Anticoagulation therapy in patients with atrial fibrillation and transcatheter aortic valve implantation

Irzal Hadžibegović*,
Ivana Jurin,
Tomislav Šipić,
Daniel Unić,
Igor Rudež,
Šime Manola

University Hospital Dubrava, Zagreb, Croatia

KEYWORDS: transcatheter aortic valve implantation, atrial fibrillation, oral anticoagulation therapy.

CITATION: Cardiol Croat. 2021;16(9-10):301. | https://doi.org/10.15836/ccar2021.301

***ADDRESS FOR CORRESPONDENCE**: Irzal Hadžibegović, Klinička bolnica Dubrava, Avenija Gojka Šuška 6, HR-10000 Zagreb, Croatia. / Phone: +385-91-533-3091 / E-mail: irzalh@gmail.com

ORCID: Irzal Hadžibegović, https://orcid.org/0000-0002-3768-9134 • Ivana Jurin, https://orcid.org/0000-0002-2637-9691 Tomislav Šipić, https://orcid.org/0000-0001-8652-4523 • Daniel Unić, https://orcid.org/0000-0003-2740-4067 Igor Rudež, https://orcid.org/0000-0002-7735-6721 • Šime Manola, https://orcid.org/0000-0001-6444-2674

Background: Patients scheduled for transcatheter aortic valve implantation (TAVI) have advanced age, with estimated more than 30% of patients with an indication for oral anticoagulation therapy due to atrial fibrillation (AF). Dual antiplatelet therapy after TAVI has been historically considered as a standard approach, with current guidelines supporting the use of oral anticoagulation monotherapy with vitamin K antagonists (VKA) in patients requiring stroke protection in atrial fibrillation.[1] Direct oral anticoagulants (DOACs) are being currently investigated as monotherapy in patients with AF after TAVI, with conflicting results among different agents.

Patients and Methods: We analyzed 151 consecutive patients who underwent TAVI procedure in our institution from 2013 to 2021.

Results: There were 67 (44%) patients with AF (paroxysmal AF in 17 (25%) patients) that underwent TAVI procedure. Their median age was 80 years, 24% had diabetes mellitus, 30% had concomitant coronary artery disease, and their median CHA2DS2Vasc score was 5 (high thrombotic risk). Pre-procedural anticoagulation therapy was AVK in 34 (51%), DOACs in 18 (27%), and the remaining 22% of patients were taking ASA or clopidogrel. Early post-procedural anticoagulation therapy was AVK in 44 (67%), DOACs in 7 (12%), with antiplatelet therapy in 14 (21%) of patients. One patient 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. After 2017, all patients with AF were anticoagulated with AVK or DOAC after TAVI. After 2019, when full percutaneous approach was introduced, 7 patients were managed with single DOAC early after TAVI (5 with apixaban, and 2 with rivaroxaban) and had no peri-procedural ischemic or bleeding complications related to anticoagulation therapy.

Conclusion: Patients with AF scheduled for TAVI have increased bleeding and thrombotic risk and require scrutinized tailoring of anticoagulation and other concomitant therapy. With fast-track transfemoral TAVI and full percutaneous approach, early continuation of a single DOAC in optimal dose adjusted to age, renal function and other comorbidities appears to be safe and effective and needs to be evaluated in a larger cohort of patients.

RECEIVED:
July 31, 2021

ACCEPTED:
August 5, 2021

LITERATURE

1. Kawashima H, Watanabe Y, Hioki H, Kozuma K, Kataoka A, Nakashima M, et al; OCEAN-TAVI Investigator. Direct Oral Anticoagulants Versus Vitamin K Antagonists in Patients With Atrial Fibrillation After TAVR. JACC Cardiovasc Interv. 2020 Nov 23;13(22):2587-2597. https://doi.org/10.1016/j.jcin.2020.09.013