Management of Atrial Fibrillation

Diagnosis and Investigations

Diagnosis and investigations NICE 2014, CG180 Look for AF by OPPORTUNISTIC CASE FINDING Take the pulse in those with: o Breathlessness Palpitations Syncope/dizziness Chest discomfort Stroke/TIA. Do NOT screen asymptomatic populations (evidence shows no benefit). AF may also be detected as an incidental finding on clinical examination. Irregular pulse: AF suspected: do ECG If paroxysmal AF suspected: do a 24h ECG OR use an event recorder ECG in those who have infrequent episodes (less than daily). ECG confirms AF or flutter Patient education Stroke prevention/bleeding Rate/rhythm control Bloods? risk assessment Echo? Referral? · Bloods: NICE do not Ensure patient has up to Assess stroke risk using Rate control is treatment date information on AF CHA, DS, Vasc of choice for majority. recommend any blood including: tests. Most people would (preferred to CHADS₂) Rhythm control may be check FBC, renal and cause, effects, possible indicated if: AND thyroid function as a complications, management · AF with reversible cause Assess bleeding risk using minimum. (rate/rhythm control, stroke (e.g. pneumonia)? HAS-BLED. prevention) and support . Echo: do NOT routinely do · Heart failure thought to be

Echo

sites.

 Do NOT routinely do an echo if decision to initiate anticoagulation has already been made on clinical grounds (most of our patients).

caused mainly by AF?

don't define 'new', but

they are trying to identify

those with a good story

for recent onset, e.g. 'I

palpitations'.)

suddenly got these dreadful

· New onset AF? (NICE

echo. Do echo only if result

routine referral not needed.

Refer promptly if treatment

fails to control symptoms.

will change management

(see criteria below).

Referral to specialist:

· DO request echo if:

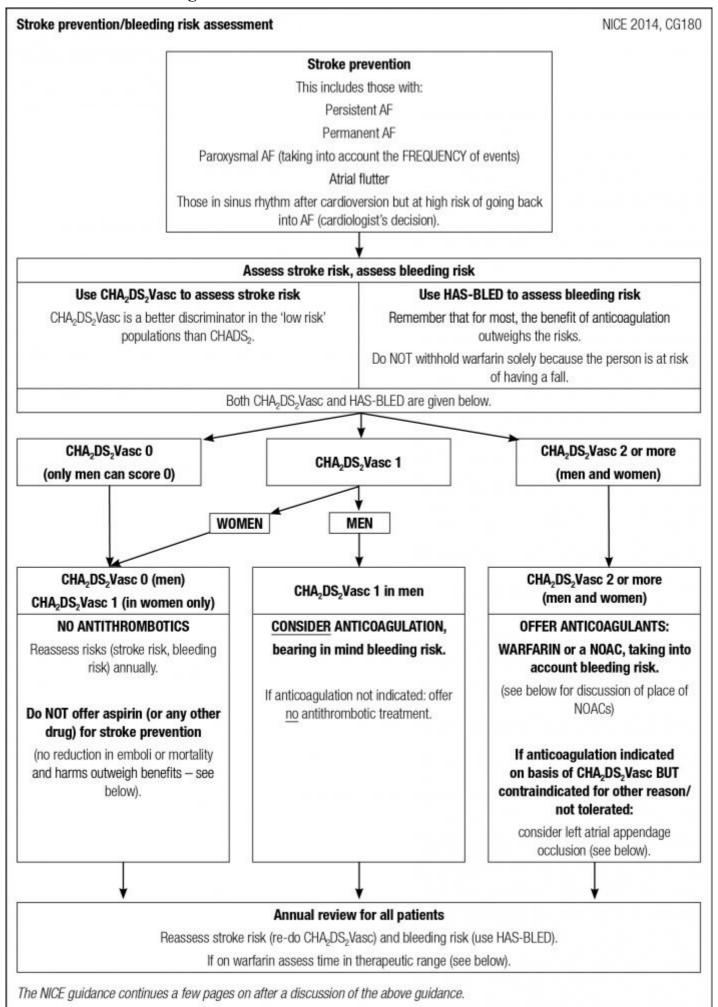
networks. See Useful websites

box for some useful patient

- Suspected underlying structural or functional heart disease (e.g. murmur, heart failure).
- Cardioversion planned (echo can indicate likelihood of success).
- Better stroke risk stratification for antithrombotic therapy is needed (for example, high risk of stroke but also high risk of bleeding).

