Lancashire & South Cumbria Medicines Management Group

NHS

Atrial Fibrillation:

Pathway for the prevention of stroke and systemic embolism in AF in the absence of valvular heart disease

Version 1.6 – October 2024

Midlands and Lancashire CSU
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Version control

Version Number	Amendments made	Author	Date
1.0	N/A	SA	20/09/17
1.1	Addition of Guidelines for Antiplatelet/Anticoagulant Therapy for Primary and Secondary Prevention of Ischaemic Stroke and Transient Ischaemic Attack (TIA) as appendix 1	SA	16/07/18
1.2	Edoxaban promoted as first-line NOAC choice in-line with LMMG recommendation - December 2018. Other amendments as per NOAC steering group recommendations	SA	17/4/19
1.3	Amendments as per NOAC steering group recommendations. Updated references and addition of appendix. Title updated to give Atrial Fibrillation prominence.	SA	14/11/19
1.4	Amendments as per NG196 and changes due to national procurement scheme	JG	24/10/22
1.5	Addition of apixaban as a first line DOAC	JG	15/01/24
1.6	Addition of rivaroxaban as first line option, removal of edoxaban as 1st line option	DP	10/10/24

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Introduction

Atrial Fibrillation (AF) is the most common sustained cardiac arrhythmia and is a major cause of ischaemic stroke. Anticoagulation to reduce the risk of stroke is an essential part of AF management. NICE Guidance emphasises the importance of undertaking a stroke risk assessment for all patients with AF and anticoagulating, where safe and appropriate. All people with AF should be offered a personalised package of care which includes up-to-date, comprehensive information and practical advice on their anticoagulation in line with recommendations made in NICE NG158[1] and NICE NG196.[2]

There is a template available on EMIS to aid clinicians when prescribing oral anticoagulants in Primary Care.

Background

Estimates suggest that the prevalence of AF is increasing nationally with a current prevalence being estimated between 2.05% for known AF and 2.5% for the true prevalence.[3] The management of atrial fibrillation should aim to prevent complications, particularly stroke, and alleviate symptoms.

The availability of Direct Acting Oral Anticoagulants (DOACs) has led to a change in the management of stroke prevention in AF in the absence of valvular heart disease. Also, there is greater understanding of how to manage warfarin, with the importance of the average time in therapeutic range (TTR) increasingly recognised.

Scope

This guideline advises on local recommendations around anticoagulation in AF in the absence of valvular heart disease.

For information on cardiovascular risk management and symptom control in AF please refer to NICE NG196, CG181 and the relevant CKS chapters.

