

PRIMARY CARE MANAGEMENT GUIDELINES

Atrial Fibrillation

DATE & VERSION: 25 August 2004, 11:54.14
Atrial Fibrillation, as confirmed with an electro-cardiogram.

NATIONAL GUIDELINE

DISTRICT HEALTH BOARD: National

CLINICAL PROBLEM (Clinical Determinants)	ACTIONS	LOCAL IMPLEMENTATION REQUIREMENTS
SYMPTOMATIC		
Haemodynamic compromise, dyspnoea, chest pain, near syncope, hypotension OR Heart rate >140 OR Acute systemic illness	— Acute referral	— Acute General Medical Team on call [or cardiology team, depends on DHB preferences]
DURATION <36 HOURS (CLEAR HISTORY)		
AND possible candidate for cardioversion ¹	— Acute referral	— Acute General Medical Team on call [or cardiology team, depends on DHB preferences]
Not candidate for cardioversion	— Manage as below	—
DURATION >36 HOURS		
All patients	<ol style="list-style-type: none"> Rate control Aim for resting Heart Rate 50-80; with gentle exercise Heart Rate 80-110² Any of: <ul style="list-style-type: none"> ○ Metoprolol CR 23.75-190 mg daily ○ OR Atenolol 25-100 mg daily ○ OR Diltiazem CD 120-360 mg once daily ○ OR Diltiazem SR 90-180 mg twice daily ○ OR Verapamil SR 120-360 mg daily ○ Add Digoxin if necessary to achieve desired rate (0.0625-0.25 mg daily according to levels)³ Anticoagulate unless contraindicated. International Normalized Ratio (INR) range 2.0-3.0 (except in elderly or patients with prosthetic heart valves)⁴ Refer to specialist (for further investigations and management e.g. consideration of anti-arrhythmics, DC cardioversion)⁵ 	[Local cardiology or specialist access detail/fax number] [DHB or hospital to specify if echo prior to cardiology clinic]
LONE ATRIAL FIBRILLATION I.E. NO RISK FACTORS,⁶ OR ABNORMALITIES ON ECHOCARDIOGRAM		
All patients	— Stop anticoagulation	—
PAROXYSMAL ATRIAL FIBRILLATION		
Very occasional (e.g. 1-2 episodes per year, duration less than 6 hours)	— No need for treatment (anticoagulation or rate control)	—
More frequent episodes	— Treat as for Atrial Fibrillation >36 hours	— [Cardiology clinic fax number] [Echo prior to referral if local availability and preference]
Uncertain frequency	— Refer to Specialist	— [Local cardiology or specialist access detail/fax number] [DHB or hospital to specify if echo prior to cardiology clinic]

SEE NOTES ON REVERSE >>>

NOTES:

1. Cardioversion should be considered particularly in patients with persistent atrial fibrillation (AF) caused by a reversible cause (e.g. hyperthyroidism), patients who remain significantly symptomatic despite rate control, patients who cannot safely take warfarin in the long term (would need to at least for several weeks), where sinus rhythm is important for physiological reasons e.g. aortic and mitral stenosis, left ventricular hypertrophy, hypertrophic cardiomyopathy, diastolic dysfunction i.e. when the atrial kick is really needed, and probably younger patients.
2. Rate should be assessed at the apex with a stethoscope (or by ECG) at rest and after gentle exercise (e.g. walking 20-30 m around office). Uncontrolled heart rate can lead to a rate-related cardiomyopathy.
3. Digoxin should be used first line in patients with AF and heart failure with left ventricular systolic dysfunction. Clinical trials suggest that a combination of beta-blocker and digoxin is the most effective rate-controlling combination. If loading is required to rapidly reduce rate consider 0.25 mg every 6 hours for 3-4 doses. Aim for the lower half of the therapeutic range of digoxin unless rate control is a problem.
4. A meta-analysis shows that warfarin reduces stroke relative risk by 70-80%, as opposed to 20% by aspirin (benefit of aspirin has only been demonstrated in doses 300-325 mg daily, not less than this).
 - Aggressive warfarin loading is not required, e.g. a 5, 5, loading regimen could be considered
 - Clinical trials excluded patients with increased bleeding risk (see below)

Contraindications: Excessive alcohol consumption, previous major bleed e.g. haemorrhagic stroke, gastrointestinal bleed, bleeding diathesis, active peptic ulcer disease, recurrent falls/syncope. Frequently being frail or poor compliance are contraindications to anticoagulation. If there is concern about the relative risks and benefit of anticoagulation it is reasonable to phone for a specialist opinion re: aspirin 300 mg daily alone or no treatment at all.

