GUIDELINES

Retractory anaphylaxis

No improvement in respiratory or cardiovascular symptoms despite 2 appropriate doses of intramuscular adrenaline

peripheral IV or IO access **Establish dedicated**

Seek expert help early

Critical care support is essential

Give rapid IV fluid bolus e.g. 0.9% sodium chloride

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Start adrenaline infusion

Adrenaline is essential for treating all aspects of anaphylaxis

every 5 minutes until adrenaline infusion has been started Give IM* adrenaline

settings (e.g. peri-operative) while not recommended, but may be appropriate in some specialist *IV boluses of adrenaline are an infusion is set up

Follow local protocol

Peripheral low-dose IV adrenaline infusion:

- 1 mg (1 mL of 1 mg/mL [1:1000]) adrenaline in 100 mL of 0.9% sodium chloride
- Prime and connect with an infusion pump via a dedicated line

DO NOT 'piggy back' on to another infusion line interfere with the infusion and risk extravasation **DO NOT** infuse on the same side as a BP cuff as this will

- In both adults and children, start at 0.5–1.0 mL/kg/hour, and titrate according to clinical response
- Continuous monitoring and observation is mandatory

↑↑ BP is likely to indicate adrenaline overdose

and ECG for cardiac arrhythmia Monitor HR, BP, pulse oximetry

for mast cell tryptase

Take blood sample

Titrate to SpO₂ 94-98% Give high flow oxygen

Titrate according to clinical response Continue adrenaline infusion and treat ABC symptoms

= Airway

Partial upper airway obstruction/stridor:

Nebulised adrenaline (5mL of 1mg/mL)

Total upper airway obstruction:

Expert help needed, follow difficult airway algorithm

B = Breathing

Oxygenation is more important than intubation

If apnoeic:

- Bag mask ventilation
- Consider tracheal intubation

Severe/persistent bronchospasm:

- Nebulised salbutamol and ipratropium with oxygen
- Consider IV bolus and/or infusion of salbutamol or aminophylline
- Inhalational anaesthesia



Circulation

Child 10 mL/kg per bolus Give further fluid boluses and titrate to response:

Adult 500-1000 mL per bolus

- Use glucose-free crystalloid
- Large volumes may be required (e.g. 3–5 L in adults) (e.g. Hartmann's Solution, Plasma-Lyte®)

Establish central venous access Place arterial cannula for continuous BP monitoring

IF REFRACTORY TO ADRENALINE INFUSION

to adrenaline infusion: Consider adding a second vasopressor in addition

- Noradrenaline, vasopressin or metaraminol
- In patients on beta-blockers, consider glucagon

Consider extracorporeal life support

Cardiac arrest – follow ALS ALGORITHM

- Start chest compressions early
- Use IV or IO adrenaline bolus (cardiac arrest protocol)
- Aggressive fluid resuscitation
- Consider prolonged resuscitation/extracorporeal CPR

