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Commentary: Oral anticoagulants in bioprosthetic valves: Time to adapt

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Vitamin K antagonists (VKAs) have been the mainstay of anticoagulation therapy after valve replacement, including bioprosthetic valves.¹ Because the evidence for the need for VKA-based anticoagulation therapy in patients with bioprosthesis and sinus rhythm has been soft, guidelines have changed to recommending aspirin as routine treatment for this scenario.^{2,3}

During the past 10 years, direct oral anticoagulants (DOACs) have become the preferred treatment for patients with atrial fibrillation without valve replacement, at least in the case that renal function is not impaired. Patients with bioprosthetic valves will generally require anticoagulation medications if atrial fibrillation is present. Guidelines still recommend VKAs for this scenario. In view of the low incidence of thromboembolic complications related to bioprosthesis with normal rhythm, it appears reasonable to assume that the principles of anticoagulation used in atrial fibrillation can also be applied in the presence of bioprosthesis.

In fact, a number of studies have compared safety and efficacy of DOACs with VKAs, summarized in a meta-analysis.⁴ Compared with VKAs, DOACs appear to decrease the incidence of bleeding events, whereas embolic events and survival were similar. These results emphasize that the general management principles of atrial fibrillation also apply to patients with bioprosthetic valves.

A caveat remains. DOACs can accumulate in the presence of impaired renal function, and this can and will lead to an increase of hemorrhagic complications if drug dosage

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CENTRAL MESSAGE

Direct oral anticoagulant medications in patients with atrial fibrillation and bioprosthetic valves are safe and effective.

is not closely monitored by effect. The results of the meta-analysis thus apply primarily in patients with normal renal function or only mild impairment. In addition, the higher bleeding rates with VKAs have been observed with a target international normalized ratio of 2.0 to 3.0. Because the protective effect of VKA anticoagulation can be observed at lower international normalized ratio values,⁵ further research may be reasonable to better judge the role of VKAs versus DOACs.

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