NHS
Greater Glasgow and Clyde

CLINICAL GUIDELINE

GGC HEART MCN GUIDELINES FOR THE MANAGEMENT OF ATRIAL FIBRILLATION

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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OBJECTIVES

(1) Prevention of stroke
(2) Symptom relief
(3) Optimal management of concomitant cardiovascular disease
(4) Rate control
(5) Correction of rhythm disturbance

These goals are not mutually exclusive and the initial strategy may differ from the long-term therapeutic goal. For example, in patients with symptomatic AF lasting several weeks, initial therapy may be anticoagulation and rate control, while the long-term goal may be to restore sinus rhythm. Improvement of symptoms by rate control may lead to a decision not to restore sinus rhythm. However, if rate control provides inadequate symptomatic relief, then restoration of sinus rhythm becomes a long-term goal.

SUMMARY OF INITIAL MANAGEMENT IN PRIMARY CARE

Consider hospital admission in acute onset atrial fibrillation (AF) or rapid ventricular rate associated with chest pain, heart failure or hypotension.

Do not delay treatment while awaiting investigation. In most patients, decisions regarding anti-coagulant treatment and rate control drugs can be made on clinical grounds. Carry out a formal stroke risk assessment (see $CHADS_2$ below) to determine appropriate anti-thrombotic therapy and give a rate control drug (unless heart rate < 60 bpm).

ESSENTIAL INVESTIGATIONS

1. resting 12 lead ECG
2. thyroid function tests
3. echocardiogram
4. liver function tests

RATE CONTROL

None of the rate vs. rhythm trials demonstrated the expected benefit of rhythm control therapy on mortality. More patients are now treated with rate control only. The optimal level of rate control with respect to morbidity, mortality, quality of life and symptoms remains unknown but 'lenient' rate control is not associated with an increase in adverse cardiovascular events.

1. Target ventricular (apex or ECG) rate < 110 bpm. If still symptomatic, aim for lower rate < 80bpm.
2. Patients WITHOUT heart failure should be started on either:

- beta-blocker – start with bisoprolol 2.5mg daily or atenolol 25mg b.d. and up-titrate to bisoprolol 5mg daily or atenolol 50mg b.d. if ventricular rate still > 110 bpm. In frail elderly, consider starting dose for atenolol of 25mg once daily.

  OR

- rate-limiting calcium channel blocker (CCB) i.e. verapamil. Start with verapamil M/R 120mg daily and up-titrate to 240mg daily if ventricular rate still > 110 bpm.

  (DO NOT combine verapamil or diltiazem with beta-blocker)

- Digoxin has a limited role as first-line treatment for ventricular rate control. It is usually second line, in combination with beta-blocker or rate limiting CCB when control of ventricular rate is difficult.

3. For Patients WITH heart failure consider digoxin or beta blocker as appropriate and follow the NHSGGC Heart Failure guideline.

PATIENTS WHO SHOULD BE REFERRED FOR OUT PATIENT SPECIALIST ASSESSMENT

- symptomatic AF despite adequate rate control
- young age (< 60 years)
- inadequate ventricular rate control despite treatment with the combination of a beta-blocker and digoxin or rate-limiting CCB and digoxin, or if intolerant of these
- structural heart disease on echocardiogram
- AF and co-existing heart failure

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PREVENTION OF THROMBOEMBOLISM IN NON-VALVULAR AF (NVAF)

$CHADS_2$	Score
CHF	1
Hypertension	1
Age≥ 75	1
Diabetes mellitus	1
Stroke/TIA/thromboembolism	2

NON VALVULAR ATRIAL FIBRILLATION
(paroxysmal, persistent or permanent)

Determine risk of thromboembolism (use $CHADS_2$)

CHA_2DS_2-VASC	Score
CHF	1
Hypertension	1
Age≥ 75	2
Diabetes mellitus	1
Stroke/TIA/thromboembolism	2
Vascular disease (PVD, IHD)	1
Age 65-74	1
Female	1 **(only if other risk factors)**

$CHADS_2 \geq 2$

Consider warfarin or direct thrombin inhibitor or factor Xa inhibitor (NOAC) if no contraindications (see below)

$CHADS_2 = 0$ or 1 (then use CHA_2DS_2-VASC)

CHA_2DS_2-VASC = 0

No anti-thrombotic

CHA_2DS_2-VASC = 1

Consider warfarin or NOAC after discussion of risk and patient preference

CHA_2DS_2-VASC > 1

Warfarin or NOAC

Absolute contraindications to anticoagulant therapy (including new anticoagulants).

1. active bleeding
2. pregnancy
3. stroke < 14 days

Relative contraindications to anticoagulant therapy

1. significant bleeding risk e.g. active peptic ulcer or recent head injury
2. bleeding in the last six months
3. previous cerebral haemorrhage

Caution

1. recurrent falls e.g. Weekly
2. alcohol abuse

Choice of agent: NOAC vs. warfarin

Pros of NOACs

1. more stable anticoagulation
2. no requirement for anticoagulant monitoring
3. fewer food and drug interactions
4. fewer intracranial bleeds

Cons of NOACs

1. no specific antidote
2. more GI bleeding with dabigatran and rivaroxaban, especially in the elderly

Remember: NOACS are indicated only in those patients who have non-valvular AF; not those with mitral stenosis or a mechanical valve

Combined anticoagulant and anti-platelet therapy

Continued aspirin therapy is not indicated in patients with stable coronary artery disease who also have AF and are on an anticoagulant. After PCI, short term combined double or triple therapy is used according to cardiologist advice.

New anticoagulants (direct thrombin and Factor Xa inhibitors)

Apixaban 5mg twice daily
Dabigatran 150mg twice daily
Rivaroxaban 20mg once daily

Dose may need to be reduced in some patients who have either low body weight (≤ to 60kg), renal impairment or age > 80 years and another risk factor. Refer to Summary of Product Charactersistics or NHSGGC Guidance on Anticoagulant Choice on Patients with Non-Valvular AF.
http://www.ggcprescribing.org.uk/media/uploads/prescribing_resources/noac_guidance_-_1304.pdf

Use of rivaroxaban for the prevention of stroke and systemic embolism in patients with NVAF is restricted to:

- *those currently receiving warfarin who have poor INR control despite evidence that they are complying*
- *patients with allergy or intolerable side effects from coumarin anticoagulants*

- *patients for whom warfarin has been clinically excluded as a therapeutic option but anticoagulation is deemed safe and appropriate*

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