

## STROKE

# Cloistazol demonstrates noninferiority to aspirin for the prevention of recurrent stroke

The antiplatelet agent cloistazol might be an option for recurrent stroke prevention in selected patients, according to a new study published in *The Lancet Neurology*. Researchers in Japan have demonstrated that cloistazol not only shows noninferiority to aspirin for secondary stroke prevention in patients with noncardioembolic ischemic stroke, but is also associated with a lower incidence of hemorrhagic events.

“ Cloistazol was associated with markedly fewer hemorrhagic events than was aspirin... ”

Aspirin has proved the bedrock of antiplatelet therapy in secondary stroke prevention, and few antiplatelet regimens have shown even moderate benefits over aspirin administered alone in this setting.

Cloistazol exhibited a preventive effect against recurrent cerebral infarction in a placebo-controlled trial and, in a Chinese

study, performed favorably compared with aspirin in the prevention of recurrent stroke. The new, multicenter study aimed to establish the noninferiority of cloistazol to aspirin for secondary stroke prevention.

Investigators randomly assigned 2,757 patients who had experienced cerebral infarction in the preceding 26 weeks to receive 100 mg cloistazol twice daily or 81 mg aspirin once daily for 1–5 years. Most of the individuals who initially enrolled in the trial were included in the final analyses, and the mean follow-up period was 29 months. The primary end point of the trial was first occurrence of stroke (recurrence of cerebral infarction, or occurrence of cerebral hemorrhage or subarachnoid hemorrhage).

The yearly rates of stroke in the cloistazol and aspirin treatment groups were 2.76% and 3.71%, respectively (hazard ratio [HR] 0.743, 95% CI 0.564–0.981). As the upper 95% CI of the HR was lower than the prespecified noninferiority

margin, the investigators concluded that cloistazol showed noninferiority to aspirin for stroke prevention. Indeed, further analysis of the data led the investigators to suggest that cloistazol might even have a superior effect to aspirin.

Cloistazol was associated with markedly fewer hemorrhagic events than was aspirin; however, various adverse events, such as headache and diarrhoea, occurred more frequently with cloistazol treatment.

The trial's investigators concluded that cloistazol might be used to prevent stroke in patients with noncardioembolic stroke, and may be particularly useful in such patients who have an increased risk of hemorrhage.

*Darran Yates*

**Original article** Shinohara, Y. et al. Cloistazol for prevention of secondary stroke (CSPS 2): an aspirin-controlled, double-blind, randomised non-inferiority trial. *Lancet Neurol.* 9, 959–968 (2010)

## CORRECTION

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In the November 2010 issue of *Nature Reviews Neurology*, the drug cilostazol was incorrectly referred to as cloistazol.