Medical Treatment After TAVR

Duk-Woo Park

Asan Medical Center

In the routine clinical practice, post-TAVR antithrombotic management is based on empirical acceptance of a widely-accepted strategy centered on post-percutaneous coronary intervention (PCI) management. In the existing guidelines, it is recommended to maintain DAPT (aspirin plus clopidogrel) for about 3~6 months after TAVR procedure and then maintain aspirin alone. The recently updated 2017 AHA/ACC guideline suggested that anticoagulation with vitamin-K antagonist (VKA) during at least 3months is reasonable considering the possibility of leaflet thrombosis. However, there has been still a lack of evidence to support these anticoagulation recommendations.

Although the mechanism of bioprosthetic valve thrombosis has not been clearly elucidated, the underlying principles might be related to perturbations in blood flow and activation of various hemostatic factors. It is still unclear whether post-TAVR produced-thrombi have a predominant platelet- or thrombin-related origin. Albeit, there is evidence that thrombin plays a major role in the formation of thromboembolic events; mechanisms of platelet activation and coagulation are highly interdependent, with thrombin playing a central role in both pathways.10 Hence, it is reasonable to consider an antithrombotic regimen to reduce the long-term thromboembolic risk after TAVR.

Currently, to assess the safety and efficacy of routine anticoagulation in patients after TAVR procedure, two large-sized randomized trials (GALILEO [NCT02556203] and ATLANTIS [NCT02664649] study) are actively ongoing and the results of these trials may provide the best answer to the question of whether or not anticoagulation should be recommended.