SAQ

A 4 year old boy is brought to your Emergency Department having sustained a 4 cm eyebrow laceration following a fall at a playground. He is accompanied by his mother.

You plan to suture the wound under procedural sedation using ketamine.

**a. List 8 contraindications to ketamine use in this setting ? (4 Marks)**

*1/2 mark each up to 4 marks from the following:*

*Parental refusal*

*Procedural required unsuitable for ketamine sedation*

*Inadequate staffing / area / equipment*

*Previous adverse reaction to Ketamine*

*Altered conscious state*

*Unstable patient: seizures, vomiting, hypotension*

*Cardiovascular disease - heart failure, uncontrolled hypertension, congenital heart disease*

*Procedures involving stimulation of posterior pharynx*

*Known airway instability or tracheal abnormality*

*Psychosis*

*Thyroid disorder or medication*

*Porphyria*

*Risk of raised intraocular or intracranial pressure*

*Active pulmonary infection or disease including acute asthma and URTI*

*Full meal within 3 hours (relative contraindication only, balance risk against urgency of procedure)*

**b. List 4 potential side effects/complications associated with ketamine use in this setting (2 Marks)**

*1/2 mark each up to 2 marks from the following:*

*Airway obstruction*

*Nystagmus*

*Muscle rigidity*

*Random movements (can resemble seizure like activity)*

*Vomiting (during or after procedure)*

*Emergence phenomena*

*Apnoea*

*Failed procedure (need for a General Anaesthesia)*

*Hypersalivation*

**c. Complete the following table regarding ketamine usage in paediatric procedural sedation by route of delivery (4 Marks)**

*1/2 Mark for each correctly completed table cell - only 1 example for advantage / disadvantage by route required for mark - longer list of acceptable answers re: adv/disad examples only in table*

|  |  |  |
| --- | --- | --- |
|  | **Intra-muscular (i.m)** | **Intra-venous (i.v)** |
| **Initial dose** | *4 mg/kg* | *1 - 1.5 mg/kg* |
| **Top-up dose** | *2 mg/kg* | *0.5 mg/kg* |
| **Advantage** | *Nil iv required, as safe as iv*  *Longer action etc.* | *More predictable, easier top-up, quicker onset etc.* |
| **Disadvantage** | *Pain / distress on injection, less predictable etc.* | *iv line required, quicker offset etc.* |

*All answers taken from PMH Emergency Department guideline on Ketamine Sedation*