ADRENALINE INFUSION POLICY

ACTION
Increases SVR, cardiac contractility, conduction velocity, automaticity and irritability. This results in increased heart rate, blood pressure and cardiac output. Causes bronchodilation and mobilises liver glycogen.

PRESENTATION
1mg/1mL (1 in 1000) or 1mg/10mL (1 in 10,000) amps. Ampoules are stored in Acute Care and Operating Theatres, or in all hospital cardiac arrest trolleys.

CONTRAINDICATIONS
- Known hypersensitivity to sympathomimetic amines.
- Cardiac dilatation and coronary insufficiency, ischaemic heart disease or cardiac arrhythmias.
- Cerebral arteriosclerosis.
- Diabetes Mellitus.
- Hyperthyroidism.
- Organic brain damage.
- Labour.
- In obstetric patients with a maternal blood pressure in excess of 130/80mmhg.

PRECAUTIONS
- Coronary insufficiency or dilation.
- Use in caution in patients with acute myocardial infarction.
- Adrenaline causes increased rate and force of cardiac contractions.
- Administration through a peripheral line may cause phlebitis.
- Patients with allergies to sodium metabisulfite.

ADVERSE REACTIONS
1. Severe hypertension which may lead to cerebral haemorrhage and pulmonary oedema.
2. Arrhythmias e.g. VT, VF, bradycardia.
3. Tachycardia, palpitations.
4. Nervousness, anxiety
5. Tremors, flushing, sweating

INTRAVENOUS BOLUS ADMINISTRATION
To be administered in cardiac arrest only

- Non-shockable rhythm (asystole and pulseless electrical activity)- administer 1mg if adrenaline as an IV bolus immediately.
- Shockable rhythm (ventricular tachycardia or ventricular fibrillation)- administer 1mg of adrenaline as an IV bolus AFTER the second shock.
- Follow all adrenaline bolus doses with a flush of 20mL sodium chloride 0.9%.

INTRAVENOUS INFUSION ADMINISTRATION
- Add 6mg of adrenaline 1:1000 into 100mL sodium chloride 0.9% or glucose 5% (to make a concentration of 60 microgram/mL).
- Administer using a giving set and infusion pump.
- Start the infusion at 1 microgram per minute, i.e. 1mL per hour.
- Titrate infusion to achieve desired hemodynamic result Adrenaline is incompatible with many drugs and should be administered on a dedicated line or lumen.
- In an emergency situation adrenaline may be infused peripherally for short term use only.

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ADRENALINE INFUSION POLICY  cont’d

A central line must inserted as soon as possible with a dedicated lumen for the adrenaline infusion.

- **MONITORING** Continuous ECG and blood pressure monitoring is required.
- Monitor urine output and peripheral perfusion. Observe for signs of cardiac ischaemia.
- Report abdominal pain (may indicate mesenteric vasoconstriction).
- Monitor blood glucose levels.
- If the infusion is being temporarily delivered via peripheral line, observe site frequently for signs of extravasation and tissue necrosis.
- Wean off an adrenaline infusion slowly as per medical order.

REFERENCES

- Astrazeneca, Adrenaline injection BP product information, TGA approved June 2005, Astrazeneca, North Ryde, Australia.
- Cardiology Department, 2007, Adrenaline hydrochloride, St George Hospital Coronary Care Unit.
- Australian Resuscitation Council Advanced Life Support Guidelines 2014
- POW ICU Clinical Practice Guidelines 2010

Risk rating: Low. Review in 2020

REVISION & APPROVAL HISTORY

Reviewed and endorsed Therapeutic & Drug Utilisation Committee 10/2/15
Approved Quality & Patient Safety Committee 18/8/11
Reviewed and endorsed Therapeutic & Drug Utilisation Committee 14/6/11
Approved Patient Care Committee March 2008

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