NEW ONSET ATRIAL FIBRILLATION IN SURGICAL INTENSIVE CARE UNIT

Background ~ 10% of ICU admissions have new onset AF
  - typically self-limited/paroxysmal new onset AF lasts < 48 hours
  - AF considered persistent if > 1 week or permanent > 1 year

Assessment - determine patient’s hemodynamics
  - stable - 12-lead electrocardiogram to confirm AF, focused H&P
  - unstable - DC cardio-version at 100-200 J biphasic

Criteria for instability - symptomatic hypotension (Systolic < 90, MAP < 60 mmHg)
  - angina, myocardial ischemia, pulmonary edema, dyspnea
  - failed pharmacologic measures

Stable - control the ventricular rate if > 100 beats per minute
  - evaluate for anticoagulation therapy
  - manage associated AF factors
  - revert the cardiac rhythm back to SR

Associated factors to consider
  - systemic hypertension, heart failure, coronary disease, pulmonary embolism
  - sleep apnea, thyroid disease, chronic / acute drug / alcohol use
  - catecholamine release, pain management
  - systemic inflammation, sepsis, renal failure
  - spontaneous conversion from AF to SR can occur if eliminate associated factors

Pharmacologic treatment - simpler, no sedation or anesthesia
  - Amiodarone, Diltiazem, Esmolol, Metoprolol, Digoxin

DC cardio version - immediate, more likely to restore SR
  - < 48 hours - cardio version without anticoagulation considered safe
  - > 48 hours /unknown - TTE/TEE to evaluate the left atrium/appendage clots

Anticoagulation - in post op surgical patients
  - risks of bleeding needs very careful evaluation

Heart failure - high stroke risk,
  - resistant to conversion but sensitive to side effects

CHADS\textsuperscript{2} - stroke risk factor–based scoring system
  - CHF, HTN Age ≥75 years, DM, prior Stroke doubled

HEART TRANSPLANT

- Do not treat new onset A fib with β blocker
- Contact attending
Figure 1. ICU decision and treatment algorithm for new-onset atrial fibrillation.