Atrial fibrillation and survival after transcatheter aortic valve implantation

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Background: The prevalence of atrial fibrillation (AF) in patients undergoing transcatheter aortic valve implantation (TAVI) is about 30%-50%. Because of their multiple comorbidities, TAVI patients are likely to be at a high thromboembolic as well as bleeding risk, making appropriate management of AF in those patients challenging. Current guidelines support the use of oral anticoagulation monotherapy with vitamin K antagonists (AVK) in patients with AF after TAVI and direct oral anticoagulants (DOACs) are being currently investigated as monotherapy in patients with AF with conflicting results among different agents. Several prior studies have shown that pre-existing AF in TAVI patients is associated with worse outcomes including mortality compared with patients in sinus rhythm[1]. We aim to investigate the impact of pre-existing AF on survival in our cohort of TAVI patients.

Patients and Methods: We analyzed 252 consecutive patients who underwent TAVI procedure in our institution from 2013 to October 2020.

Results: There were 48% patients with AF (either paroxysmal, persistent, or permanent) that underwent TAVI procedure. Their median age was 80 years, their median CHA_2DS_2Vasc score was 5 and median HASBLED was 4. Early post-procedural anticoagulation therapy was AVK in 24%, DOACs in 74%, and 2% of patients received no anticoagulant therapy due to very high bleeding risk. Two patients with AF had post-procedural stroke, with no cases of post-procedural stroke among non-AF group. Their in-hospital mortality was 3.4%, in comparison to 2.7% in patients without AF. In the case of a new introduction of oral anticoagulants (OAC), mainly DOAC is introduced depending on the assessment of the risk for major bleeding and the possibility of choosing the optimal dose, except in special cases (kidney disease) when preference is given to AVK.

Conclusion: Almost half of high-risk patients scheduled for TAVI have indication for OAC due to AF. AF is associated with poor outcome and increased mortality after TAVI. These risks might be reduced by carefully choosing the optimal OAC strategy but strong conclusions with respect to optimal anticoagulation strategies cannot yet be made, and further research is required to transcend the current equipoise regarding the optimal OAC especially regarding which DOAC to choose after TAVI.

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LITERATURE

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