

Aneurysmal subarachnoid hemorrhage medical treatment

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Pharmacotherapy has an accepted role in several aspects of the disease and an emerging role in several others. No preventive pharmacologic interventions for SAH currently exist. Antiplatelet medications as well as anticoagulation have been used to prevent thromboembolic events after endovascular coiling. However, the main focus of pharmacologic treatment of SAH is the prevention of [delayed cerebral ischemia](#) (DCI). Currently, the only evidence-based medical intervention is [nimodipine](#). Other calcium channel blockers have been evaluated without convincing efficacy. Anti-inflammatory drugs such as statins have demonstrated early potential; however, they failed to provide significant evidence for their use in preventing DCI. Similar findings have been reported for magnesium, which showed potential in experimental studies and a phase 2 trial. Clazosentane, a potent endothelin receptor antagonist, did not translate to improve functional outcomes. Various other neuroprotective agents have been used to prevent DCI; however, the results have been, at best inconclusive. The prevention of DCI and improvement in functional outcomes remain the goals of pharmacotherapy after the culprit lesion has been treated in aneurysmal SAH. Therefore, further research to elucidate the exact mechanisms by which DCI is propagated is needed. In this article, we review the current pharmacologic approaches that have been evaluated in SAH and highlight the areas in which further research is needed ¹⁾.

Current treatment guidelines to prevent delayed cerebral ischemia are limited to oral nimodipine, maintenance of euvolemia, induction of hypertension if ischemic signs occur, and endovascular therapy for patients with continued ischemia after induced hypertension. Future investigations will involve agents targeting vasodilation, anticoagulation, inhibition of apoptosis pathways, free radical neutralization, suppression of cortical spreading depolarization and attenuation of inflammation ²⁾.

¹⁾

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