

Arrhythmia Management Guidelines

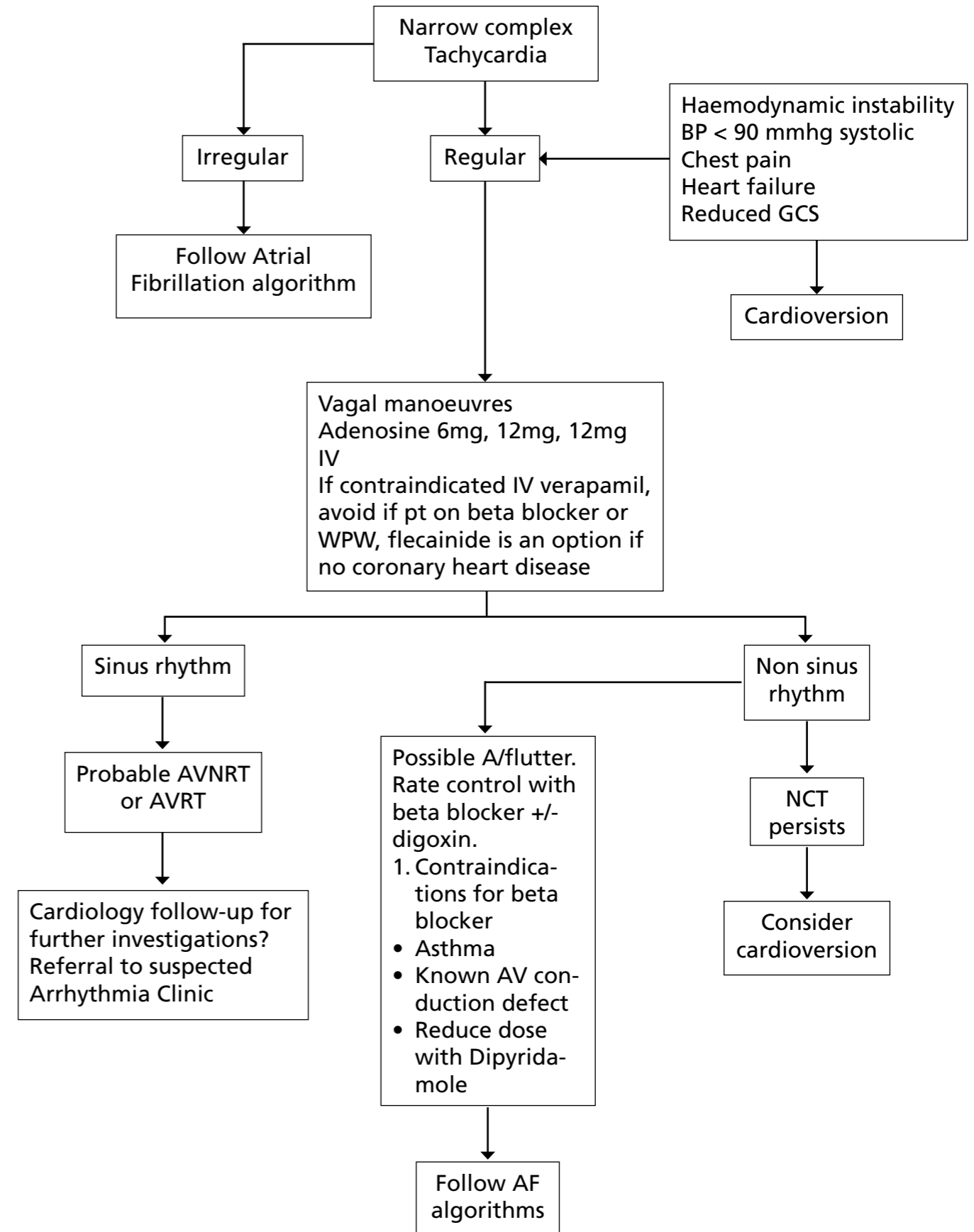
Subject	Arrhythmia Guidelines
Persons responsible for implementation and review	Dr. J. Pidgeon Consultant Cardiologist Andy Lapper Arrhythmia Nurse
Date of review	June 07

The following algorithms are based on current NICE and UK Resuscitation Council guidelines.

