Title **Clinical Effectiveness and Cost-effectiveness of Clopidogrel and Modified-release Dipyridamole in the Secondary Prevention of Occlusive Vascular Events: A Systematic Review and Economic Evaluation**

Agency **NCCHTA, National Coordinating Centre for Health Technology Assessment**
Mailpoint 728, Boldrewood, University of Southampton, Southampton
SO16 7PX, United Kingdom; Tel: +44 2380 595586, Fax: +44 2380 595639

Reference Health Technol Assess 2004;8(38). Oct 2004. www.ncchta.org/execsumm/summ838.htm

Aim

To examine the clinical and cost effectiveness of 2 alternative antiplatelet agents, clopidogrel and modified-release (MR)-dipyridamole, relative to prophylactic doses of aspirin for the secondary prevention of occlusive vascular events.

Conclusions and results

In the CAPRIE trial, the point estimate for the primary outcome, ie, ischemic stroke, myocardial infarction (MI), or vascular death, favored clopidogrel over aspirin, but the boundaries of the confidence intervals raise the possibility that clopidogrel is not more beneficial than aspirin. Regarding secondary outcomes, a non-significant trend favored clopidogrel over aspirin. The number of patients reporting bleeding disorders in the clopidogrel group did not differ from the aspirin group. The incidences of rash and diarrhea were statistically significantly higher in the clopidogrel group than the aspirin group. The aspirin group had a higher incidence of indigestion/nausea/vomiting than the clopidogrel group. Hematological adverse events were rare in both groups. No cases of thrombotic thrombocytopenic purpura were reported in either group. Treatment with MR-dipyridamole alone did not significantly reduce the risk of any of the primary outcomes reported in ESPS-2 compared with treatment with aspirin. Acetylsalicylic acid (ASA)–MR-dipyridamole was significantly more effective than aspirin alone in patients with stroke or transient ischemic attacks (TIAs) at reducing the outcome of stroke and marginally more effective at reducing stroke and/or death. ASA–MR-dipyridamole did not statistically significantly reduce the risk of death compared to aspirin. The number of strokes was statistically significantly reduced in the ASA–MR-dipyridamole group versus the MR-dipyridamole group. Results in the other primary outcomes, stroke and/or death, and death, favored ASA–MR-dipyridamole, but the findings were not statistically significant. The number of bleeding complications did not differ between the groups, but the incidence was significantly lower in the MR-dipyridamole group. More patients in the MR-dipyridamole treatment groups experienced headaches compared to patients receiving aspirin alone. The York model assessed, under several different scenarios, the cost effectiveness of differing combinations of treatment strategies in 4 patient subgroups. The results of the model were sensitive to the assumptions made in the alternative scenarios, in particular the impact of therapy on non-vascular deaths.

Recommendations

Please see the full monograph for recommendations.

Methods

Please see the full monograph for methods.

Further research/reviews required

Evaluation of the combination of clopidogrel and aspirin (for secondary prevention of occlusive vascular events). Randomized, direct comparisons of clopidogrel and MR-dipyridamole in combination with aspirin (to inform treatment of patients with a history of stroke and TIA). Trials to compare treatment with clopidogrel and MR-dipyridamole (for secondary prevention of vascular events in patients demonstrating genuine intolerance to aspirin).

Written by Ms Lisa Jones and Dr Rob Riemsma, CRD, UK