several aspects reached the interest of all:

- Is it worth implanting a stent in a healthy left main coronary artery to treat aortic paravalvular leak?
- Will it be reasonable to keep a patient over 70 years old with aspirin, clopidogrel, and acenocoumarol or warfarin, instead of closing his or her left atrial appendage?
- Why to maintain a patient with aspirin indefinitely after the implantation of an intracardiac device, if it has been proven that three to six months is endothelialised?
- Will alcohol continue to be used in septal ablation of hypertrophic cardiomyopathy? Will or should the coils take its place?
- Will the intracardiac echocardiography remain in use?

These and other issues were a source of debate because of the diversity of criteria and forms of treatment that exist among different hospitals and doctors, regardless of common points. The comments and discussions were as or more interesting than the talks, which demonstrates the need for consensus. We all agree that more clinical trials are needed to demonstrate the effectiveness of what we are doing today, in order to reach those essential agreements with scientific demonstration that would generate or enrich future Clinical Practice Guidelines on these interesting topics. This situation, recognized by the audience, was considered one of the

main achievements of the conclave.

CONFLICTS OF INTEREST

None

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