

Antithrombotic Therapy for Patients With Atrial Fibrillation

Condition

Atrial fibrillation — also referred to as AFib or AF — is the most common abnormal heart rhythm, affecting 350,000 Canadians. It can lead to serious complications, such as blood clots that can cause strokes.

Drugs

Antithrombotic drugs make the blood less likely to form clots (thrombi). This helps to prevent stroke, but it also increases the risk of serious bleeding. There are two types of antithrombotic drugs used to prevent stroke in people with non-valvular AFib:

- anticoagulant drugs such as warfarin (Coumadin); and newer drugs such as dabigatran (Pradaxa), rivaroxaban (Xarelto), and apixaban (Eliquis)
- antiplatelet drugs such as acetylsalicylic acid (ASA, Aspirin) and clopidogrel (Plavix).

Issues

Warfarin has been the mainstay of therapy for more than 60 years. It is effective in preventing strokes caused by blood clots in patients with AFib, but there are some challenges with warfarin therapy: doses must be personalized, and regular blood tests are needed to ensure correct dosing.

New oral anticoagulants are given in fixed doses, so routine blood tests and personalized dosing are not needed.

Antiplatelet drugs are less effective than warfarin, but are sometimes used for patients with a low risk of stroke.

Methods

An expert committee made recommendations based on a systematic review of the scientific evidence for these drugs and an economic analysis.

Key Messages

- Warfarin is the recommended first-line therapy for preventing stroke in patients with atrial fibrillation.
- New oral anticoagulants are a second-line option for some patients with non-valvular atrial fibrillation not doing well on warfarin.
- If a new oral anticoagulant is prescribed, patients must be monitored.
- For people who are able to use an anticoagulant, anticoagulant drugs should be used in preference to antiplatelet drugs.

Results

Compared with warfarin, the benefits of new oral anticoagulants are small. The estimated number of patients who would avoid a stroke or other blood clot if treated with a new drug rather than warfarin was less than 10 people for every 1,000 patients treated per year.

Bleeding risks for patients treated with the newer drugs compared with warfarin were similar overall, with a modest decrease in intracranial bleeding and a small increase in gastrointestinal bleeding. A previous systematic review showed that, while warfarin can be reversed with vitamin K, there is no reversal agent or proven management strategy if bleeding occurs with the new drugs. The cost-effectiveness of the new drugs was uncertain.

Compared with anticoagulant drugs, people on antiplatelet drugs experience more strokes without any reduction in bleeding risk. Even though antiplatelet drugs are inexpensive, they are not cost-effective because the cost of treating additional strokes and bleeding events must be factored in.

For more information, visit www.cadth.ca/clots.

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