

Title	Antithrombotic agents for the prevention of stroke and systemic embolism in patients with atrial fibrillation
Agency	Canadian Agency for Drugs and Technologies in Health (CADTH) Suite 600, 865 Carling Ave, Ottawa, ON Canada K1S 5S8, Phone: 1-613-226-2553 / Fax: 1-613-226-5392 E-mail: requests@cadth.ca / Web site: http://www.cadth.ca
Reference	CADTH Therapeutic Review, Volume 1, Issue 1B, March 2013. ISSN: 1929-7440. Available From: http://www.cadth.ca/media/pdf/TR0003_AntithromboticAgents-AF_ScienceReport-e.pdf

Aim

To extend previous findings on the clinical and cost-effectiveness of new oral anticoagulants (NOACs) compared with warfarin and develop recommendations that include NOACs and the antiplatelet drugs, acetylsalicylic acid (ASA) and clopidogrel.

Conclusions and results

Results show statistically significant differences between NOACs and warfarin. NOACs may be cost-effective alternatives to warfarin for preventing stroke or systemic embolism (SSE) in patients with atrial fibrillation (AF).

Under specific assumptions of willingness-to-pay, dabigatran 150 mg twice daily is likely optimal in patients who have a moderate risk of stroke (CHADS₂ = 1); are relatively young (≤ 70 years old); or, cannot maintain adequate INR control (TTR < 66%). Apixaban, 5 mg twice daily is likely optimal in patients who have a high risk of stroke (CHADS₂ score ≥ 2), or are relatively old (≥ 80 years old). The review demonstrates that anticoagulant therapy is clinically superior and more cost-effective than ASA, with or without clopidogrel, regardless of age and degree of INR control (TTR).

Recommendations: A companion report recommends considering the use of NOACs for prevention of stroke in patients with non-valvular AF who have a CHADS₂ ≥ 1 and who cannot achieve adequate anticoagulation with warfarin. It also recommends that any decision to use NOACs be based on individual clinical factors.

Available from:

http://www.cadth.ca/media/pdf/TR0003_AntithromboticAgents-AF_RecsReport-e.pdf

Methods

RCTs of antithrombotic agents for the prevention of stroke and other thromboembolic events in patients with AF were identified using a systematic search strategy and independently screened and evaluated by two researchers. Trials were included if they compared at least two of the antithrombotic strategies under review in patients who were eligible for anticoagulant therapy, and reported outcomes related to patient safety or clinical efficacy. Pairwise and Bayesian mixed treatment comparison (MTC) network meta-analyses (NMA) were conducted to pool trial results, which were used to evaluate cost-effectiveness of the interventions following standard procedures.

Further research/reviews required

More research on the benefits and risks of each agent in various patient populations and on the consequences of bleeding with NOACs.

Written by

Jeannine Fraser, Canada