Trans-oesophageal echo maybe used in specific situations: these would all be patients being seen by the cardiologists.

Stroke and bleeding Risk stratification



ASSESSING CHA2DS2Vas score			
Risk factor	CHA2DS2Vasc: maximum = 9	Interpretation	
Congestive cardiac failure	1	• Score 2 or more (men and	
Hypertension	1	• Score 2 or more (men and women): offer	
Age	1 if 65–74y 2 if ≥75y	anticoagulants. • Score 1 in men only:	
Diabetes	1	consider anticoagulants.	
Stroke/TIA (history of)	2	Score 1 in women only:	
Sex (female)	1	no antithrombotics.	
Vascular disease (MI, PAD, aortic plaques)	1	• Score 0 (men): no antithrombotics.	

Annual stroke risk by CHA2DS2Vasc score		
CHA2DS2Vasc	Annual stroke risk (%)	
0	0%	
1	1.3%	
2	2.2%	
3	3.2%	
4	4%	
5	6.7%	
6-9	9-15%	

HAS-BLED score identifies those at high risk of bleeding		
HAS-BLED Criteria: score 3 or more suggests high risk	Points: maximum = 9	
Hypertension – uncontrolled (SBP > 160)	1	
Abnormal renal function (on dialysis/transplant/Cr>200) and/or Abnormal liver function (defined as chronic hepatic disease (e.g. cirrhosis) or abnormal LFTs (e.g. bilirubin >2× upper limit of normal, AST/ALT/ALP >3× upper limit normal)	1 point for any renal abnormalities 1 point for any liver abnormalities	
Stroke	1	
Bleeding (PMH of bleeding problems/anaemia/bleeding tendency)	1	
Labile INRs (unstable INRs or INRs frequently not in therapeutic range)	1 Score 0 if never had warfarin	
Elderly (age >65y)	1	
Drugs (e.g. on aspirin/NSAIDs) or alcohol abuse (1 point each)	1 or 2	

Bleeding risk by HAS-BLED score		
HAS-BLED score	Annual bleeding risk (%)*	
0-1	1.1%	
2	1.9%	
3 or more	4.9%	

Rate or Rhythm?

Rate or rhythm control in AF? (NICE CG 180, 2014) The bottom line is this: rate control for most people! NB this section does NOT apply to paroxysmal AF Rate or rhythm control? . New onset AF? (NICE don't define 'new', but they are trying to identify those with a good story for recent onset, e.g. 'I suddenly got these dreadful palpitations'.) AF with reversible cause (e.g. pneumonia)? Heart failure thought to be caused primarily by AF? YES NO Rate control Rhythm control (the vast majority) (a minority) · Aim to keep pulse under 100. Refer for cardioversion: . Offer beta-blocker (any except sotalol) OR rate Electrical cardioversion preferred. However, amiodarone limiting calcium channel blocker (usually diltiazem) may be started before electrical cardioversion to help . Do NOT use digoxin UNLESS non-paroxysmal AF and maintain sinus rhythm once electrically cardioverted (started sedentary (very little or no exercise) - the BNF reminds us 4w before electrical cardioversion and continued for up to digoxin only controls ventricular rate at rest. 12m after cardioversion). · Do NOT use amiodarone Electrical cardioversion can be done either by standard NOTE: rate limiting calcium channel blockers are unlicensed means or using trans-oesophageal echo to guide but recommended by NICE. cardioversion. With standard cardioversion 4 w of INRs in the therapeutic range are required to ensure there is no thrombus, however, with a trans-oesophageal echo you If monotherapy ineffective try dual therapy: can check there is no thrombus in the heart, so prolonged Use 2 of the following together: anticoagulation is not needed. beta-blocker, diltiazem, digoxin. If dual therapy ineffective: If electrical cardioversion +/- amiodarone fails: refer. consider ablation. Rhythm control or ablation will be offered.

