Anticoagulation

This resource reviews anticoagulation with warfarin and non-vitamin K antagonist (VKA) oral anticoagulants (NOACs) in line with current national guidance. It discusses the rationale for anticoagulation use in atrial fibrillation (AF), risk stratification for treatment, available agents and specific clinical considerations for treatment.

Recommendations

- Anticoagulation is the treatment of choice to reduce risk of stroke.
- Aspirin is no longer recommended in AF.[1]
- Use CHA_2DS_2-VASc score to assess stroke risk.[1]
- Use HAS-BLED to assess bleeding risk.[1]
- The decision about whether to start treatment with warfarin or a NOAC should be made after an informed discussion between the prescriber and the patient about the relative risks and benefits of each agent.[2]
- For patients on warfarin who have AF or heart valve disease and prefer to self monitor, ensure that the person or their carer is both physically and cognitively able to self-monitor effectively. Ensure that there is a process for appropriate quality control of the meter and for obtaining test strips.[3]
- All four NOACs have a National Institute of Health and Care Excellence Technology Appraisal (NICE TA) and are an option for prescribing where appropriate.[2]
- There is no clear evidence of one NOAC being superior to another.[4]
- Use NOACS in line with algorithms or decision support tools. Take into account benefits, bleeding risks, reversibility, the person's values and preferences, renal and hepatic impairment, interacting drugs and attitudes towards once or twice daily dosing.[2]
- Ensure regular review of risks and benefits; ensure that baseline renal function is checked prior to starting a NOAC, then monitored on a regular basis. Ensure that dosage is adjusted accordingly.[2]
- For the prevention of DVT or PE, ensure that NOACs are stopped after the defined period of anticoagulation stated by the hospital (usually at least three months). Take into account information that may help predict risk of recurrence and risk of bleeding in the individual patient.[5-10]
- For prevention of VTE after major elective orthopaedic surgery (i.e. knee or hip replacement) ensure that NOACs are stopped after the documented or licensed treatment period is reached.[5-7]

Additional resources available: https://www.prescqipp.info/b183-anticoagulation/category/400-anticoagulation

Bulletin | Data pack | Decision aids, algorithm, patient information, checklists, slideset

Summary

NICE recommends to offer anticoagulation with a NOAC or a vitamin K antagonist in AF patients with a CHA_2DS_2-VASc score of 2 or above, taking bleeding risk into account.[1] Warfarin is licensed for use without additional risk factors present. All NOACs are licensed for prevention of stroke in non valvular atrial fibrillation plus at least one additional risk factor.

A meta-analysis of 12 studies (with a study population of 77,011) compared the safety and efficacy of the four NOACs to warfarin in patients with AF. NOACs were found to be superior to warfarin for the prevention of the composite of stroke and systemic embolism in patients with AF and an additional risk factor for stroke. There was a significant 52% reduction in intracranial haemorrhage, which drives the finding of significantly lower mortality.[3] NOACs have more predictable pharmacokinetics, fewer food and drug interactions, shorter half-lives, and quicker onset of action than warfarin.[2]

There are no randomised clinical trials comparing NOACs, and the few indirect comparisons suggest that NOACs are equally effective in the prevention of stroke. See decision aids for further information on bleeding risks.

Analysis and costs

Table 1 shows the cost and volume of all anticoagulants prescribed across England and Wales. Efficiencies may be achieved through ensuring appropriate managed use of NOACs across secondary and primary care and ensuring that duration of treatment is appropriate and in line with licensed indications.

Table 1. Cost and volume of anticoagulants prescribed across England and Wales (ePACT March to May 2017)

	Warfarin	Dabigatran	Rivaroxaban	Apixaban	Edoxaban
Cost of 28 days of treatment	3mg - £0.79 and any monitoring costs	£47.60	£50.40	£53.20	£49.00
Total spend England and Wales (ePACT March to May 2017)	£3.7 million	£5.2 million	£37.4 million	£32.9 million	£707,000
Total items England and Wales (ePACT March to May 2017)	2.7 million	120,332	832,680	730,521	15,316

References

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