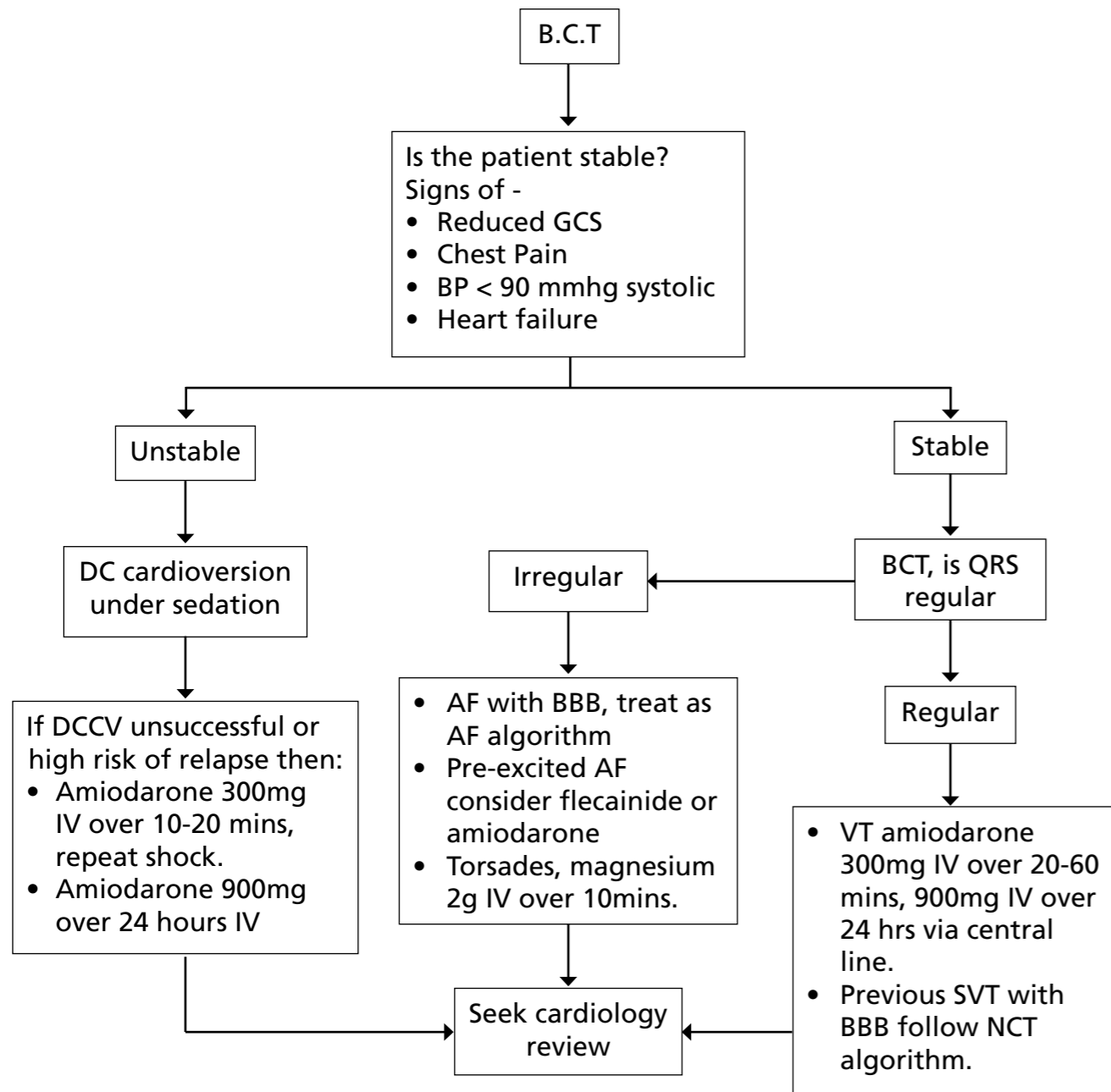
Abbreviations:-

- AF - Atrial Fibrillation
- GCS - Glasgow Coma Scale
- CAD - Coronary Artery Disease
- LVD - Left Ventricular Dysfunction
- WPW - Wolff-Parkinson-White Syndrome
- CV - Cardioversion
- SRSA - Stroke Risk Stratification Algorithm
- LA - Left Atrium
- LVH - Left Ventricular Hypertrophy
- BCT - Broad Complex Tachycardia
- VT - Ventricular Tachycardia
- SVT - Supra Ventricular Tachycardia
- BBB - Bundle Branch Block
- NCT - Narrow Complex Tachycardia
- AVNRT - Atrio-ventricular Nodal Re-entry Tachycardia
- AVRT - Atrio-ventricular Re-entry Tachycardia

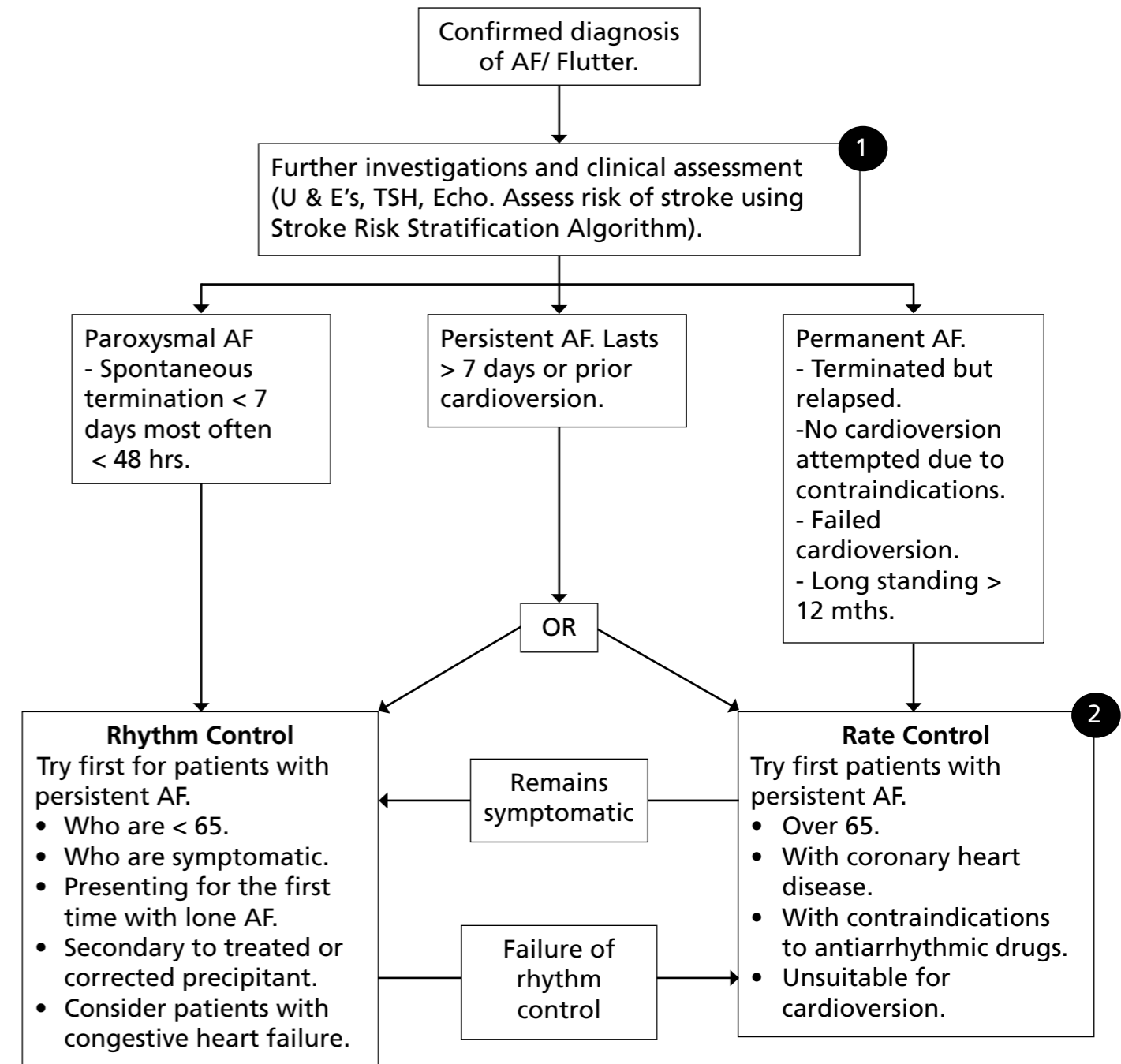
Treatment Algorithm for Narrow Complex Tachycardia