Rhythm control drugs (these will be initated by secondary care)

There are 4 main classes of anti-arrhythmics (from BNF 2014):

- Class 1c: flecainide, propafenone. (Class 1a (disopyramide) drugs rarely used in the UK.)
- Class 2: beta-blockers (but not sotalol, see below).
- Class 3: amiodarone, dronedarone, sotalol. NOTE: sotalol only has class 3 properties above 240mg/day. Below this dose (most are on lower doses) it acts like a standard beta-blocker, but lengthens QT interval and for this reason it is not a primary care drug
- Class 4: rate limiting calcium channel blockers (verapamil, diltiazem), NOT the non-rate limiting calcium channel blockers (the dihydropyridines amlodipine, nifedipine, etc.).

REMINDER: verapamil should not be used with beta-blockers (risk of hypotension and asystole) (very occasionally used in combination by cardiologists if good myocardial function) Verapamil and diltiazem depress myocardial function and should not be used in heart failure.

Consider referral for Left atrial appendage occlusion if anticoag is contraindicated/other treatments have failed

Management of paroxysmal AF

Paroxysmal AF

Stroke prevention:

assess as for all with AF: use CHA2DS2Vasc and HASBLED

(see 'Stroke and bleeding risk stratification' flow diagram (above), taking into account FREQUENCY of episodes — the more frequent, the higher the risk, but remember that some episodes may also be silent).

Usually would refer: treatment decisions usually made in secondary care

Infrequent but symptomatic paroxysms, especially if known precipitants (caffeine, alcohol)

AND

no history of left ventricular dysfunction, valve disease or IHD

AND

systolic BP >100

AND

resting heart rate >70bpm.

NO

YES to all of the above

Long term rhythm control: to hold in sinus rhythm

(this will be the majority)

Use beta-blocker (not sotalol) (unless contraindicated).

If beta-blockers don't work or are contraindicated the following may be used:

- Amidoarone (if heart failure/LV impairment).
- Sotalol, at doses that give class 3 antiarrhythmic effect, (care in renal failure or if low BMI).
- If structural heart disease: do NOT use class 1 antiarrhythmic such as flecainide or propafenone.
- · There is almost no role for digoxin.

If the above fail/can't be used consider: dronedarone or left atrial appendage occlusion.

Dronedarone is very definitely a secondary care drug! NICE set strict criteria for use in 2010 (NICE 2010, TA197).

The MHRA also highlighted concerns about the cardiovascular risks, concerns about hepatotoxicity and the risk of pulmonary fibrosis. Regular cardiac, renal and hepatic function monitoring is required (Drug Safety Update 2011;5:3).

Try 'pill in the pocket': to abort AF when it occurs

(this will be a minority)

The patient takes a one-off oral dose of an antiarrhythmic to abort the attack (e.g. flecainide).

Suitable for those on no or low maintenance doses of antiarrhythmic.

Aim is to abort the attack with a single dose of antiarrhythmic, without further treatment/admission.

Secondary care decision.

Evidence for 'pill in the pocket'?

A trial of 212 people with mild symptoms and <12 attacks/ year of paroxysmal AF were given either flecainide or propafenone to self-administer during an attack (BMJ 2007;334:637):

The results showed:

- No reduction in the number of attacks.
- Statistically significant drops in rates of A&E visits (from 45.6/month to 4.9/month).
- Statistically significant reduction in hospital admissions (from 15/month to 1.6/month).

A significant benefit to patients and cost saving for the NHS.