Algorithm for Cardioversion of AF

Cardiovascular System

Start SC enoxaparin 1 mg/kg twice daily
(Unless active bleeding or high risk of bleeding - consult senior before withholding)

Haemodynamic compromise?
Adverse signs are pallor, sweating, cold clammy extremities, impaired consciousness, systolic < 90 mmHg, pulmonary oedema, raised JVP.

YES

Consult senior

NO

Oxygen and monitoring as tachyarrhythmia
(tachy algorithm link)

DC cardioversion

Maintenance of sinus rhythm with amiodarone

Deal with precipitants
- Infection
- Alcohol
- Hyperthyroidism
- Heart Failure

Perform Echo – Excludes mitral stenosis, gives structural and functional assessment of heart (e.g. whether LV systolic dysfunction/ hypertrophy) i.e. helps identify need for warfarin.

N.B. Investigation should not delay treatment to slow the ventricular rate and reduce the risk of thrombo-embolism.

See AF guideline page 113 for guidance on warfarin.

See page 81 for initial dosing schedule.

Consult senior

Chemical cardioversion

IV amiodarone
(see dose guideline page 115)

Chemical cardioversion failed?

Onset > 48 hours

Onset < 48 hours

Consult senior at once re urgent DC cardioversion

Aim for rate control (apex < 80 bpm)
Digoxin for rapid control (if required)
otherwise
Beta-blocker (bisoprolol) *or*
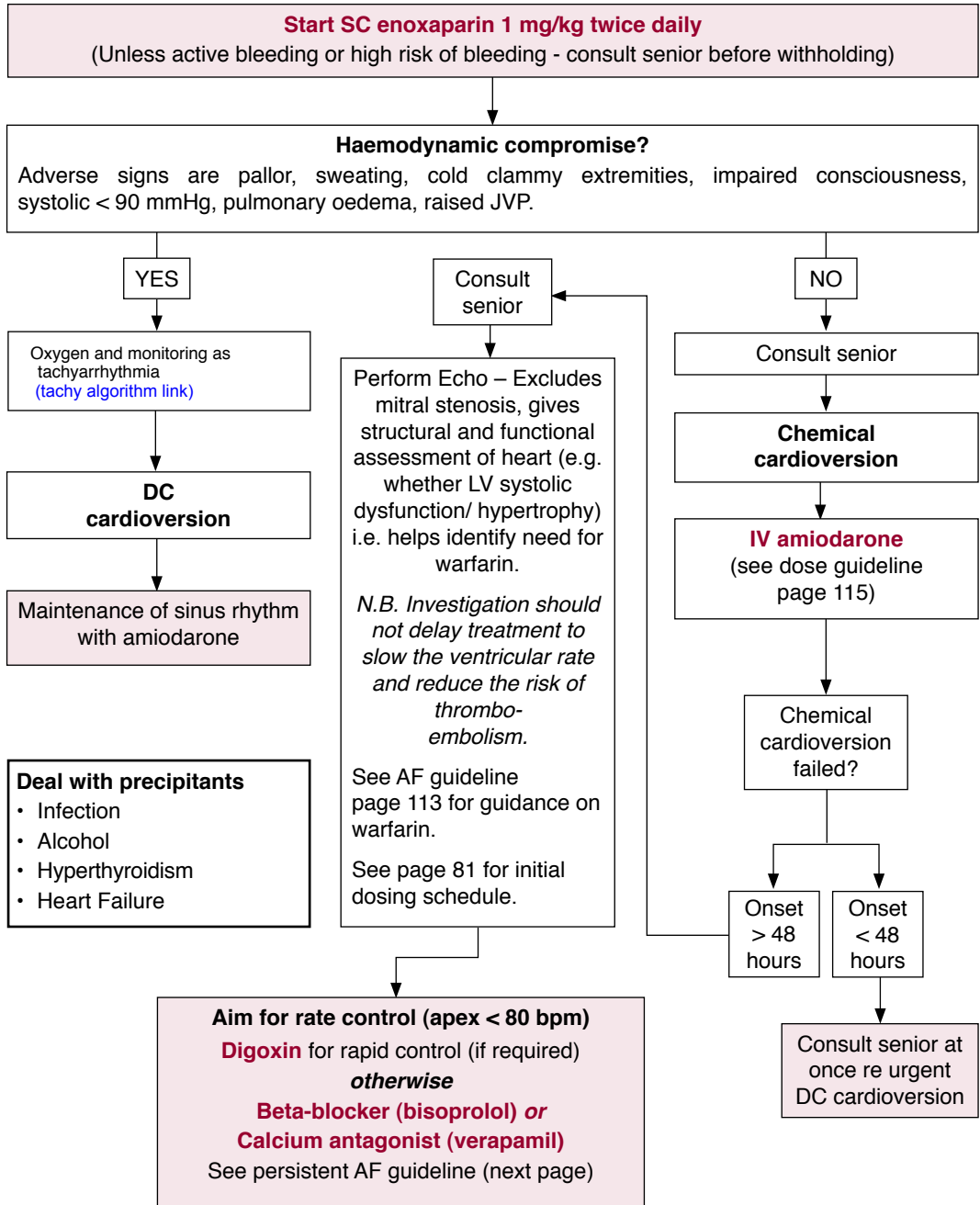**Calcium antagonist (verapamil)**
See persistent AF guideline (next page)

Atrial Fibrillation (AF) or Flutter – Recent Onset

ⓘ

Requiring admission, or onset during admission for other problem e.g. post surgery.

- Follow guidance for tachyarrhythmia. (Link to peri-arrest algorithm)
- Haemodynamic compromise is an indication for rapid DC cardioversion - always use sedation or general anaesthesia, ensure 2 doctors present (one with advanced airway skills).
- If the patient is haemodynamically stable, (no reduced conscious level, systolic BP > 90 mmHg, no chest pain and no heart failure), and onset < 48 hours, consider chemical cardioversion with IV amiodarone.
- Control ventricular rate with oral bisoprolol (or digoxin IV if heart failure is present).
- If chemical cardioversion fails, consult senior medical staff re electrical cardioversion.
- Do echo and consider warfarin.
- Remember – many cases of new onset AF or flutter will spontaneously revert to sinus rhythm – particularly if there is an obvious precipitating cause such as pneumonia, alcohol intoxication, hyperthyroidism or surgery.
- Cardioversion is much less successful in established AF or flutter than in new onset, and, if being considered, should not be delayed. Anticoagulant cover required if onset > 48 hours, so 4 - 6 week delay required.