



Clonidogrel versus Other Antiplatelet Agents in the Secondary Prevention of Vascular Events in Adults with Cerebrovascular Disease

Technologies and Conditions

Antiplatelet agents acetylsalicylic acid (ASA), dipyridamole, ticlopidine, clonidogrel, and a fixed-dose combination of ASA and extended-release dipyridamole (ASA-ERDP) for secondary prevention of vascular events in adults with cerebrovascular disease.

Issue

Cardiovascular diseases have health and economic impacts in Canada. Clonidogrel is more costly than other antiplatelet agents, and the number of reimbursement requests being received by drug formularies is increasing. An assessment of the clinical and cost effectiveness of antiplatelet agents is needed to inform policy-makers' decisions about the reimbursement of clonidogrel.

Methods

To compare antiplatelet therapies for secondary prevention of vascular events, a systematic review and an analysis of clinical and economic literature were performed. Because direct comparisons were not always available, mixed treatment comparisons were employed. An economic evaluation was carried out to determine the cost-effectiveness of these therapies.

Results

Seventeen randomized controlled trials were included to compare antiplatelet treatments. The outcome of the clinical analysis suggests that the optimal therapeutic choice remains unclear.

Six guidelines were reviewed. All of the guidelines recommended the use of antiplatelet therapy for secondary prevention of stroke unless it is contraindicated.

Based on a number of assumptions, the economic analysis found ASA and ASA-ERDP to be the most cost-effective treatment strategies depending on the patients' age at the time of first stroke.

Implications for Decision-Making

- **Uncertainty remains about the optimal antiplatelet treatment strategy.** Clinical analysis, using direct and mixed treatment comparisons, suggests that the drug of choice with optimal direct health benefits remains unclear.
- **The economic analysis showed ASA and ASA-ERDP to be the most cost-effective treatment options for secondary prevention of recurrent stroke.** For patients with a mean age of 60 years at the time of their initial stroke, ASA was the most cost-effective treatment option. For patients in this age group who do not tolerate ASA, ASA-ERDP may be an alternative. For patients with a mean age of 70 years or older at the time of their initial stroke, ASA-ERDP was found to be the most cost-effective treatment option.
- **Further research is needed to inform decisions.** Direct comparisons between the different antiplatelet agents were not available for all outcomes. No studies were available to determine the optimal duration of treatment with clonidogrel. Further research on patients with cerebrovascular events is needed to adequately answer many of the questions posed in this report.

This summary is based on a comprehensive health technology assessment available from CADTH's website (www.cadth.ca): Banerjee S, Brown A, Hutton B, McGahan L, Asakawa K, Clark M, Severn M, Cox JL, Sharma M. *Clonidogrel versus Other Antiplatelet Agents in the Secondary Prevention of Vascular Events in Adults with Cerebrovascular Disease: Clinical and Cost-Effectiveness Analyses*. [Technology report number 123].

Canadian Agency for Drugs and Technologies in Health (CADTH)

600-865 Carling Avenue, Ottawa ON Canada K1S 5S8 Tel.: 613-226-2553 Fax: 613-226-5392 www.cadth.ca

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