Development and Implementation of an Outpatient Atrial Fibrillation Pathway

Protocol Definitions & Criteria

AFIB PROTOCOL EXCLUSION CRITERIA*

1. Accompanying diagnosis warranting inpatient care (e.g., acute coronary ischemia, decompensated heart failure, sepsis).**
2. Renal failure (creatinine clearance <15mL/min), if new anticoagulation start anticipated.
3. Pregnancy
4. Hemodynamic instability after initial rate control attempt if cardioversion not anticipated (i.e., HR 140 - 150bpm or SBP<90mm Hg, ongoing requirement for a drip medication).
5. Social barriers to outpatient follow-up (e.g., poor access to follow-up care, anticipated low compliance to patient instructions).
6. If observation unit available and anticipated, expected Length of Stay >your institution's maximum LOS (e.g., 2 midnights).

**Above criteria are modifiable according to individual institutional standards*
***Examples only, not a comprehensive list*

RATE CONTROL

In the emergency department and observation, options include Diltiazem, 0.25mg/kg IV x1 if SBP>100 mm Hg followed by 30mg PO q6h if rate adequately controlled. Also, Lopressor, 5-10mg IV x1 if SBP>100 mm Hg followed by 25mg PO q6h if rate adequately controlled (preferred agent for patients already on a β blocker). If rate is not controlled and SBP<100 mm Hg consider Diltiazem drip (start at 10 mg/hr IV, titrate at 5mg/hr increments to max of 25mg/hr to HR<100). Adequate rate control for discharge home defined as resting HR<100bpm and ambulatory HR<110bpm with tolerable symptoms.
Discharge rate control for patients sent home in atrial fib/flutter should be lowest dose equivalent of long acting oral medication (i.e., if the patient did well on 30mg PO Diltiazem q6h, discharge patient with 120mg of long-acting Diltiazem once daily, first dose due 6h from previous).

ELECTRICAL CARDIOVERSION

Perform synchronized DC electrical cardioversion with procedural sedation (i.e., Propofol sedation with preceding analgesia with 200J with biphasic defibrillator). Recommend anterior/posterior pad placement. If performing procedural sedation consult your institution's sedation policy.

FAILED ELECTRICAL CARDIOVERSION RECOMMENDATIONS

If no evidence of sinus rhythm after initial shock:

- Check pad placement and skin contact.
- If less than 200J used on initial attempt, increase energy to maximum and repeat shock x1.

If transient sinus rhythm after initial shock (early recurrent atrial fibrillation), consider Ibutilide.

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CHEMICAL CARIDOVERSION

Consider for patients who are poor sedation candidates secondary to patient or department resource factors. Options include intravenous antiarrhythmic Class III (Ibutilide), oral antiarrhythmic Class IC (Flecainide), among others.

Ibutilide:

- Pre-treat with Magnesium 2g IV x1 over 30 minutes; defibrillator at bedside and pads on patient.
- Ibutilide 1mg IV over 10 min; if still in atrial fib/flutter at 30 minutes consider electrical cardioversion.
- Monitor on telemetry 4 hours, watch QTc (risk: Torsades de Pointes); avoid if initial QTc>450 millisecond.
- No need to confirm lack of structural heart disease or occlusive coronary disease.

Flecainide:

- Confirm no significant structural cardiac abnormalities (i.e., TTE within last year or during observation stay showing no wall motion abnormalities/severe valvular disease) or occlusive coronary disease (i.e., low risk or recent normal stress test in observation).
- Achieve adequate rate control prior to cardioversion.
- Flecainide (300mg PO x1 if ≥70kg or 200mg PO x1 if <70kg).
- If still in atrial fib/flutter after 2 hours, consider electrical cardioversion.
- No need for extended telemetry monitoring.

CARDIOLOGY CONSULTATION

Consider Cardiology consultation in the following situations:

- Failed electrical or chemical cardioversion.
- Anticipated TEE electrical cardioversion.
- Assistance for determining the best plan of care in a medically complex patient ineligible for early cardioversion who is not already followed by a Cardiologist.

ANTICOAGULATION IN ED/OBSERVATION

Direct Oral Anticoagulant (DOAC) otherwise Lovenox or unfractionated Heparin per drug administration guideline recommendations if contraindications present.

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DISCHARGE ANTICOAGULATION

If patient is discharged in atrial fib/flutter:

- Start anticoagulation if $CHADS_2$ VASc score ≥2 and HAS-BLED score <3.
- Consider starting for patients with a score $CHADS_2$ VASc score of 0-1 to facilitate outpatient cardioversion.

If patient is discharged in sinus rhythm:

- Use the $CHADS_2$ VASc score to determine anticoagulation need (0-1 = no anticoagulation; ≥2 = Direct Oral Anticoagulant [DOAC]); consider either Lovenox +/- Coumadin (with bridge) for contraindications.
- Hold anticoagulation if HAS-BLED score ≥3.

DISPOSITION CRITERIA FOR HOSPITAL ADMISSION

- Deterioration in clinical status, such as worsening or new concerning symptoms (e.g., shortness of breath or inability to tolerate oral medications).
- Failed cardioversion or inadequate rate or symptom control after ED resources have been exhausted.

DISPOSITION CRITERIA FOR HOME

- Adequate symptom management and rate control in atrial fib/flutter OR conversion to sinus rhythm for >1 hour.
- Evaluation and treatment complete with symptoms resolved or tolerable.
- Follow up appointment made and communicated to patient; if after hours, appointment requested and confirm next business day.

OUTPATIENT FOLLOWUP

Arrange for follow-up clinic visit within 3-5 day window (can be Cardiology, Primary Care or other based on institutional standards; if anticoagulant started, consider anticoagulant clinic for follow-up).

- Ensure patient's insurance will permit planned clinic follow up and new medications.
- Perform patient education around atrial fibrillation and new medications.
- Instruct patient around signs and symptoms warranting return to ED.

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