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LETTER TO THE EDITORS

Left atrial appendage occlusion in patients with atrial fibrillation and high risk of fall: a clinical dilemma or a budgetary issue?

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Sirs:

In patients with atrial fibrillation (AF), the left atrial appendage (LAA) is a known source of thrombi.

Although oral anticoagulation (OAC) remains the first stroke prevention tool in patients with non-valvular AF, percutaneous or minimally invasive surgical LAA-occlusion (LAAO) and exclusion using different devices have been recently proposed as an alternative in patients with contraindications to long-term OAC therapy [1–3]. In patients under OAC a history of falls does not seem to be associated with a marked increase in the risk of intracranial hemorrhage [4, 5]. For this reason, the European guidelines for AF-management do not advice OAC withholding and LAAO, unless there is evidence of severe uncontrolled falls (e.g. epilepsy or advanced multisystem atrophy with backwards falls), or in selected patients with dementia (lack of adherence) [6].

We have recently evaluated a 92-year-old gentleman with a history of non-valvular chronic AF, previous bypass surgery, and two documented falls, not accompanied by life-threatening bleeding, and secondary to an exacerbating and untreatable vision reduction. At the time of admission, his neuro-psychological status was compatible with his age and he presented a CHA2D2S-VASc-Score of 5 and HAS BLED-Score of 4.

We did believe that he was at high risk of traumatic bleeding under OAC, due to his frailty (advanced age) and to the increasing possibility of falling for his progressive visual impairment. In light of his specific clinical profile, a percutaneous LAAO was performed for stroke prevention. The LAAO procedure was uneventful and the patient was discharged the next day under dual anti-platelet therapy (Aspirin and Clopidogrel).

Few weeks later the German health insurance authority refused to reimburse the LAAO procedure because "performed outside of the existing guidelines". The insurance office consultant stated that a progressive vision reduction was not a justifiable reason for OAC withholding and that the patient´s last fall had occurred 2 years before. Moreover, it was mentioned that according to the European guidelines a high bleeding risk score should generally not result in withholding OAC. Rather, bleeding risk factors should be identified and potentially treatable factors should be corrected.

6 months after the insurance decision, the patient was readmitted for a stairs fall resulting in subdural hematoma and cranial base-nasal-ribs fractures. At that point, he was already under single antiplatelet therapy and, in spite of the important trauma, he did not incur life-threatening bleeding. He was discharged to home-care 1 week later, in recovering condition and neurologically intact.

Referred patients often present with specific clinical profiles that are not contemplated in the general guidelines and for which a personalized approach is required. Although many triggers of major bleeding events can be identified and corrected in advance, risk of trauma in elderly patients is difficult to quantify and prevent, even in the absence of clinical conditions leading to recurrent falls. In this context, risk of fall represents a quite common condition that will lead medical practitioners to reconsider OAC and accept alternative tools for stroke prevention in AF (i.e. LAAO), particularly in frail elderly patients. In fact, although OAC in patients at risk of fall does not increase bleeding rates, it does actually lead to significantly higher rates of death secondary to a bleeding injury [7]. The European Heart Rhythm Association Survey has shown that 15% of LAAOs are performed in patients at risk of recurrent falls, for unspecified reasons [8]. Furthermore, cost-effectiveness analyses of LAAO compared with pharmacological strategies for stroke prevention in AF are now available and should be kept into

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consideration. Lee et al. have published a decision analytic model for evaluating the long-term costs and effectiveness of treatment strategies for stroke prevention in AF patients [9]. Base-case values for analytic model were derived from a series of published randomized studies and allowed the authors to conclude that transcatheter LAAO is cost-effective for prevention of stroke in non-valvular AF compared with seven different pharmacological strategies [9].

An integration of general guidelines, specific patient profile, and product economic evaluation will be essential to support in the very next future alternatives to OAC in patients with AF and recalibrate those that are the current reimbursement strategies.

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