



Atrial Fibrillation-ER Cardioversion Protocol*

General Measures: See *Optimal Management of Atrial Fibrillation January 2005

- Ensure atrial fibrillation of recent onset (< 48 hours) and not recurrent
- NPO, Bedrest, IV, Monitor

Investigations:

- CK, Troponin, electrolytes, CR, TSH, PT (INR)/PTT
- Echocardiogram to be arranged if not previously obtained (not necessary acutely)
- TEE in selected cases for rapid cardioversion if unknown duration or Afib > 48 hours

Medications:

Anti-coagulation: Consider prior to either electric or pharmacologic cardioversion

- UFH IV standardised protocol
 - 5000 U IV bolus → 1000 U/hr infusion (Target PTT 50-70)
- LMWH e.g. Fragmin 200 u/kg/day divided qd-q12h or Lovenox 1 mg/kg q12h

Rate Control (IV or PO): Do not Rx digoxin, β-blocker or CCB if pre-excitation.

- β-blocker: Metoprolol 5mg IV q5min X 3→ 5-10 mg IV q6h
 - PO 25-100 mg BID
- Verapamil: 5-15 mg IV→ 0.05-0.2 mg/min IV
 - PO 80-120 mg TID or use sustained release preparation.
- Diltiazem 0.25 mg/kg IV over 2 minutes→ 5-15 mg/hr IV
 - PO 30-90 mg QID or use sustained release preparation.
- Digoxin 0.25 mg PO or IV q4h X 3 doses→ 0.125-0.5d mg/d**

**Adjust based on body size and renal function/Use for adjunctive rate control

Pharmacologic Cardioversion: See * for antiarrhythmic drug selection recommendations

- ! Ibutilide: IV 1 mg over 10 min (for pts < 60 kg give 0.01 mg/kg over 10 min)
- !! Flecainide: PO 300mg→ 50 mg q12h
- Procainamide IV: 1 gm IV bolus over 30-60 min→ 2 mg/min infusion
- Propafenone: 600 mg PO single dose¹
- Amiodarone IV 300 mg bolus or 30 mg/kg PO single dose²

Electrical Cardioversion:

- Anaesthesia present/IV sedation/Airway control/Oxygenation
- Synchronised shock: Initial energy 100 Joules biphasic (or 200 J monophasic)

Post Cardioversion:

- Home: ___ hours
- ASA: _____
- Warfarin: _____
- Rate control: _____
- Prophylactic anti-arrhythmic Rx: _____

Follow-up:

- Cardiologist: _____
- Family MD: _____

1 *Ann Int Med.* 1997;126: 621-625. 45% conversion rate 3 hours vs. 18% placebo/76% vs. 37% at 8 hours; with structural heart disease 81% vs. 17% at 8 hours. No pro-arrhythmia.

2 *Am J Cardiol.* 2000;85:462-465. 50% conversion rate 8 hours vs. 20% placebo. 85% vs.35% at 24 hours.

! Ibutilide:Caution if Class I,III antiarrhythmic drug within 4 hours, history of polymorphic VT, long QTc, hypokalemia, hypomagnesemia, bradycardia, CHF !! Flecainide: hypotension, rapidly conducting AFlutter

