

Medications for Analgesia and Sedation (Revised 8-09)

Medication	Dose Range	Onset	Duration	Complication/ Miscellaneous
LET- Topical	1-3ml	15-30min	45-60 min	Avoid mucosa
EMLA- Topical	2.5gm	60min	1-2 hrs	Long wait
Synera- Patch	1x patch (70mg lido + 70mg tetracaine)	20-30min	1.5 hrs	Intact skin. >4months old
Fentanyl IV	1-2 mcg/kg	2-3 min	45-60 min	Chest wall rigidity
Morphine IV	0.1-0.2 mg/kg	5-20 min	2-4 hrs	<Respiratory, >Histamine
Chloral Hydrate PO	25-100 mg/kg, max 3 gms	30-60 min	1-2 hrs ½ life 4-9 hrs	Variable effect, Liver, resp.
Etomidate IV	0.1-0.2 mg/kg	30-60 sec	3-5 min	Myoclonic mvt, vomiting, apnea
Ketamine** (sedative + analgesic)	3-4 mg/kg	2-10 min	60-90 min	Sedation and analgesia. Dysphoria. Hypersalivation
-IV	1-2 mg/kg	30-60 sec	10-30 min	(**Atopine/ Robinul)
Ketafol IV (Ketamine + Propofol)	0.75mg/kg Ketamine + 0.75mg/kg Propofol	30-60sec	5-15 min	Shorter duration then ketamine and longer duration propofol. Counteracts adverse effects.
Midazolam (Versed)				Respiratory Depression
-PO	0.5-0.7mg/kg	15-20min	45-90min	
-IM	0.1-0.15 mg	10-20min	1-2hrs	Use lower dose
-IV	0.1 mg/kg (<5yrs) 0.05mg/kg(6-12yrs)	2-3min	30-60 min	With Ketmine
Methohexital IV (Brevital)	1 mg/kg	30-60 sec	20-30min	<Respiratory
Pentobarbital -IM	2-3 mg/kg (may titrate up to 6mg/kg (max 100mg)	10 min	1-2 hrs	Immobility Respiratory Depression
-IV	2-6 mg/kg	30-60 sec	15-30min	Hypotention
Propofol IV (Diprivan)	0.75mg/kg then titrate 0.5mg/kg prn	30 sec	1-3minutes	Respiratory depression, Hypotension

- **Atropine is used with Ketamine to decrease secretion. More common use in younger patients.
- Ketamine may be administered with **midazolam (0.01 mg/kg)** and **atropine (0.01mg/kg, max0.5mg)** in the same syringe. May substitute **Robinul 4mcg/kg (max 200mcg)** for atropine.
- For IV dosing, use a smaller amount of Ketamine (1-2mg/kg).
- Recent studies show no significant benefit of adding versed to ketamine to decrease the emergence phenomenon.
- Most sedations medications (Propofol/ Brevital) will require physician to administer the meds.
- If IM sedation used, please have IV starter kit and IO/Code Cart available near by.

Reversal Agents: (must observe for at least 2 hr post)

1)Narcan: 0.01-.1 mg/kg IV/IM/ETT. (Maximum dose of 2mg maybe repeated every 2-5 minutes for a total dose of 10-20mg.

2)Flumazenil: 0.02 mg/kg/dose up to 0.2mg (IV) . May repeat in 45-60 sec interval with 0.3mg for a total of 3mg.

Topical

Analgesic

Sedative