ANTICOAGULANT TREATMENT IN PATIENTS WITH ATRIAL FIBRILLATION AND SMALL VESSEL DISEASE

Senta Frol

Clinic of vascular neurology, University Clinical Centre Ljubljana, Slovenia

Atrial fibrillation (AF) is an arrhythmia, which often causes stroke. Due to AHA/ASA guidelines oral anticoagulants (OA) are recommended in secondary stroke prevention (vitamin K antagonist class I, level A; non-vitamin K antagonists (NOAC): apixaban (class I, level A; dabigatran class I, level B; rivaroxaban class IIa, level B). Decision on OA initiation is made by CHADS2-VASC and HAS-BLED score calculation.

Hypertension and amyloid angiopathy (AA) are the commonest diseases affecting small vessels. Cerebral microbleeds (CMB) are markers of severity and type of small vessel disease. CMB are hemosiderin spots, round-shaped, less than 5 mm sized areas. On T2 magnetic resonance images CMB appear hypointense. Cortico-subcortical location is presumably caused by cerebral AA, which often causes lobar bleeds, deep brain region location results from hypertensive arteriopathy. CMB are predictors for anticoagulation related hemorrhage. Latest reports on NOAC showed lower incidence of newly developed CMB compared to warfarin.

Sustained high bleeding risk is a clear contraindication for NOAC treatment. Risk factors, increasing the risk for cerebral hemorrhage must be taken into consideration before OA initiation: blood pressure (160 mmHg systolic), low compliance (elevated INR3.0), elderly (75 years), events prior to treatment (previous strokes, hemorrhagic strokes), diseases affecting small vessels (AA, smoking, alcohol, aspirin usage), statistically significant markers (leukoaraiosis, CADASIL). In absolute contraindication for OA initiation, non-pharmacological prevention, such as closure of left atrial appendage could be recommended (class IIb, level B).