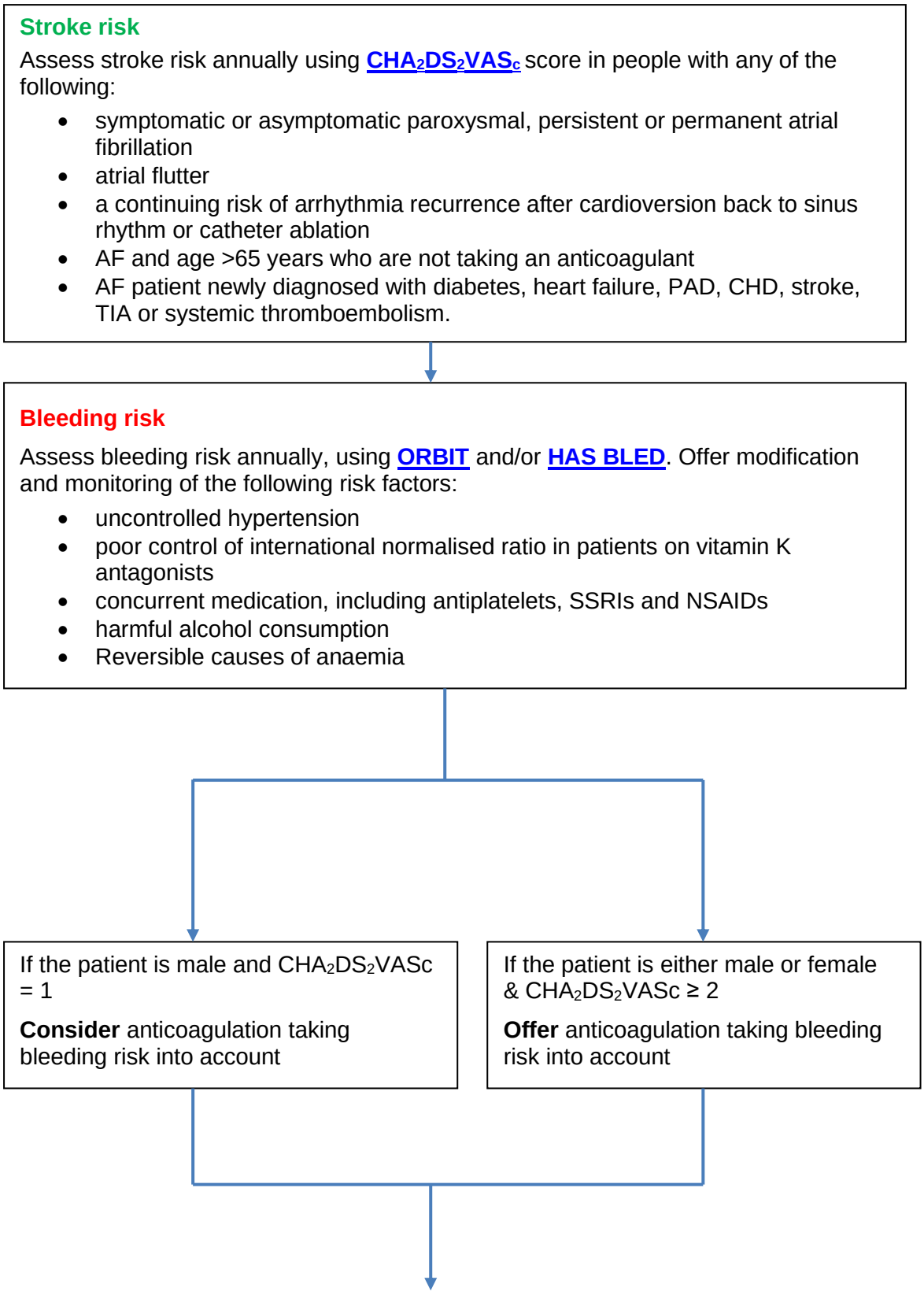
This guidance does not override the individual responsibility of health professionals to make decisions when exercising their clinical judgement in the circumstances of the individual patient, in consultation with the patient and/or guardian or carer. For full prescribing information please refer to the SPC for each drug.

Definitions

DOAC – Direct Acting Oral Anticoagulant

VHD – Valvular Heart Disease e.g. presence of a mechanical prosthetic heart valve or moderate to severe mitral stenosis (usually of rheumatic origin)

Assessment of Patient



Anticoagulant Choice

The decision to start treatment with an anticoagulant should be based on the patient's clinical features and preferences and made after an informed discussion between the clinician and the patient about the risks and benefits. The reasons for using a particular anticoagulant should be documented.

Follow the recommendations on patient involvement in decisions about medicines in NICE's guideline on medicines adherence and patient decision aids in NICE's guideline on medicines optimisation.

First line: Offer anticoagulation with a DOAC

Apixaban (generic) or rivaroxaban (generic) are to be used first line.

Use most clinically appropriate and cost effective option (Apixaban £2.21-2.48/month, Rivaroxaban £6.75/month. Drug tariff Oct 2024)

Edoxaban, apixaban, dabigatran, and rivaroxaban are all recommended as options for patients with AF in the absence of valvular heart disease unless there is a specific clinical reason **not** to do so, such as:

- Contra indication to anticoagulation or DOACs (refer to the individual drug SPC)
- Allergy to the DOAC or any of its excipients
- Patient has antiphospholipid syndrome[4] *
- Body weight **<40kg or >120kg** or BMI >40kg/m^2
  - **Actual** body weight should be used, unless the patient's actual bodyweight is within this range but is >120% of their ideal bodyweight. For such patients, individual risk factors should be considered when determining appropriate dosage
- Edoxaban should not routinely be used if CrCl **> 95ml/min** due to reduced efficacy.[5] Edoxaban should only be used in patients with a high CrCl after careful evaluation of the individual thromboembolic and bleeding risk, consider referral for specialist evaluation.[4]
- CrCl **< 15ml/min**
  - In patients with CrCl **between 15ml/min and 30ml/min** careful consideration should be given to the stability of the patient's renal function. In patients with a declining renal function warfarin should be considered first line. Patients with AF and CKD have an increased morbidity and mortality due to their excessive risk for both thromboembolic and severe bleeding events
  - Renal function should be calculated as creatinine clearance (CrCl) using the Cockcroft-Gault formula. **Actual** body weight should be used in this calculation for all DOACs, as per the manufacturer's clinical trials. Caution should be taken when using EMIS to calculate CrCl to ensure the correct weight value is used in the calculation[6]
  - It should be noted that the calculation of renal function is an estimate that is influenced by many changeable factors and should not be used in isolation to decide on the choice or dose of anticoagulant
  - Dabigatran is contraindicated when CrCl<30ml/min
  - Patients with CrCl <15ml/min and patients undergoing dialysis should be under the care of a renal specialist
- Valvular heart disease
- Insurmountable drug interaction with the DOAC
- Specialist recommendation