Treatment Algorithm for Broad Complex Tachycardia



Decision Algorithm for Atrial Fibrillation

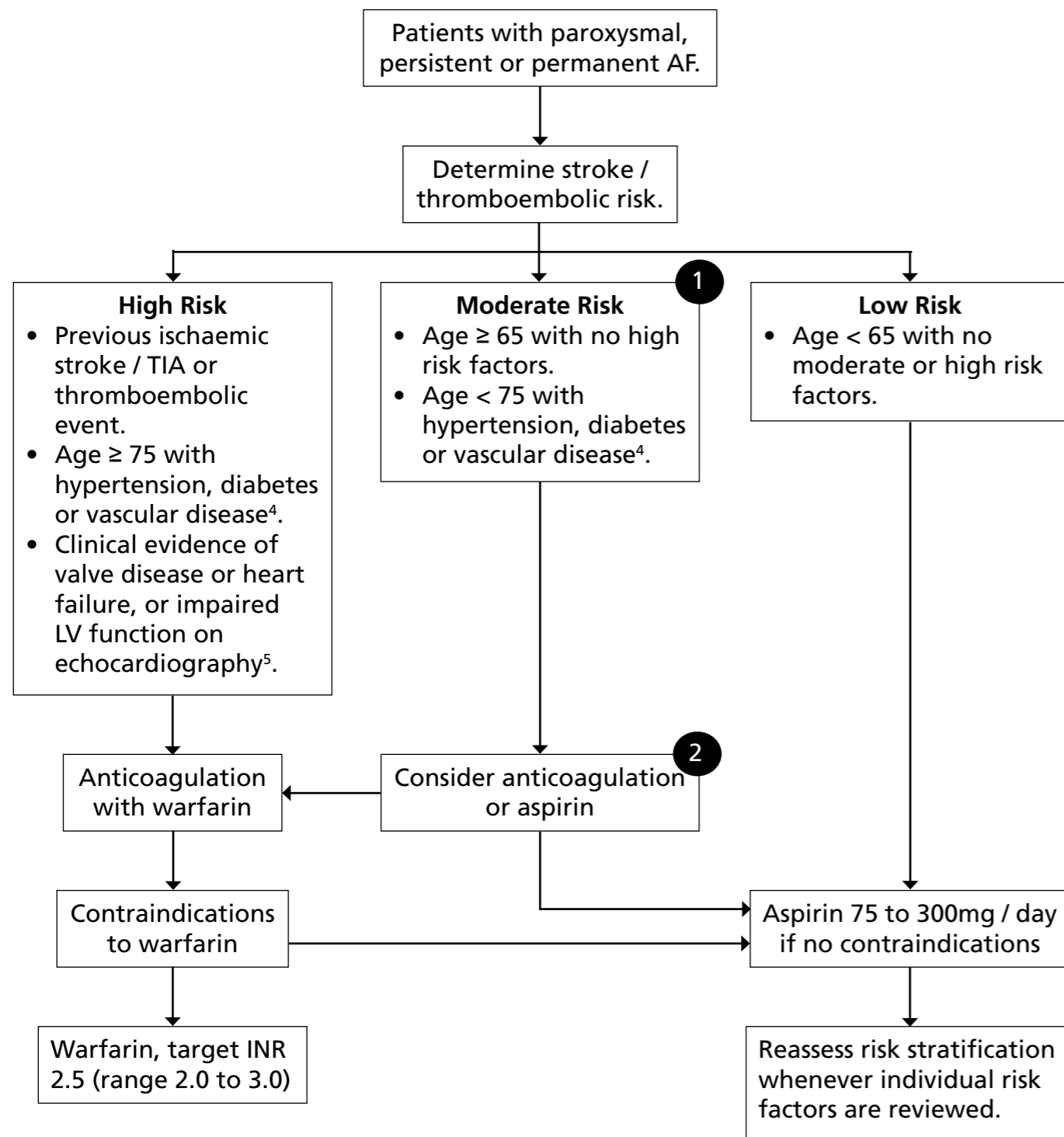


1. Where this may influence management, e.g. to refine risk stratification for:

- Moderate / severe LVSD
- Valve disease
- When cardioversion is considered

2. Unsuitable for cardioversion. Contraindications to anticoagulation, left atrium > 5.5cm or significant mitral valve disease, AF duration greater than 12 mths, multiple failed CV attempts despite antiarrhythmic drugs, ongoing reversible cause e.g. hyperthyroid.

Stroke Risk Stratification and Thromboprophylaxis

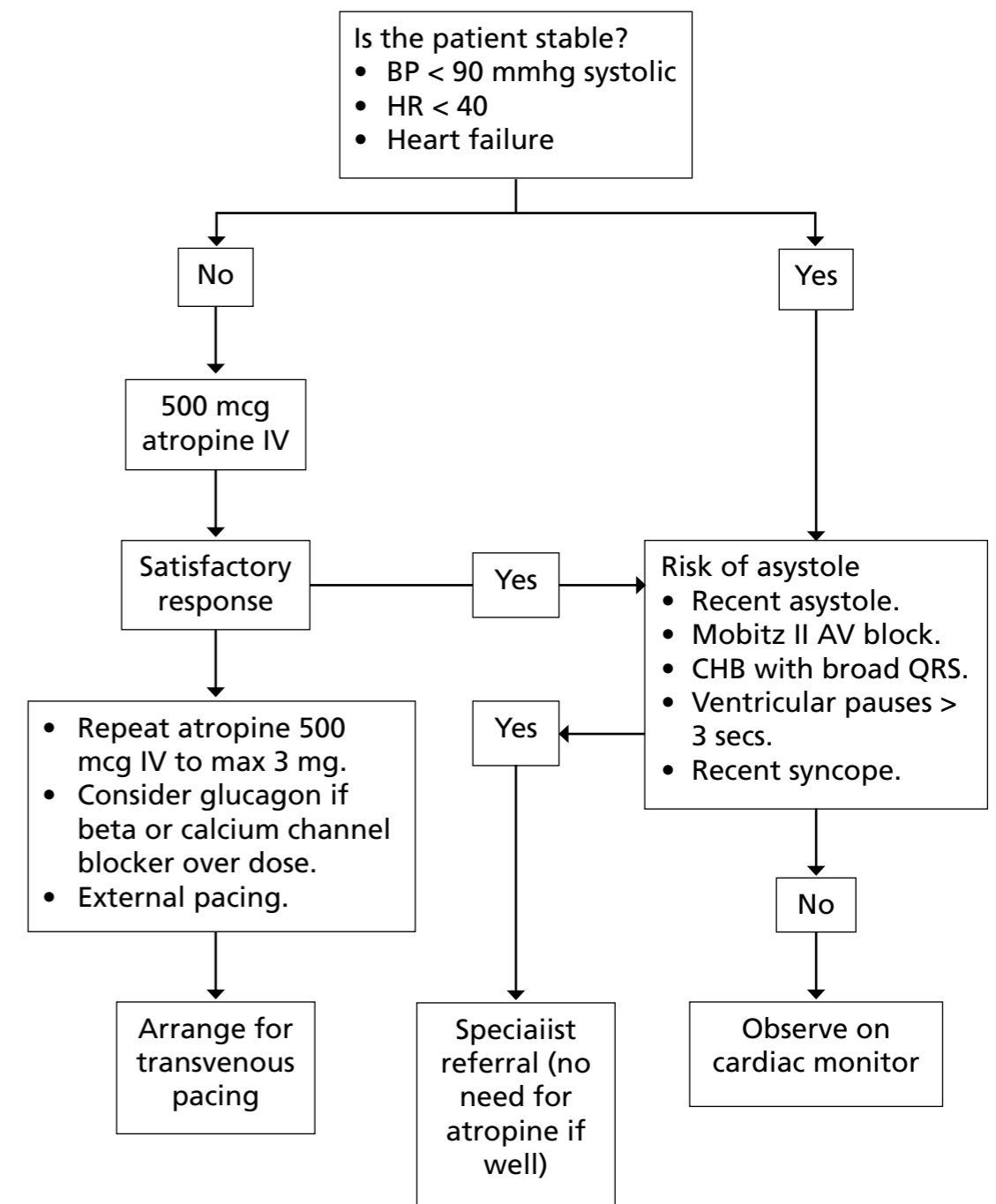


1. Note that risk factors are not mutually exclusive, and are additive to each other in producing a composite risk. Since the incidence of stroke and thromboembolic events in patients with thyrotoxicosis appears similar to that in patients with other aetiologies of AF, antithrombotic treatments should be chosen based on the presence of validated stroke risk factors.
2. Owing to lack of sufficient clear-cut evidence, treatment may be decided on an individual basis, and the physician must balance the risks and benefits of warfarin versus aspirin. As stroke risk factors are cumulative, warfarin may, for example, be used in the presence of two or more moderate stroke risk factors. Referral and echocardiography may help in cases of uncertainty.

