

Postprocedural dual anticoagulant and antiplatelet treatment after peripheral artery disease endovascular interventions: a shifting paradigm

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Endovascular interventions in patients with peripheral artery disease (PAD) have been significantly developed and improved in the last decade. However, guideline recommendations for the treatment in postprocedural period still vary significantly, ranging from the use of aspirin alone to the use of conventional dual antiplatelet treatment (DAPT) clopidogrel with aspirin for one to three months followed by continued long-term aspirin use. Treatment recommendations focus on platelet aggregation, and do not include the role of coagulation cascade in thrombus formation.^{1,2} Loss of patency after endovascular treatment remains high, ranging from 17 to 40% in patients on dual antiplatelet therapy. Endovascular treatment can also result in catheter-induced damage to the endothelium, exposing tissue factor-rich subendothelium to the blood stream and creating a thrombogenic environment wherein platelets and coagulation factors are activated. That means that with DAPT we do not protect the endothelium or lesion surface i.e. activation of coagulation cascade. At the moment there are several ongoing trials (up to approx. 200 patients) with postprocedural combination of anticoagulant (NOACs) and aspirin treatment for one to three months followed by aspirin. Risk of bleeding according to ISTH (International Society on Thrombosis and Hemostasis) criteria was as follows: non-major bleeding and all bleedings were higher with NOACs and aspirin than with clopidogrel and aspirin, though major bleeding was lower. Further on, in PAD patients, six months composite endpoint event rates showed that NOACs was more favorable treatment than clopidogrel in all cases of restenosis, with or without target lesion revascularization, ischemic complications including amputation and/or major adverse cardiac events. It was also more favorable treatment for all different characteristics of patients such as: gender, lesion length, age and region. Despite significantly increasing number of PAD endovascular procedures still remains dilemma due to postprocedural protection of endothelium and lesion surface. NOACs and aspirin combination is a new promising approach.

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LITERATURE

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