Acute Ischemic Stroke in subjects on new direct oral anticoagulants

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Background

Vitamin K antagonists were routinely used to prevent cardioembolic strokes but novel direct oral anticoagulants (NOACs) appear to be safe and more convenient alternatives to warfarin. It is probable that the number of patients treated with NOACs will increase and for this reason, physicians will must face with new challenges in acute condition, for example the treatment of acute ischemic stroke (AIS) in these subjects. Each year about 1.0 - 2.0% of subjects with atrial fibrillation who are receiving NOACs can experience an ischemic stroke. An inadequate dosing for stroke prevention was reported and little is known about medication adherence to NOACs. Aim of our study was to prospectively evaluate clinical features, therapeutic adherence and diagnostic and therapeutic decisions in patients observed for acute ischemic stroke (AIS) during anticoagulant therapy with NOACs.

Methods

We included all individuals with confirmed AIS occurred during anticoagulant therapy with NOACs, evaluated in our Hospital from 1 January 2016 to 31 December 2016. Following data were collected: clinical-demographical records, neuroradiological findings, type and dosage of NOAC, coagulation tests obtained in acute phase, treatments in acute and sub-acute phases, clinical outcome measured at 3 months by the modified Rankin Scale (mRS), safety outcome measured as incidence of symptomatic intracranial hemorrhage (SICH) and mortality rate.

Results

We observed 45 subjects (mean age 80,9 + 6.9 s.d.), 29 % taking dabigatran, 36 % rivaroxabam and 35 % apixabam. 37 out of 45 (82 %) took a low dosage of NOAC, in 12 (26 %) without a real contraindications for full dose. Nobody underwent i.v. thrombolysis. 5 subjects underwent mechanical thrombectomy. We did not observe SICH. Mortality rate was 20 % and was higher in comparison with a control group of patients matched for age and initial severity of stroke who did not take oral anticoagulants (12 %). The percentage of patients with a good functional outcome (mRS 0-2) at three months was similar to the control group (39 % vs 42 %)

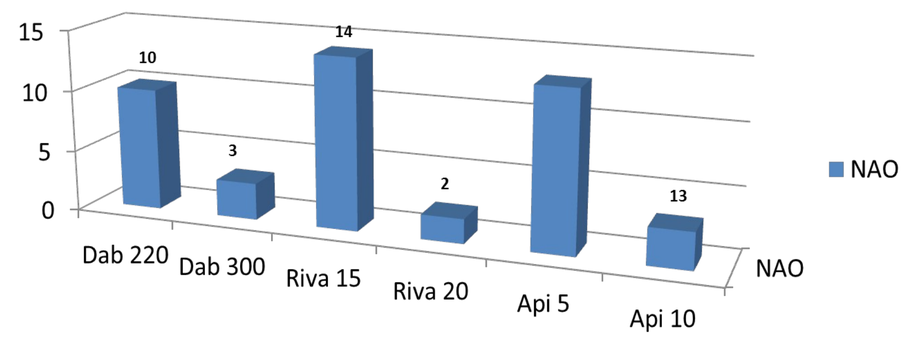
Conclusions

The event of AIS in subjects who take NOACs is not rare. About a quarter of the patients took low dosage of NOACs without a real contraindication for full dose. The mortality rate was higher in comparison with subjects with AIS who did not take oral anticoagulants, while the functional outcome was similar.

Characteristics of the Study Patients

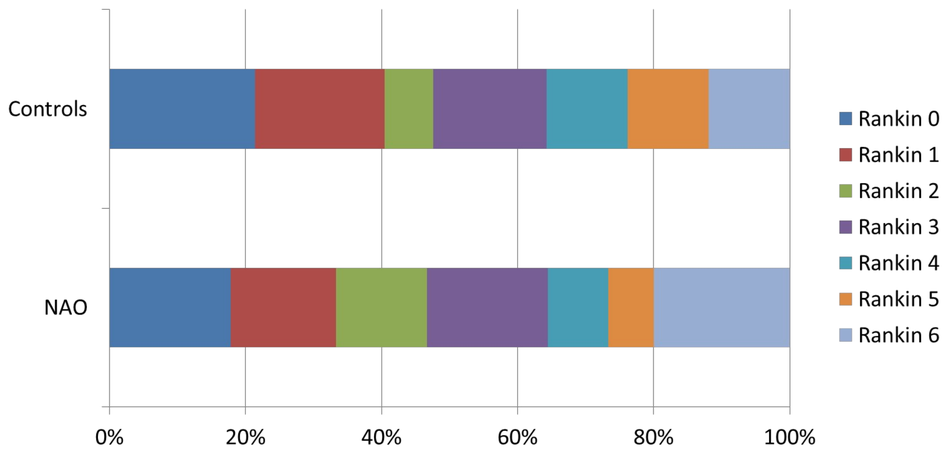
Number of subjects	45
Males	40 %
Females	60 %
Age (mean ± s.d.)	80,9 ± 6.9
Previous Stroke/TIA	24 %
Hypertension	86,7 %
Diabetes	33,3 %
Chronic A.F.	88 %
Paroxysmal A.F.	6 %
Flutter	6 %

Type and dosage of NAO treatment

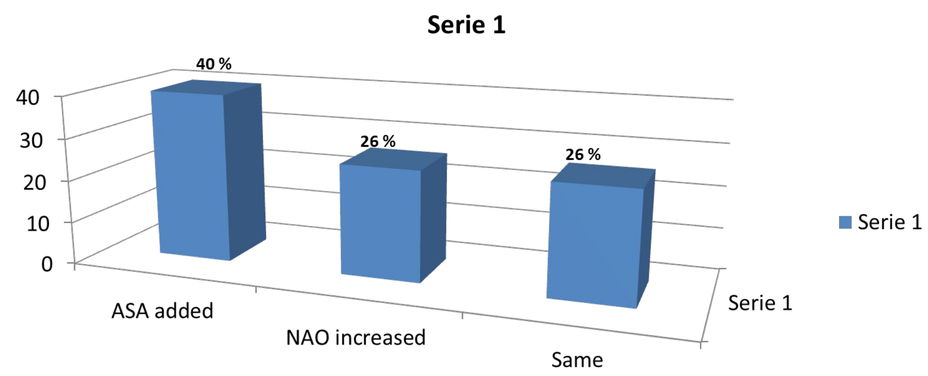


82 % of patients were taking a low dosage

Three months prognosis



Final prevention therapy



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