⁴Coronary artery disease or peripheral artery disease.

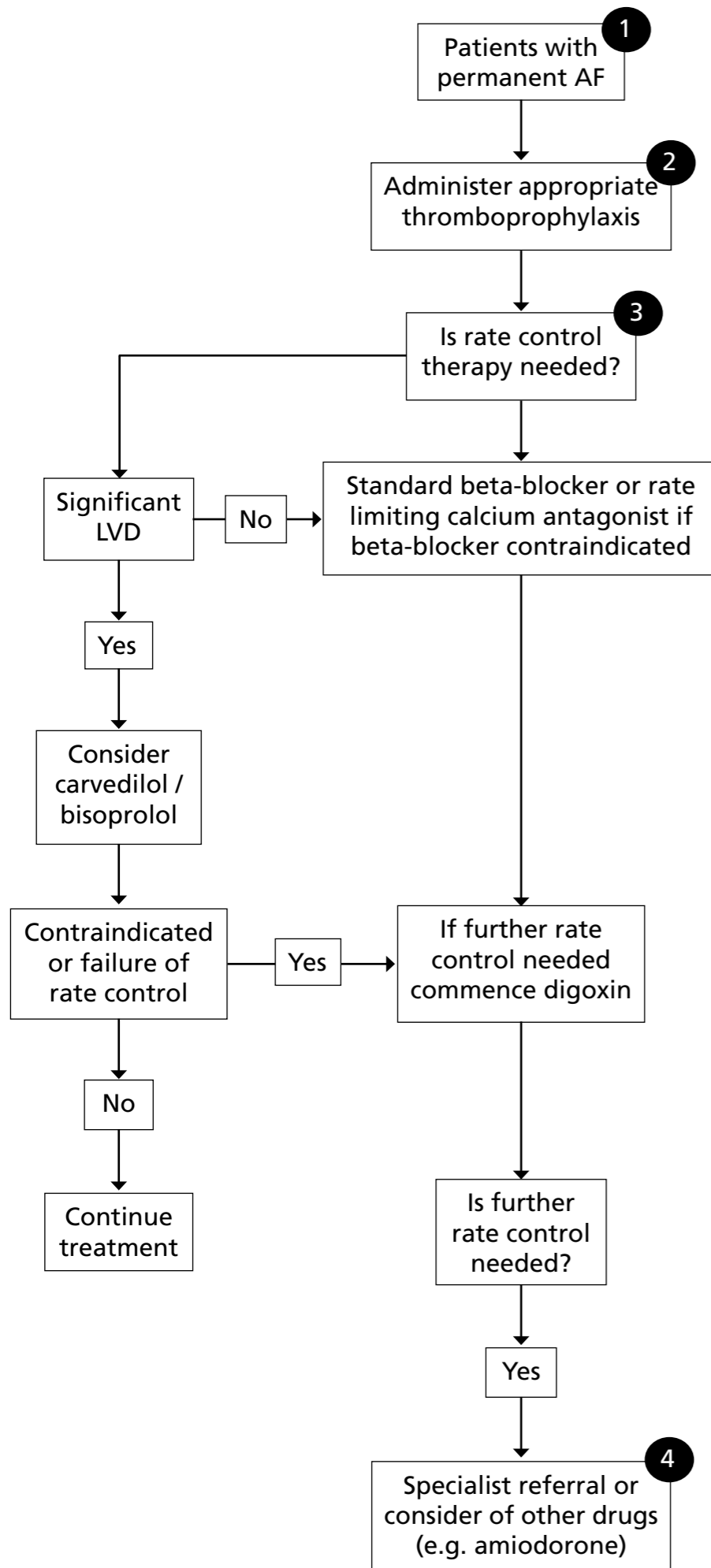
⁵An echocardiogram is not needed for routine assessment, but refines clinical risk stratification in the case of moderate or severe LV dysfunction and valve disease.

Treatment Algorithm for Bradycardia



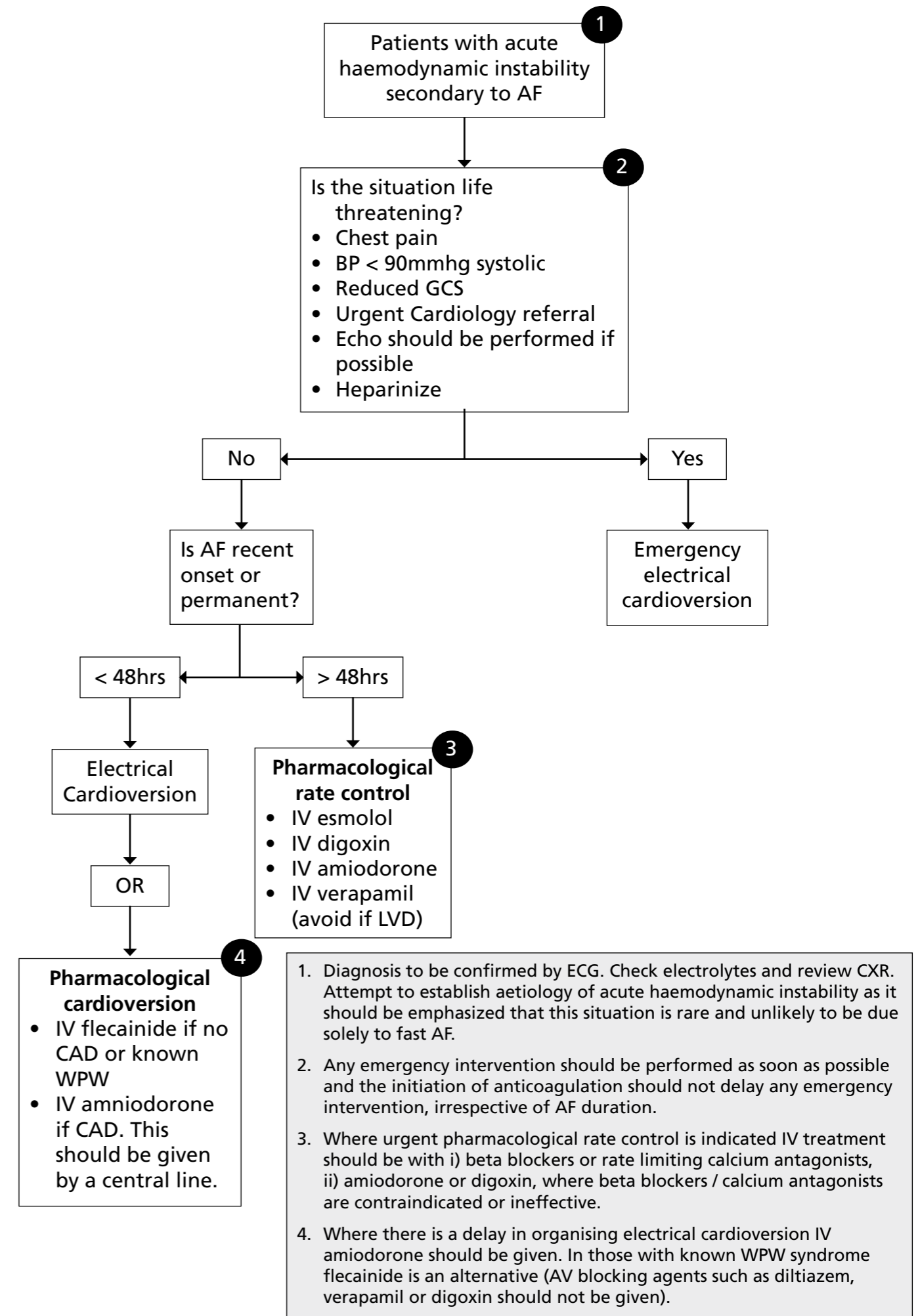
- Consider cause of bradycardia**
- Recent MI
 - Recent limiting medication, beta blockers / Ca blockers-stop
 - Hypothyroidism

