Evidence and Principles for Anticoagulation in Patients with CAD

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Atrial fibrillation (AF) is common in patients with coronary artery disease (CAD), and the incidence ranges from 10-21% in patients with acute coronary syndrome (ACS). AF is associated with increased in-hospital and long-term mortality. Because of the difference in the mechanism, they need both anticoagulation and antiplatelet therapy. There are insufficient data in different clinical settings regarding the combination of anticoagulation and antiplatelet therapy in patients with AF and CAD. This lecture will describe different clinical settings where AF complicates CAD in various stages, for example, acute ST elevation myocardial infarction (MI) or percutaneous coronary intervention (PCI), recent (<1yr) acute coronary syndrome (ACS), and remote (>1yr) from the ACS.

In patients with ACS, addition of warfarin to standard aspirin decreases myocardial infraction and ischemic stroke. Triple therapy should be continued as short as possible because of the risk of bleeding. There is no data on the use of new oral anticoagulants (NOACs) as a dual or triple therapy in ACS setting. However, it is assumed that efficacy of NOAC be maintained in dual or triple therapy. Of note, there was a significantly higher rate of MIs with dabigatran vs. VKA. However, the net clinical benefit of dabigatran over VKA was maintained in AF patients with a previous MI, and the relative effects of dabigatran vs. VKA on myocardial ischemic events were consistent in patients with or without a previous MI or CAD. Low-dose rivaroxaban on top of DAPT significantly improves ischemic outcome after ACS, but is also associated with increased major and intracranial bleeding risk.

In patients with recent (<1yr) ACS and low atherothrombotic risk, warfarin monotherapy could be considered after 1–3 months with bare metal stents or 6 months with drug eluting stents. In patients with high atherothrombotic risk, additional clopidogrel might be warranted in the first 6–12 months after the acute event. Factor Xa inhibitors (rivaroxaban or apixaban) may replace warfarin in this setting.

In patients with stable (>1yr) CAD, warfarin alone seems to be equivalent in efficacy with lower bleeding risk than warfarin plus antiplatelet agents. NOACs may be safe and effective alternative to warfarin.