ATRIAL FIBRILLATION ALGORITHM

Cardiac and Stroke Networks in Lancashire & Cumbria

RATE OR RHYTHM CONTROL

ANTICOAGULATE?

<table>
<thead>
<tr>
<th>CHADS2 Score</th>
<th>Score</th>
<th>Stroke rate per 100 patient years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>Aspirin</td>
</tr>
<tr>
<td>Cardiac failure</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1</td>
<td>2.8</td>
</tr>
<tr>
<td>Age &gt; 75 yrs</td>
<td>1</td>
<td>4.0</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td>Stroke/TIA</td>
<td>2</td>
<td>8.5</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>18.2</td>
</tr>
</tbody>
</table>

Anticoagulation is recommended for those patients with CHADS2 score of 2 or more and should be considered for those with score of 1 otherwise prescribe aspirin. The two shouldn’t usually be prescribed together.

Consider rate control first for patients with persistent AF (1)
- With HR >90 (>110 if recent onset of AF)
- Who are older
- in whom anti-arrhythmic drugs are C/I
- unsuitable for cardioversion

*Prescribe rate controlling drug
  Beta-blocker
  Atenolol 25-100mg once daily
  Bisoprolol 2.5-10mg once daily

Rate Limiting Calcium-Channel Blocker
  Diltiazem SR 120-360mg daily
  Verapamil SR 120-360 mg daily

If further rate control needed add Digoxin
N.B. plasma concentration of digoxin is increased by Calcium channel blockers

Failure of rate control?

*Depending on local prescribing recommendations

Prescribe Warfarin
Target INR 2.5 (range 2-3)

Prescribe Aspirin 75mg/day if no CI
Re-assess annually

CI

If treatment decision complex

Refer to cardiologist (4)

Consider rhythm control first for patients with persistent AF
- Who are symptomatic
- Who are younger
- presenting for the first time with lone AF (2)
- with secondary AF (3)
- with heart failure (NICE)

If suspect recurrent paroxysmal AF

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Paroxysmal AF (Recurrent) Terminates spontaneously within 7 days and usually < 48 hours. Refer ALL cases to cardiology.

Persistent AF (Recurrent) Lasts >7 days, not self-terminating, requires electrical or pharmacological conversion.

Permanent AF (Established) No further cardioversion attempts.

Acute Presentation of AF
Immediate hospitalisation and urgent intervention is required for patients presenting with any of the following:
If onset of AF is known to be within 48hrs (for cardioversion)
A ventricular rate > 150 beats per minute
Ongoing chest pain
Significant cardiac failure or clinical signs of low cardiac output
Haemodynamic compromise e.g. systolic blood pressure < 90 mmHg
Pre-syncpe/syncope

Patients unsuitable for Cardioversion (1)
Contraindications to anticoagulation
Structural heart disease that precludes long term maintenance of sinus rhythm
A long duration of AF (Usually > 12 months)
A history of multiple failed attempts at cardioversion and/or relapses
An ongoing but reversible cause of AF (e.g. Thyrotoxicosis)

Causes of secondary AF include:
thyrotoxicosis
rheumatic heart disease
valve disease
hypertension
sick sinus syndrome
Wolff-Parkinson-White
cardiomyopathy
pulmonary embolism
electrolyte depletion
chest infection
lung carcinoma
pleural effusion

Indications for referral for Specialist opinion include: (4)
Paroxysmal atrial fibrillation
Heart failure
Failure of pharmacological therapy
Significant valvular disease
ECG evidence of any underlying electrophysiological disorder e.g. WPW

ECG - An ECG should be performed in ALL patients, whether symptomatic or not, in whom AF is suspected because an irregular pulse has been detected.

Investigations required – FBC, biochemical profile, TFT, consider CXR

Echocardiography should be performed...

If you are considering “rhythm control”

If you suspect underlying structural or functional heart disease that would influence management, such as choice of anti-arrhythmic drug.

Where needed to help with stratifying stroke risk for antithrombotic therapy, but only where clinical evidence is needed for LVD or valve disease

NB Echo is not required in the elderly if anti-coagulation therapy is indicated/decided and there are no signs of structural heart disease

Rate v Rhythm

Some patients with Persistent AF will satisfy criteria for either an initial rate-control or rhythm control strategy i.e. age > 65 but also symptomatic therefore the indications for each option should not be regarded as mutually exclusive, and the potential advantages and disadvantages of each strategy should be explained to patients before agreeing which to adopt.

Any co-morbidities that might indicate one approach rather than the other should be taken into account.

A greater attempt should be made to restore sinus rhythm in symptomatic patients

Lone AF (2) - This is defined as AF without overt structural heart disease and is confirmed only if there is no history of cardiovascular disease or hypertension, no abnormal cardiac signs on physical examination, a normal chest x-ray and, apart form the presence of AF, a normal ECG (i.e. no indication of prior Myocardial Infarction (MI) or LVD) or normal atria, valves and left ventricular size and function by echocardiography.