Rate control treatment algorithm for permanent Atrial Fibrillation



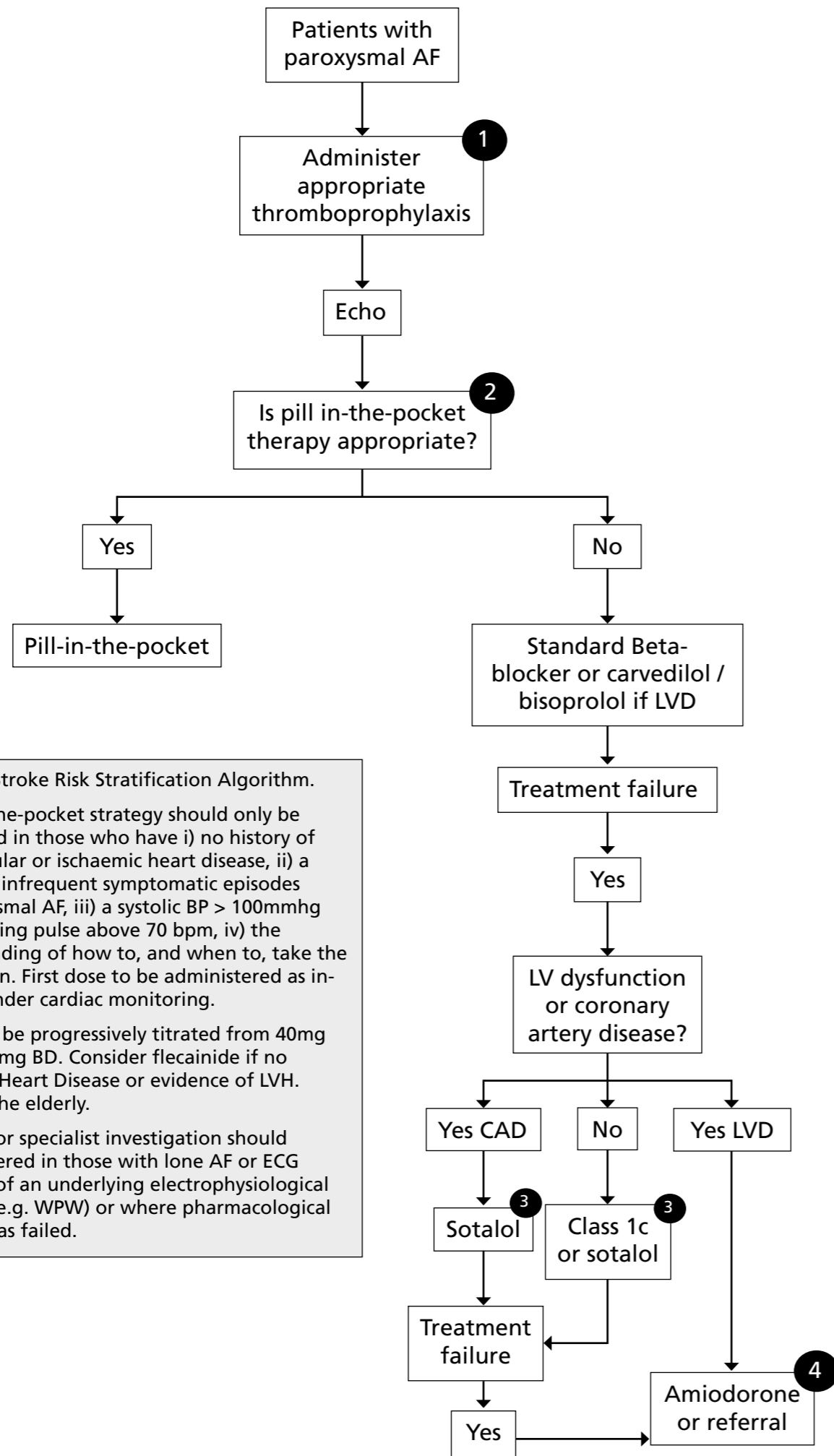
1. Patients with permanent AF (includes those with persistent AF who have been selected for rate control treatment strategy).
2. Based on Stroke Risk Stratification Algorithm.
3. Target a resting heart rate < 80 bpm. (110 bpm for those with recent onset AF). Target exercise heart rate less than 110 bpm (inactive), 200 minus age (active).
4. Referral for further specialist investigation should be considered in those with lone AF or ECG evidence of an electrophysiological disorder (e.g. WPW) or where pharmacological therapy has failed.

