Characteristics and ten-year prognosis of patients treated with aspirin prior to a first-ever acute ischemic stroke. Data from the ‘Athens Stroke Outcome Project’

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INTRODUCTION

• Although antiplatelet treatment remains undoubtedly the cornerstone for the secondary prevention of non-cardioembolic stroke, there is a lot of debate regarding the use of antiplatelet therapy for the primary prevention of stroke.
• A limited number of trials have reported controversial results regarding the impact of treatment with aspirin prior to a stroke event on neurological severity and outcome with reported mortality.

AIM

• We aimed to assess the clinical characteristics and the ten-year prognosis of patients treated with aspirin prior to a first-ever acute ischemic non-cardioembolic stroke (AINCS).

METHODS

• This was a retrospective study involving a total of 1,782 patients hospitalized due to a first-ever AINCS; of those,
  • 14% (n=257) were treated with aspirin (ASA group) for elective purposes,
  • while 1,525 patients received no antiplatelets (non-ASA group) prior to the index event.
• Primary endpoints included:
  • time to stroke recurrence
  • composite cardiovascular event (stroke recurrence, myocardial infarction, unstable angina, coronary revascularization, peripheral atherosclerotic artery diseases, or sudden death)
  • all-cause mortality

RESULTS

• Results of the univariable and multivariable Cox proportional hazard analyses to determine the effect of different factors on (A) 10-year mortality and (B) 10-year cardiovascular incidence after first-ever ischemic stroke in patients receiving aspirin prior to the event.

Dependent variable | Univariable analysis | Multivariable analysis
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A. | Hazard ratio (95% CI) | Hazard ratio (95% CI)
Age (per 1 year increase) | 1.09 (1.06-1.12)‡ | 1.07 (1.04-1.09)‡
NIHSS scale (per 1 point increase) | 1.08 (1.05-1.10)‡ | 1.05 (1.03-1.08)‡
Heart failure | 2.62 (1.41-4.87) † | 2.32 (1.24-4.36) †
Peripheral artery disease | 2.09 (1.11-3.95)* | 2.25 (1.15-4.39)*
Lipid-lowering treatment | 0.57 (0.37-0.87) † |  
B. | |  
Male sex | 2.06 (1.01-4.50)* | 2.27 (1.04-4.98)*
Lipid-lowering treatment | 0.62 (0.39-0.99)* | 0.58 (0.36-0.93)*

* p&lt;0.05, † p&lt;0.01, ‡ p&lt;0.001

Subjects pre-treated with aspirin had lower composite cardiovascular event-free survival compared with the non-ASA group.

There was no difference between 2 groups regarding the time to stroke recurrence.

CONCLUSIONS

• This study indicates that elective treatment with aspirin prior to an AINCS does not affect long-term stroke recurrence but increases mortality and cardiovascular morbidity.