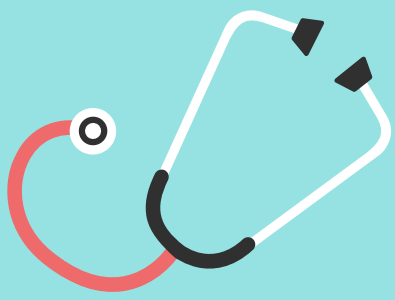
A brief infographic about

MAGMAR

Magnesium in the Management of Atrial fibrillation with Rapid ventricular response



This randomised control trial will examine the relationship between the ventricular response rate in rapid atrial fibrillation and magnesium therapy in acute emergency department presentations. Patients will be randomised into one of two treatment arms, receiving either high dose intravenous magnesium, or intravenous placebo (normal saline) in addition to the usual emergency department management.

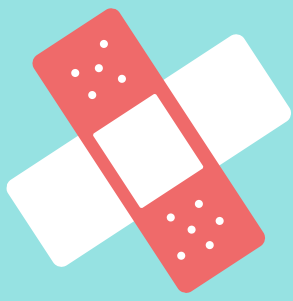
1 SCREENING FOR INCLUSION AND EXCLUSION CRITERIA

- ⩾18 years old
- AF heart rate ⩾120bpm
- Presentation attributable to AF
- Patient/agent able to give informed consent

- SBP<90mmhg
- Suspected acute myocardial infarction
- Overt sepsis
- Known renal impairment (eGFR <30)

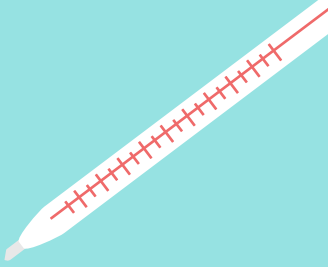
2 CONSENT PATIENT AND SIGN PICF

For patients with the inclusion criteria and none of the exclusion criteria!



3 BASELINE DATA ACQUISITION

- Medical history and HOPC
- Medications
- Vital signs: Pulse, BP, RR, SpO2, Temperature
- Baseline ECG
- Baseline pathology: FBE, UEC, serum Mg
- TFTs if first presentation



4 BLINDED RANDOMISATION INTO MAGNESIUM VS PLACEBO GROUP

Magnesium group

20mmol $MgSO_4$ in 100ml of normal saline administered intravenously over 30 min

No rate control agents to be given for 1 hour

Placebo group

100ml of normal saline administered intravenously over 30 min

No rate control agents to be given for 1 hour

5 MONITORING

ECG every 30 min with telemetry for 2 hours post-infusion

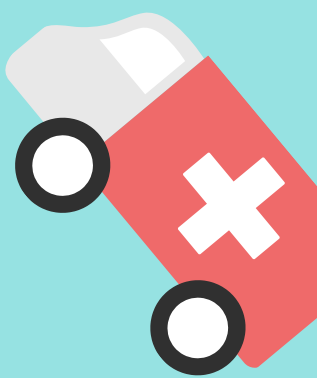
6 MEDICAL THERAPY AND ONGOING MONITORING

- After 1 hour, emergency physicians give medications for rate control at their own discretion.
- Ongoing hourly observations and ECGs

??? ENDPOINT MEASUREMENTS

1
- Decreased ventricular rate
- Reversion to sinus rhythm

2
- time to achieve target HR
- number of additional treatments required to achieve HR target
- length of stay in ED
- rate of inpatient hospital admission
- 30 day mortality & readmission rates



Principal Investigator: A/Prof Andrew Teh,
Co-Investigators: Dr. Jason Nogic, Dr. Paul Buntine, Dr. Patrick Carey, Dr. Michael MacPherson, Dr. Jithin Sajeev, Dr. Louise Roberts, Dr. Jennifer Cooke