

# 2-4b Refractory Anaphylaxis v.1

Refractory anaphylaxis exists where a woman shows no improvement in cardiovascular or respiratory symptoms after two appropriate doses of IM adrenaline

## START

- 1 **Call for anaesthetics/ICU** if not already present
- 2 **Start continuous monitoring** if not already started
  - ▶ SpO<sub>2</sub>
  - ▶ 3-lead ECG
  - ▶ Blood pressure checks on automatic cycle (at least every 5 minutes)
  - ▶ Continuous fetal monitoring
- 3 **Start adrenaline infusion (Box A)**
  - ▶ Repeat adrenaline boluses at 5 minute intervals until infusion started
- 4 **Check response to treatment**
  - ▶ If ongoing shock → give rapid bolus(es) of IV crystalloid –and– give steroid treatment (**Box A**)
  - ▶ If severe or persistent wheeze → give nebulised salbutamol –and– give steroid treatment (**Box A**)
  - ▶ If systolic BP < 50mmHg commence CPR
- 5 **Take mast-cell tryptase sample**
  - ▶ 5-10 ml clotted blood drawn as soon as feasible following initial resuscitation
  - ▶ Second sample 1-2 hours (no later than 4 hrs) after initial reaction
- 6 **Transfer the woman to a critical care setting**
- 7 **Start post event actions (Box C)**

### Box A: Drug doses and treatments

- ▶ **Adrenaline bolus** \*500 micrograms IM to anterolateral aspect of mid-thigh –or– [specialist use] 50 micrograms IO / IV
  - \*IM generally preferred; IV/IO adrenaline **ONLY** to be given by experienced specialists
- ▶ **Adrenaline infusion** †check local protocol –or– 1 mg in 100 ml 0.9% sodium chloride via peripheral IV; start at 0.5 - 1.0 ml/kg/hr
  - †Only for refractory anaphylaxis
- ▶ **Salbutamol** 5 mg nebulised
- ▶ **Oxygen** 15 L/min via reservoir mask –then– titrate to SpO<sub>2</sub> 95-98%
- ▶ **Crystalloid bolus** e.g., 500-1000 ml Hartmann's titrate to response (Reduce to 250-500 ml if pre-eclamptic)
- ▶ **Steroid** Prednisolone PO 40 mg if possible –or– Hydrocortisone 100 mg IV if PO route unavailable
- ▶ **Glucagon** 1mg IV repeat as necessary if β-blocked woman unresponsive to adrenaline

**If hypotension resistant experienced specialist to consider alternative vasopressor e.g., metaraminol, noradrenaline +/- vasopressin**

- ▶ **Vasopressin** 2 units repeat as necessary (consider infusion)

### Box B: Critical changes

- ▶ **Obstetric cardiac arrest** → 1-1

### Box C: Post event actions

- ▶ Stop suspected triggers currently prescribed.
- ▶ Take 2nd tryptase sample at 1-2 hrs, and 3rd after 24 hrs
- ▶ Consider cetirizine for cutaneous symptoms
- ▶ Make referral to a specialist allergy clinic or immunology centre to identify the causative agent (see [www.bsaci.org](http://www.bsaci.org))
- ▶ Report anaphylactic drug reactions ([www.mhra.gov.uk](http://www.mhra.gov.uk))
- ▶ Inform the woman and her GP