To ensure the correct dosage and frequency of administration of DOACs please refer to the individual drug SPC.

Second line: Vitamin K antagonist

If DOACs are contraindicated, not tolerated or not suitable, **offer a vitamin K antagonist** (e.g. warfarin).

Warfarin is the preferred option for those people with AF and the following:

- Antiphospholipid syndrome*
- Patients **<40kg or >120kg** (or BMI >40kg/m^2)
    - In patients of weight **between 120kg and 150kg** (or BMI 40kg/m^2 to 50 kg/m^2) who are considered less suitable for warfarin, a DOAC may be considered following specialist recommendation and consideration of the full clinical picture, in particular renal function[7]
- Who are at risk of insurmountable drug interactions with a DOAC
- In patients with CrCl **between 15ml/min and 30ml/min** careful consideration should be given to the stability of the patient's renal function. In patients with a declining renal function warfarin should be considered first line. Patients with AF and CKD have an increased morbidity and mortality due to their excessive risk for both thromboembolic and severe bleeding events
- Patients with CrCl<15ml/min and patients undergoing dialysis should be under the care of a renal specialist
- **VKAs are currently the only treatment with established safety in AF patients with a mechanical prosthetic heart valve or moderate to severe mitral stenosis (usually of rheumatic origin)**

Treatment with vitamin K antagonists has specific counselling and monitoring requirements. Please refer to local anticoagulant services for detailed information on initiation and safe prescribing.

Patient's already prescribed anticoagulation for AF in the absence of valvular heart disease

- For adults with atrial fibrillation who are already prescribed a vitamin K antagonist and are stable, continue with their current medication and if clinically appropriate discuss the option of switching treatment at their next routine appointment, taking into account the person's time in therapeutic range.[2]

- Please consult the product SPC and local policy for specific advice on switching between anticoagulants. Consider referral of patients who require anticoagulant switching to local DOAC education services, where available.

Do not

- Do not offer stroke prevention therapy with anticoagulation to people aged under 65 years with atrial fibrillation and no risk factors other than their sex (that is, very low risk of stroke equating to a CHA_2DS_2-VASc score of 0 for men or 1 for women).[2]
- Do not withhold anticoagulation solely because of a person's age or their risk of falls.[2]
- In people with a diagnosis of atrial fibrillation, do not stop anticoagulation solely because atrial fibrillation is no longer detectable. Base decisions to stop anticoagulation on a reassessment of stroke and bleeding risk using CHA2DS2-VASc and ORBIT and a discussion of the person's preferences.[2]

* **MHRA/CHM advice: Direct-acting oral anticoagulants (DOACs): increased risk of recurrent thrombotic events in patients with antiphospholipid syndrome (June 2019)**

A clinical trial has shown an increased risk of recurrent thrombotic events associated with rivaroxaban compared with warfarin, in patients with antiphospholipid syndrome and a history of thrombosis. There may be a similar risk associated with other DOACs. Healthcare professionals are advised that DOACs are not recommended in patients with antiphospholipid syndrome, particularly high-risk patients who test positive for all three antiphospholipid tests—lupus anticoagulant, anticardiolipin antibodies, and anti-beta$_2$ glycoprotein I antibodies. Continued treatment should be reviewed in these patients to determine if appropriate and switching to a vitamin K antagonist such as warfarin should be considered.[8]

Initiation and routine monitoring during DOAC treatment

Patients require monitoring during treatment with DOACs. The table below (page 9) outlines the main monitoring points and suggested time frames. Please note, this is guidance only and more frequent monitoring may be required if a patient is higher risk or they become unwell.

