

103055 A multicenter placebo-controlled double-blind group comparison study with nimodipine in patients with acute ischemic stroke.

Schmutzhard E, Aichner F, Spogler F, Gersternbrand F, University Hospital, Innsbruck, Austria.

Effective therapy of ischemic stroke is still controversial. In 15 centres in Austria and Germany the clinical effect of nimodipine in the treatment of early ischemic stroke was studied. A double blind placebo-controlled study consisting of 481 patients with clinical diagnosis of recent ischemic stroke, proven by a corresponding hypodense lesion in CT-scan, was undertaken. Patients were treated with either nimodipine (30 mg q 1 d, p.o) or placebo for 21 days. Treatment was started not later than 48 hours after the onset of stroke. The neurological course of patients was assessed using a modified Mathew scale before initiation of treatment, on treatment day 1,3,5,7,14,21 and after 6 months. Additionally, death rates were assessed after 21 days and after a follow up period of 6 months. All patients' protocols as well as the CT scans were reviewed by an independent review committee of 3 neurologists and neuroradiologists and judged as valid or not valid for efficacy. Exact statistical analyses will be finalised within the next few months and presented.

Flunarizine treatment in SAH patients.

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A prospective study on the preventive effect of the calcium blocker flunarizine on symptomatic vasospasm was performed in 72 consecutive patients with aneurysmal subarachnoid hemorrhage (SAH).

Delayed ischemic deficits from vasospasm alone were significantly less frequent in early flunarizine-treated patients in whom flunarizine was infused intravenously within 72 hours after the first bleed (2/48, 4.2%) compared to late flunarizine-treated patients (8/24 33.3%).

Among patients with subarachnoid hemorrhage at more than moderate amount, only two (7.1%) of 28 early flunarizine-treated patients developed delayed ischemic dysfunction, whereas six (60%) of 10 late flunarizine-treated patients revealed ischemic dysfunction due to vasospasm.

There were no side effects of flunarizine.

The authors conclude that flunarizine should be given to patients with subarachnoid hemorrhage as early as possible in order to reduce the occurrence of delayed ischemic deficits due to vasospasm.

103057 Effect of nimodipine on the outcome and late infarcts after aneurysmal subarachnoid hemorrhage and surgery.

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A total of 213 patients with verified aneurysmal subarachnoid hemorrhage (SAH) of grades I-III (Hunt and Hess) were enrolled into a double blind placebo-controlled trial of the effect of intravenous nimodipine on delayed ischemic deterioration (DID) and CT visualized infarcts after SAH and operation. The administration of the drug or matching placebo was started immediately after the radiological diagnosis of a ruptured aneurysm had been made. Out of the 213 patients enrolled into the study, 58 were operated early, i.e. within 0 to 3 days after the SAH (day of SAH=day 0), 69 were operated subacutely, i.e. between days 4 to 7 after the SAH and 74 were operated late, i.e. on day 8 or later. Eleven patients died before surgery was undertaken and one was not operated upon. A check up control with a CT scan was performed 1.1 to 2.4 years after the SAH (mean 1.2 years). There were no significant differences in the overall outcome between the groups at the late check up. However, nimodipine treatment was associated with significantly lower incidence of deaths caused by delayed cerebral ischemia ($p=0.01$) and significantly lower incidence of cerebral infarcts visualized by computerized tomographic scanning in the whole material ($p=0.05$) and especially in patients without an associated intracerebral hematoma ($P=0.03$).

Book of Abstracts

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**9th International
Congress of Neurological Surgery
October 8-13, 1989
New Delhi – India**