Resuscitation Council UK

GUIDELINES 2021

# Paediatric Refractory Anaphylaxis Guideline

**Establish dedicated peripheral IV or IO access**

**Give rapid IV fluid bolus**
0.9% sodium chloride or glucose-free crystalloid

**Give IM* Adrenaline every 5 minutes until adrenaline infusion has been started**
*IV boluses of Adrenaline are not recommended, but may be appropriate in some specialist settings (e.g. peri-operative) while an infusion is set up

**Give high flow oxygen**
Titrate to SpO2 94–98%

**Monitor HR, BP, pulse oximetry and ECG for cardiac arrhythmia**
Take blood sample for mast cell tryptase

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**Seek NECTAR help early**
Critical care support is essential

**Start Adrenaline infusion**
Adrenaline is essential for treating all aspects of anaphylaxis

**Follow NECTAR Critical Care Peripheral IV Adrenaline infusion guide (0.3mg/kg adrenaline in 500ml 5% dextrose or 0/9% N.saline):**
**Commence at 0.1mcg/kg/min (range 0.1-1mcg/kg/min. Nb. 10ml/hr=0.1mcg/kg/min)**
**Titrate according to clinical response**

Prime and connect with an infusion pump via a dedicated line
**DO NOT** 'piggy back' on to another infusion line
**DO NOT** infuse on the same side as a BP cuff as this will interfere with the infusion and risk extravasation
Continuous monitoring and observation is mandatory
↑↑ BP is likely to indicate adrenaline overdose

**Continue Adrenaline infusion and treat ABC symptoms**
**Titrate according to clinical response**

## Airway

**Partial upper airway obstruction/stridor:**
Nebulised adrenaline (5mL of 1mg/mL)
**Total upper airway obstruction:**
Expert help needed, follow difficult airway algorithm

## Breathing

**Oxygenation is more important than intubation**
**If apnoeic:**
Bag mask ventilation/consider tracheal intubation
**Severe/persistent bronchospasm:**
Nebulised salbutamol and ipratropium
Consider IV bolus and/or infusion of salbutamol or aminophylline
Inhalational anaesthesia

## Circulation

**Give further 10ml/kg fluid boluses and titrate to response:**
Use glucose-free crystalloid (e.g. Hartmann's Solution, Plasma-Lyte®)
**May need**
Arterial cannula for continuous BP monitoring & Central venous access
**IF REFRACTORY TO ADRENALINE INFUSION**
**CONTACT NECTAR**
Consider adding a second vasopressor **in addition** to adrenaline infusion: Noradrenaline, Vasopressin or Metaraminoli
**Consider ECMO referral (only available for patients at GNCH)**

**Cardiac Arrest – follow APLS ALGORITHM**
Start chest compressions early
Use IV or IO adrenaline bolus
(cardiac arrest protocol)
Aggressive fluid resuscitation
Consider activating ECPR (if patient at GNCH only)