Haemodynamically Unstable AF Treatment Algorithm



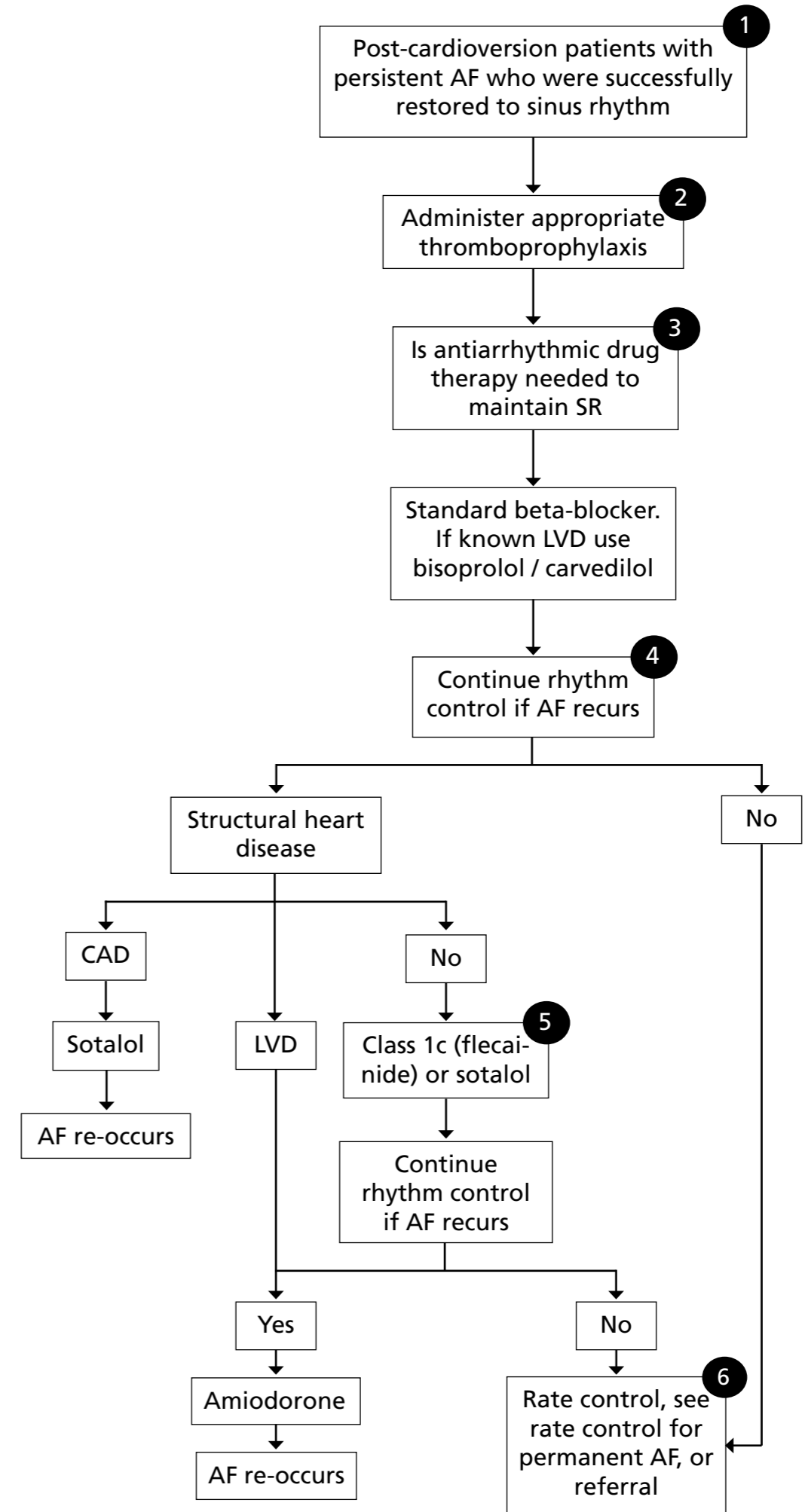
1. Diagnosis to be confirmed by ECG. Check electrolytes and review CXR. Attempt to establish aetiology of acute haemodynamic instability as it should be emphasized that this situation is rare and unlikely to be due solely to fast AF.
2. Any emergency intervention should be performed as soon as possible and the initiation of anticoagulation should not delay any emergency intervention, irrespective of AF duration.
3. Where urgent pharmacological rate control is indicated IV treatment should be with i) beta blockers or rate limiting calcium antagonists, ii) amiodorone or digoxin, where beta blockers / calcium antagonists are contraindicated or ineffective.
4. Where there is a delay in organising electrical cardioversion IV amiodorone should be given. In those with known WPW syndrome flecainide is an alternative (AV blocking agents such as diltiazem, verapamil or digoxin should not be given).

Rhythm Control Treatment Algorithm For Paroxysmal Atrial Fibrillation



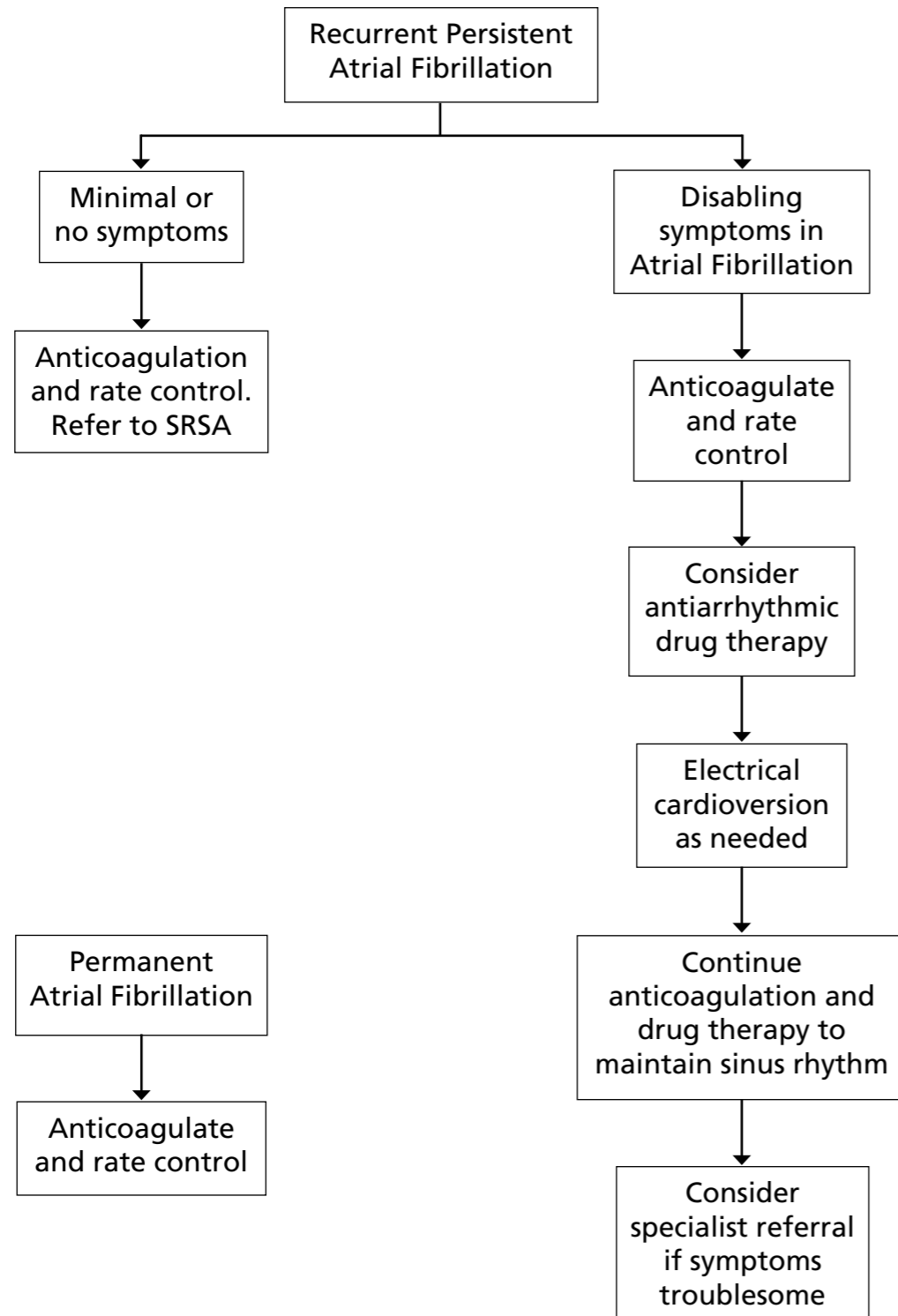
1. Based on Stroke Risk Stratification Algorithm.
2. A pill-in-the-pocket strategy should only be considered in those who have i) no history of LVD, valvular or ischaemic heart disease, ii) a history of infrequent symptomatic episodes of paroxysmal AF, iii) a systolic BP > 100mmhg and a resting pulse above 70 bpm, iv) the understanding of how to, and when to, take the medication. First dose to be administered as in-patient under cardiac monitoring.
3. Sotalol to be progressively titrated from 40mg BD to 240mg BD. Consider flecainide if no Coronary Heart Disease or evidence of LVH. Avoid in the elderly.
4. Referral for specialist investigation should be considered in those with lone AF or ECG evidence of an underlying electrophysiological disorder (e.g. WPW) or where pharmacological therapy has failed.

