## Clazosentan

Clazosentan, an endothelin receptor antagonist, has been shown to reduce vasospasm after aneurysmal subarachnoid hemorrhage.

A meta-analysis was conducted to provide an update on the efficacy and safety profile of clazosentan with different doses in aneurysmal subarachnoid hemorrhage (aSAH).

Song et al., performed a comprehensive and electronic search updated to September 2018 of The Cochrane Library, Embase, and PubMed to identify relevant clinical trials. Trials of the effectiveness of clazosentan in treating cerebral vasospasm after aSAH were studied. The main outcomes included new cerebral infarction (NCI), delayed ischemic neurologic deficit (DIND), vasospasm associated with morbidity/mortality, angiographic vasospasm, rescue therapy, and adverse events. They applied RevMan 5.3 software for this meta-analysis to analyze the combined pooled odds ratios (ORs) with 95% confidence intervals (CIs) using a fixed- or random-effects model on the basis of heterogeneity.

A total of 5 randomized placebo-controlled trials were included in this meta-analysis. Beneficial outcome was found in patients who received higher doses of clazosentan (>5 mg/h) after aSAH based on decreased incidence of DINDs (OR, 1.76; 95% CI, 1.16-2.69; P = 0.008), NCls (OR, 2.31; 95% CI, 1.34-3.95; P = 0.002), and angiographic vasospasms (OR, 1.85; 95% CI, 1.19-2.89; P = 0.007). Meanwhile, other parameters, such as vasospasm-related morbidity/mortality, rescue therapy, and adverse events, showed no statistical significance (P > 0.05) between high and low doses of clazosentan.

The significant beneficial outcomes of high-dose clazosentan have been proven in preventing cerebral vasospasm and subsequent cerebral infarction compared with low-dose clazosentan, with a manageable safety profile. However, high doses of clazosentan had no significant effect on rescue therapy and vasospasm-related morbidity/mortality <sup>1)</sup>.

## 1)

Song J, Xue YQ, Wang YJ, Xu P, Sun DK, Chen W. An Update on the Efficacy and Safety Profile of Clazosentan in Cerebral Vasospasm After Aneurysmal Subarachnoid Hemorrhage: A Meta-Analysis. World Neurosurg. 2018 Nov 27. pii: S1878-8750(18)32702-5. doi: 10.1016/j.wneu.2018.11.143. [Epub ahead of print] PubMed PMID: 30496924.

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