Some patients with prosthetic heart valves require higher intensity anticoagulation.

If age over 75, aim for lower end of range (2.0-2.5). The recent ACC/AHA/ESC atrial fibrillation guidelines have added as a class IIb guideline in patients older than 75, where there is an increased risk of bleeding but not a frank contraindication, to anticoagulate with a lower target 2.0 (range 1.6-2.5). There is no clinical trial evidence supportive of this recommendation and it is based on opinion only.

5.
 - a. Recent trials show no significant difference in quality of life or hard clinical outcomes between a strategy of attempted maintenance of sinus rhythm (MOSR) versus rate control and anticoagulation.
 - b. Anti-arrhythmic therapy should generally be initiated in hospital or from specialist clinics. The risk/benefit ratio is often difficult to judge and it is the significantly symptomatic patient or the patient who physiologically 'needs' to be in sinus rhythm who gains the most benefit.
 - c. There is no difference in the risk of stroke with chemical or DC cardioversion; therefore, unless the duration of AF is less than 48 hours, there should be 1 month anticoagulation (or trans-oesophageal echo to exclude thrombus) before attempted outpatient chemical cardioversion with anti-arrhythmic drugs.
 - d. Amiodarone is relatively safe (low risk of pro-arrhythmia) to start in an outpatient setting and it is reasonable to do so on phone advice from a Cardiologist or Physician. It has a moderate efficacy for cardioversion with oral loading. It is also a very effective rate-controlling drug and the most effective drug for MOSR after cardioversion or with paroxysmal AF. Patients on long-term amiodarone should generally be under specialist supervision because of the significant risk of long-term side effects. Amiodarone interacts with warfarin at an unpredictable time to increase the INR. Amiodarone also increases digoxin levels.
 - e. In a normal size patient with normal renal function sotalol 40-80 mg twice daily acts predominantly as a beta-blocker (i.e. no more efficacy than a standard beta-blocker) and has significant class III (anti-arrhythmic) effect only at a dose of 120 mg twice daily. At the dose of 120-160 mg twice daily there is about a 1% risk of serious pro-arrhythmia (torsade de pointes) and ECGs should be undertaken to assess the QT interval. This risk is increased with LVH (septum \geq 1.4 cm). Sotalol does not cardiovert AF but is often effective at MOSR after cardioversion or with paroxysmal AF. Sotalol should NOT be used in the presence of renal impairment.
 - f. In patients with normal LV function and no evidence of coronary artery disease (normal Exercise Tolerance Test if age $>$ 40) class 1c drugs e.g. flecainide / propafenone (usually in combination with an AV nodal blocking drug) may be considered as first choice for MOSR. Serial ECGs and drug levels are required.
6. Risk factors for thromboembolism indicating anticoagulation:

● Patient older than 65	● Rheumatic valve disease
● Hypertension	● Prosthetic heart valves
● LV dysfunction or CHF	● Hypertrophic cardiomyopathy
● Diabetes	● Sinus node dysfunction / pacemaker
● Coronary artery disease	● Thyrotoxicosis
● LA enlargement	● Alcohol excess

REFERRAL LETTER INFORMATION

- Demographics
- Critical determinants leading to referral

ADDITIONAL INFORMATION

The Elective Services Cardiology National Referral Guidelines & Clinical Assessment Criteria and the Atrial Fibrillation guidelines can be found at: www.electiveservices.govt.nz

REFERENCES

Fuster V, et al. ACC/AHA/ESC guidelines for the management of patients with atrial fibrillation: executive summary. A Report of the American College of Cardiology/ American Heart Association Task Force on Practice Guidelines and the European Society of Cardiology Committee for Practice Guidelines and Policy Conferences (Committee to Develop Guidelines for the Management of Patients with Atrial Fibrillation): developed in Collaboration with the North American Society of Pacing and Electrophysiology. *J Am Coll Cardiol* 2001;**38**:1231-66.

This management guideline has been prepared to provide general guidance with respect to a specific clinical condition. It should be used only as an aid for clinical decision making and in conjunction with other information available. The material has been assembled by a group of primary care practitioners and specialists in the field. Where evidence based information is available, it has been utilised by the group. In the absence of evidence based information, the guideline consists of a consensus view of current, generally accepted clinical practice.