

SAQ 5

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? (8 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 (4Marks)

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| <i>Airway obstruction</i> | <i>Emergence phenomena</i> |
| <i>Nystagmus</i> | <i>Apnoea</i> |
| <i>Muscle rigidity</i> | <i>Failed procedure (need for a General Anaesthesia)</i> |
| <i>Random movements (can resemble seizure like activity)</i> | <i>Hypersalivation</i> |
| <i>Vomiting (during or after procedure)</i> | |

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/dis 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