

EMERGENCY ACTION CARD

Management of Suspected Raised Intracranial Pressure

v1.1

Manage all patients during a hypoxic crisis on 100% oxygen regardless of underlying lung pathology

START: IMMEDIATELY NOTIFY DRIVER, STOP SAFELY

1 Immediate actions

- Follow Key Basic Plan.
- Have neuroprotective strategies all been followed (Box B)?
- Could this be a seizure?

2 Patient positioning

- Sit patient up as much as possible (caution: spinal injury)

3 Oxygenation and ventilation

- Deliver 100% oxygen
- Aim ETCO_2 4.0-5.0kPa (or PaCO_2 4.5-5.5kPa)

4 Sedation, analgesia and muscle relaxation

- Administer boluses (Box C)

5 Osmotherapy

- Administer 5% sodium chloride bolus (and subsequent bolus after 10 minutes if $\text{Na} < 150\text{mmol/L}$) (Box C)

6 Reassess patient

- If continued evidence of uncontrolled intracranial pressure (eg. fixed and dilated pupil), consider increased minute ventilation to reduce PaCO_2 to 3.5-4.0kPa

7 Next steps

- Inform receiving hospital neurosurgical team as destination may need to change (e.g. straight to theatre or repeat imaging)

Box A: CRITICAL CHANGES

- If problem worsens significantly, or a new problem arises, go back to **START** of Key Basic Plan
- If Transfer Practitioner or Transfer Doctor transfer, contact Remote Duty Consultant
- Consider contacting Leadership SPOC for support, if required

Box B: NEUROPROTECTIVE STRATEGIES

- **Physical:**
 - Head up 30° and neutral head position
 - Check tube ties
- **Ventilation:**
 - PaO_2 10-13kPa
 - PaCO_2 4.5-5.5kPa
- **Blood pressure:**
 - Assume ICP 20
 - CPP 60-70 will be achieved with a MAP of 80-90mmHg
- **Sedation:** RASS -5
- **Blood sugar:** 6-10mmol/L
- **Serum sodium:** 140-155mmol/L
- **Temperature:** $< 37.5^\circ\text{C}$
- **Seizure prophylaxis:** 1g levetiracetam BD

Box C: DRUGS FOR RAISED INTRACRANIAL PRESSURE

- **Sedation bolus:**
 - 10-20mg propofol
 - 1-2mg midazolam
- **Analgesia bolus:**
 - 50-100mcg fentanyl
 - 0.5-1mg alfentanil
 - 1-2mg morphine
- **Muscle relaxant bolus:** 50mg atracurium or rocuronium
- **5% sodium chloride:** 3ml/kg