Renal monitoring

Monitoring of renal function is essential when considering thromboembolic and bleeding risk in patient's with CKD.

A suggested method of estimating testing frequency for patient's with CrCl < 60ml/min is to divide the value by 10, and use the value obtained as the monthly testing frequency.

e.g. CrCl 30ml/min, 30/10 = 3 = renal function checked every 3 months.

Antiplatelets

Patient's prescribed antiplatelet medication should have the ongoing need for it reviewed if they are also prescribed an anticoagulant. Co-prescribing of antiplatelets and anticoagulants can increase the risk of bleeding and continuation of the antiplatelet(s) may not be indicated if an anticoagulant is commenced. However, some patient's may be required to continue on both and in such cases the patient's specialist may need to be contacted for clarification. Modifiable risk factors should be regularly reviewed to reduce the risk of bleeding.

Counselling information to be reinforced at every opportunity

- Bleeding risks must be explained to the patient; they must be advised on how to recognise a bleed and when to seek medical attention.
- Medication compliance is vital; missing a dose, or overdoses, will have significant efficacy or safety implications. Refer to the individual SPCs for specific information on missed doses.

Monitored dosage systems

Rivaroxaban, edoxaban and apixaban (but NOT dabigatran) can be dispensed in standard monitored dosage system (MDS) compliance aids such as dosset boxes. Special MDS containers are required for dabigatran capsules as they are moisture sensitive.

Reversal agents

Andexanet alfa (Ondexxya) is the licensed reversal agent for rivaroxaban and apixaban.

Andexanet alfa (Ondexxya) is currently in phase 3 trials to extend its license to include the indication of antidote to edoxaban.

Idarucizumab (Praxbind) is the licensed reversal agent for dabigatran.

Vitamin K antagonists (e.g. warfarin) can be reversed using phytomenadione (vitamin K).

Timeline	Assessment and Monitoring	Counselling	Prescription/Follow up
Initiation	CHA_2DS_2VASc HAS-BLED/ORBIT U&Es CrCl LFTs FBC Clotting screen Weight BP	○ Provide DOAC alert card and advise patient to carry with them. ○ Advise on the risk of bleeding and the availability of reversal agents. ○ Advise patient to report excessive bruising to GP and to seek immediate medical attention for uncontrollable bleeding/haemorrhage. ○ Ask about the use of other medications, including over-the-counter (OTC) products, to identify possible drug interactions with DOAC. ○ Assess and minimise modifiable risk factors for bleeding, such as uncontrolled hypertension, medication predisposing for bleeding (such as aspirin), and excessive alcohol intake. ○ Rivaroxaban – take with food.	Ensure patient understands dose and frequency Ensure patient knows what to do if a dose is missed Calculate frequency of renal monitoring Has the next anticoagulant review consultation been scheduled?
1 month	U&Es CrCl LFTs FBC	○ Assess adherence to treatment. ○ Look for signs of bleeding or anaemia. ○ Ask about other potential adverse effects. ○ Ask about the use of other medications, including over-the-counter (OTC) products, to identify possible drug interactions with DOAC. ○ Assess and minimise modifiable risk factors for bleeding, such as uncontrolled hypertension, medication predisposing for bleeding (such as aspirin), and excessive alcohol intake. ○ Rivaroxaban – take with food.	Ensure patient knows what to do if a dose is missed Ensure patient understands dose and frequency Is the anticoagulant still suitable given the outcomes of the consultation? Is the dose still suitable given the outcomes of the consultation? Is the frequency of renal monitoring still appropriate? Has the next anticoagulant review consultation been scheduled?
3 months	*None needed unless physical/clinical decline suspected, acute illness or new medications started in interim*		
6 monthly (Age ≥75 and/or frail)	U&Es CrCl LFTs FBC Weight BP		
Annually (and/or if patient becomes acutely unwell)	CHA_2DS_2VASc HAS-BLED/ORBIT U&Es CrCl LFTs FBC Weight BP		

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[8] Medicines and Healthcare Regulatory Authority, "Direct-acting oral anticoagulants (DOACs): increased risk of recurrent thrombotic events in patients with antiphospholipid syndrome", June 2019 [Online]. Available: https://www.gov.uk/drug-safety-update/direct-acting-oral-anticoagulants-doacs-increased-risk-of-recurrent-thrombotic-events-in-patients-with-antiphospholipid-syndrome