

Cerebrovascular diseases

O-11. Intracerebral Haemorrhage

Antiplatelet Treatment after TIA and Ischaemic Stroke in Patients with Cerebral Microbleeds in Two Large Cohorts

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ABSTRACT

Background:

In TIA/ischaemic stroke patients, microbleed burden predicts intracerebral haemorrhage (ICH), and ischaemic stroke, but implications for antiplatelet-treatment are uncertain.

Methods:

In two independent prospective cohorts with TIA/ischaemic stroke (Oxford Vascular Study/mainly Caucasian; University of Hong Kong/mainly Chinese), antiplatelet-treatment was started routinely irrespective of microbleed-burden. Risks, time course and outcome of ICH, extracranial bleeds, and recurrent ischaemic events, were determined and stratified by microbleed burden (0 vs. 1, 2–4 and ≥ 5), adjusting for age, sex and vascular risk factors.

Results:

Microbleeds were more frequent in the Chinese cohort (450/1003 vs. 158/1080; $p < 0.0001$), but risk associations were similar during 7433 patient-years of follow-up. Among 1811 patients on antiplatelet drugs, risk of major extracranial bleeds was unrelated to microbleed-burden (p trend = 0.87), but the 5-year risk of ICH was steeply related (p trend < 0.0001), with 73% of ICH in 7.7% patients with ≥ 5 microbleeds. However, risk of ischaemic stroke also increased with microbleed-burden (p trend = 0.013), such that risk of ischaemic stroke and coronary events exceeded ICH and major extracranial bleeds during the first-year, even amongst patients with ≥ 5 microbleeds (11.7% vs. 3.7%). However, this ratio changed over time (time-course p interaction = 0.034), with risk of haemorrhage matching that of ischaemic events after one-year (11.0% vs. 10.5%). Moreover, whereas the association between microbleed-burden and risk of ischaemic stroke was due mainly to non-disabling events (p trend = 0.007), the association with ICH was accounted for (p trend < 0.0001) by disabling/fatal events (≥ 5 microbleeds: 82% disabling/fatal ICH vs. 40% ischaemic stroke; $p = 0.035$).

Conclusions: In Caucasian and Chinese patients with ≥ 5 microbleeds, with holding antiplatelet drugs during the first-year after TIA/ischaemic stroke may be inappropriate. However, the risk of ICH may outweigh any benefit thereafter.