Procedural sedation - KIDS SOP

Indications

Agitated and/or non-compliant patients requiring:

- Central line insertion
- Arterial line insertion
- Chest drain insertion
- Transfer*

Contraindications/Considerations

- Airway compromise
- Respiratory compromise
- Child <1 year – consider intubation
- Non-fasted status (risk/benefit analysis required)
- *Consider elective intubation if agitation significant or may continue throughout transfer

Pre-sedation

- **Patient assessment** – history (incl. specific history of previous sedation or previous administration of Ketamine) airway assessment, GCS, pupillary response, and baseline observations.
- Preparation of monitoring, emergency equipment and drugs (see below).
- **IV access** – ideally 2 in situ and confirmed working.
- **Apply 15L O2** via Non-rebreathe mask.
- Consider prophylactic administration of **anti-emetics**.
- **Role allocation** – sedationalist, proceduralist, roles in an emergency.
  - Brief team for plan and anticipated problems, including if converting to anaesthesia and intubation.
- Prior to drug administration, **WHO sign-in** checklist (found in CVL pack).

Drugs

- Ketamine 0.5-1 mg/kg IV bolus
  - Additional increments 0.25mg/kg
- Midazolam 0.05-0.1 mg/kg IV bolus
- Lidocaine max 3mg/kg (max 200mg per dose in > 12 yrs)

- If used concurrently, reduce dose of both drugs, and titrate to effect.
- Consider infusion if prolonged sedation needed:
  - Midazolam 0.1-0.2 mg/kg/hr IV
- NaCl 0.9% fluid bolus available (10 ml/kg)

Monitoring

- 3-lead **ECG**
- Continuous **SpO2**
- Continuous waveform **capnography** – note, inline EtCO2 placed inside NRB is a suitable alternative to nasal EtCO2
- Non-invasive **BP** – cycling 5 mins

Emergency Equipment

- Self-inflating BVM/Mapleson circuit with appropriately sized face mask.
- Emergency airway equipment – age appropriate OPA, NPA, iGEL and advanced airway equipment for conversation to RSI.
- Suction – tested, on and accessible.
- Emergency drugs – e.g., metaraminol, adrenaline.

Intra-sedation

- Sedationalist takes overall responsibility for the patient.
- Document observations every 5-minutes.
- Titrate sedative agents to affect.
- Possible complications to be aware of:
  - Laryngospasm
  - Vomiting/Aspiration
  - Airway obstruction
  - Apnoea
  - Cardiovascular collapse
  - Adverse reaction to medications

Post-sedation

- Continue to monitor the patient regularly until they have regained consciousness.
- Unless sedation being used for duration of transfer, do not leave referring hospital until patient returned to baseline GCS.
- Sedationalist to remain with the patient throughout recovery period.
- Parents/Care giver can be allowed to return to patient's side.

References: 'Chapter 7:Guidelines for the provision of anaesthesia services in the non-theatre environment 2024' and 'Chapter 10: Guidelines for the provision of paediatric anaesthesia services 2024'. Royal College of Anaesthetists, 2024.

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