Rhythm Control Treatment Algorithm for Persistent Atrial Fibrillation Post DCCV



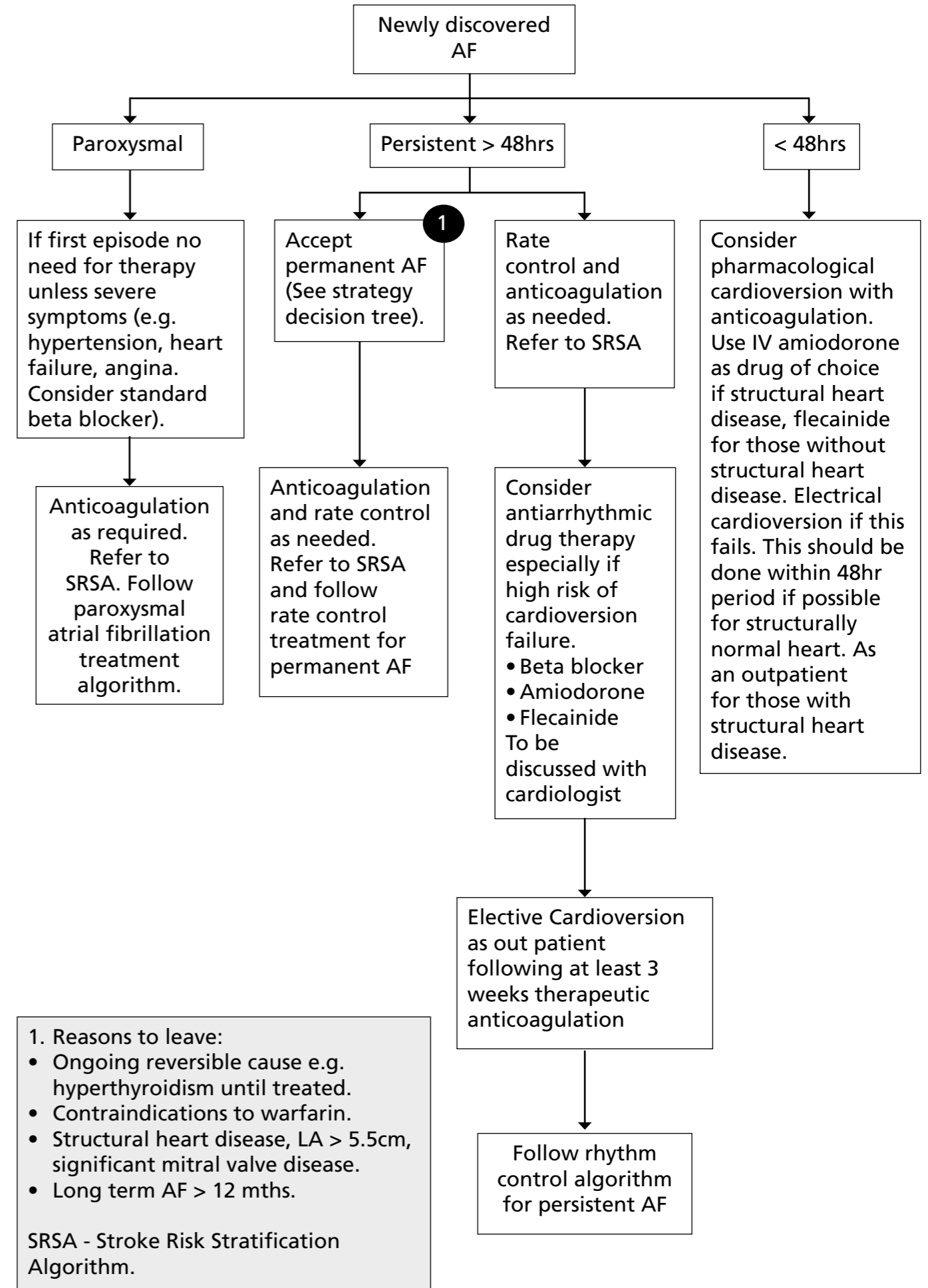
1. Patients with persistent AF who have been selected for rhythm control treatment strategy.
2. Based on Stroke Risk stratification Algorithm and Cardioversion treatment algorithm.
3. An antiarrhythmic drug is not required to maintain sinus rhythm for those patients for whom a precipitant (e.g. chest infection, hyperthyroidism) has been corrected and cardioversion has been performed successfully providing there are no risk factors for recurrence.
4. Routine follow-up assess the maintenance of sinus rhythm should take place at 1 and 6 months post cardioversion. Any patients found at follow-up to have relapsed back into AF should be fully re-evaluated for a rate or rhythm control strategy.
5. Sotalol to be progressively titrated from 80mg BD up to 240mg BD. Flecainide is an alternative if no coronary artery disease.
6. Referral for further specialist investigations should be considered in those with lone AF or ECG evidence of an underlying electrophysiological disorder (e.g. WPW) or where pharmacological therapy has failed.

