

- Title** Safety, effectiveness, and cost-effectiveness of new oral anticoagulants compared with Warfarin in preventing stroke and other cardiovascular events in patients with atrial fibrillation
- Agency** Canadian Agency for Drugs and Technologies in Health (CADTH)
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E-mail: requests@cadth.ca / Web site: <http://www.cadth.ca>
- Reference** CADTH Therapeutic Review April, 2012.
Available From: http://www.cadth.ca/media/pdf/NOAC_Therapeutic_Review_final_report.pdf

Aim

To systematically review and analyze the safety and effectiveness of new oral anticoagulants (NOACs) dabigatran, rivaroxaban, and apixaban compared with warfarin, in treating patients with non-valvular arterial fibrillation (AF) and to assess their cost-effectiveness through economic modelling.

Conclusions and results

When compared with adjusted-dose warfarin, the clinical results were as follows: Dabigatran 150 mg and apixaban, but not rivaroxaban or dabigatran 110 mg significantly reduced all-cause stroke/systemic embolism; none of the NOACs (except apixaban) significantly reduced all-cause mortality or reduced risk of myocardial infarction (MI); Apixaban and dabigatran 110 mg significantly reduced risk of major bleeding; all NOACs significantly reduced the risk of intracranial bleeding; and, none significantly reduced the risk of major gastrointestinal (GI) bleeding. Dabigatran 150 mg and rivaroxaban were associated with a significant increase in the risk of a major GI bleed versus warfarin. Economic analysis of the base case suggests that either dabigatran 150 mg or apixaban is the most cost-effective treatment option. Results for clinical and economic subgroup analyses are also discussed in the report.

Recommendations:

A companion report to this recommends warfarin as first-line therapy for preventing stroke in patients with AF and NOACs as second-line, with monitoring, in some patients with non-valvular AF. The full recommendations are available at: http://www.cadth.ca/media/pdf/tr0002_New-Oral-Anticoagulants_rec_e.pdf

Methods

Clinical evidence was selected according to predefined criteria and trials were included in a systematic review and analysis if they were conducted on AF patients, included treatment with one or more NOACs and warfarin, and included the following outcomes: all-cause stroke/SE (stroke/SE); major bleeding; intracranial bleeding; major gastrointestinal (GI) bleeding; all-cause mortality; and, MI. Cost-effectiveness was evaluated using a mixed treatment comparison (MTC) of the outcome measures.

Further research/reviews required

More analyses of patient-level data are required to evaluate the comparative effectiveness of these agents.

Written by

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