Outcome and clinical profile of patients with newly detected atrial fibrillation and cardioembolic stroke

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Background: Atrial fibrillation (AF) is a global health care problem with evidence suggesting an increasing prevalence and incidence worldwide. Undiagnosed AF represents the most common cause of thromboembolic events. The aim of the study was to analyze the clinical profile and outcome in patients with cardioembolic stroke and newly detected AF.

Methods: We enrolled 139 consecutive patients with atrial fibrillation and confirmed diagnosis of ischemic stroke (mean age 72.25±6.33 years, 59 male). Follow-up period was 1 year since the episode of acute stroke.

Results: All patients with verified cardioembolic stroke were first diagnosed with AF on admission. Patients with AF were characterized by polymorbidity (hypertension was diagnosed in 96 patients, a concomitant chronic renal failure was observed in 60 cases while a complicated course of coronary heart disease – in 35 patients, 22 patients were diagnosed with diabetes mellitus, while 9 people had a long smoking history). Mean value of CHA2DS2-VASc score was 4.51±1.2 and after acute stroke patients were recommended permanent anticoaugulation (12% – warfarin, 45% – rivaroxaban, 24% – apixaban and 19% – dabigatran). At the end of the year of follow-up patients were taking oral anticoagulants only in 16.2% of cases. In the same time only 9.9% of patients had a history of mild or moderate nasal or gingival bleeding (8.2%) while severe hemorrages were not reported. On multivariable analysis, lack of antithrombotic treatment guideline adherence was associated with increased risk of recurrent stroke (hazard ratio, 4.45; 95% confidence interval, 1.25–6.87; P=0.012 for undertreatment). For 3 (2.2%) patients the recurrent sroke was fatal and 2 (1.4%) patients had lethal outcome due to heart failure deterioration after 6 months of follow up. During one year follow up 27 (19.4%) patients had spontaneous AF conversion into sinus rhythm and 19 (13.7%) patients underwent successful catheter ablation. The adjusted risk of reccurent stroke for those in chronic AF was higher than in sinus rhythm (hazard ratio, 1.70; 95% CI, 1.37–2.12).

Conclusions: This study showed that patients with newly dignosed AF and cardioembolic stroke are characterized with polymorbidity and high thromboembolic risk but after sinus rhythm restoration the adjusted risk of reccurent stroke is much lower. The results demonstrate a low quality care of patients with AF and cardioembolic stroke at the outpatient stage. Appropriate medication compliance is crucial for positive outcomes as well as effectivesecondary stroke prevention in AF patients.