Treatment Algorithm For Recurrent Persistent Atrial Fibrillation



SRSA - Stroke Risk Stratification Algorithm

Treatment Algorithm For Newly Discovered Atrial Fibrillation

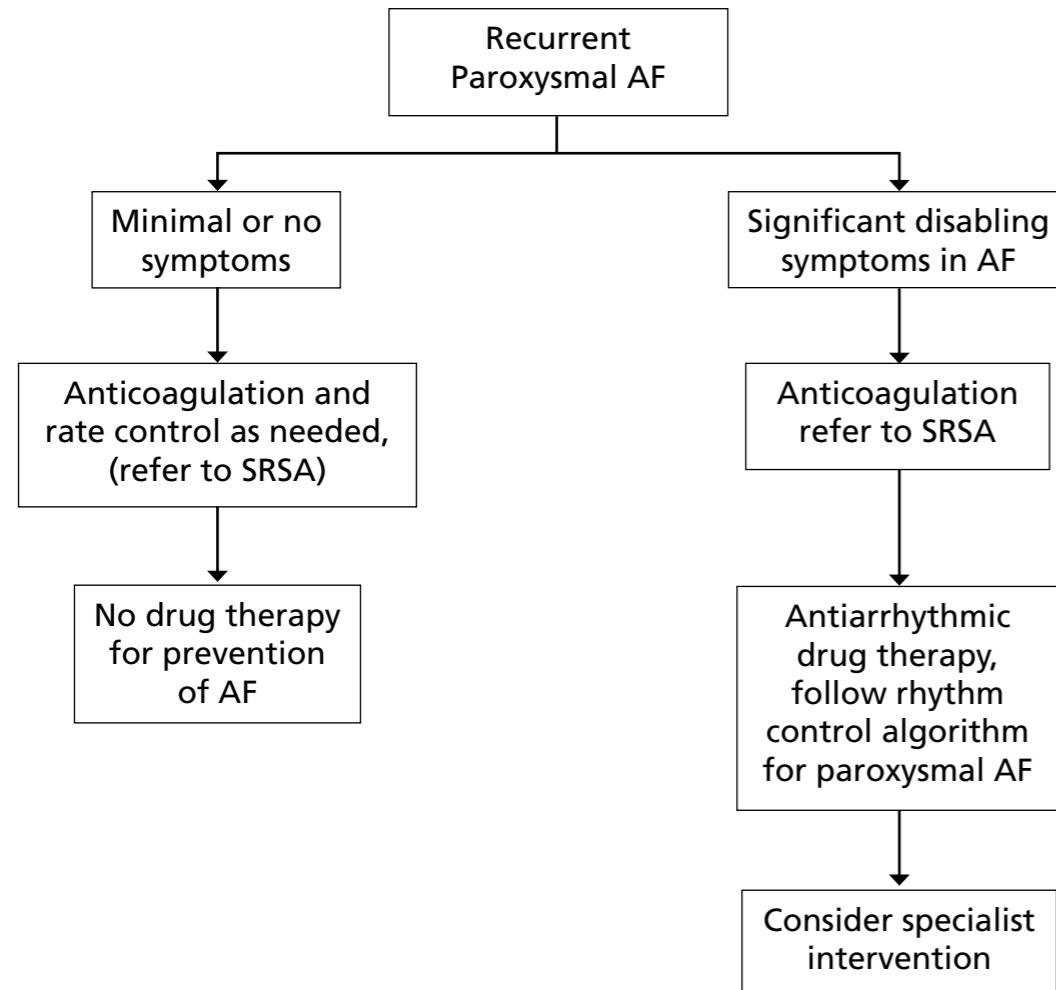


1. Reasons to leave:

- Ongoing reversible cause e.g. hyperthyroidism until treated.
- Contraindications to warfarin.
- Structural heart disease, LA > 5.5cm, significant mitral valve disease.
- Long term AF > 12 mths.

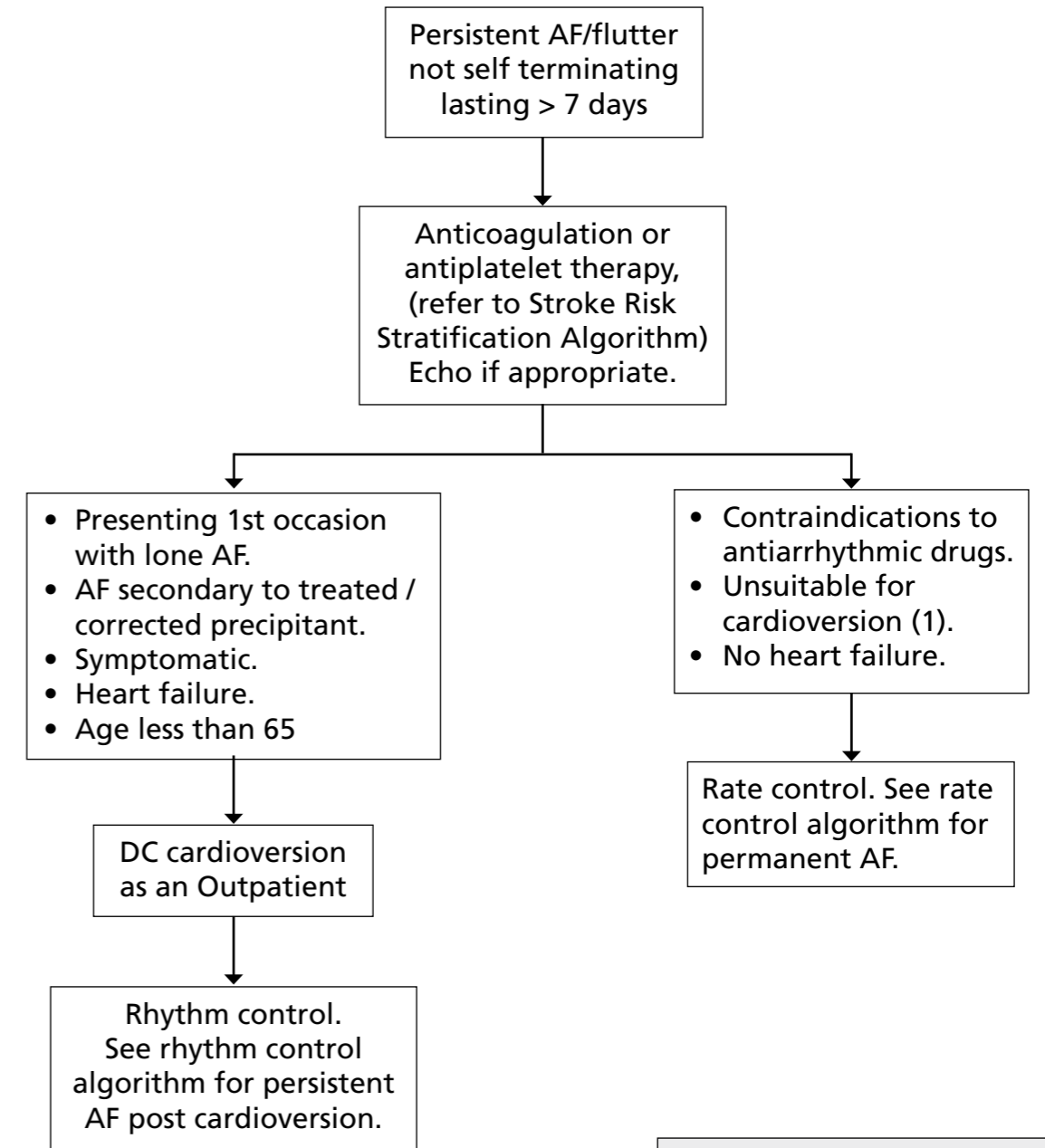
SRSA - Stroke Risk Stratification Algorithm.

Treatment Algorithm For Recurrent Paroxysmal Atrial Fibrillation



SRSA - Stroke Risk Stratification Algorithm

Treatment Algorithm For Persistent Atrial Fibrillation / Flutter



1. Ongoing reversible cause e.g. hyperthyroid.
 • Failed multiple cardioversions.
 • Contraindications to anticoagulation.
 • Structural heart disease, LA > 5.5cm, mitral valve disease.
 • Long term AF > 12mths.