Agent	Dose*	Contraindications	Comments
Propofol	0.5-1 mg/kg IV, then 0.5 mg/ kg q1-2 min prn	Egg or soy allergy	Preferred for shorter procedures and where muscle relaxation is of benefit; <u>avoid if hypotension</u> is a concern
_{Ketamine} KetanestS	1-2 mg/kg IV over 30-60 sec or 4-5 mg/kg IM, repeat half dose prn half dose	Absolute: age < 3 months, schizophrenia Relative: major posterior oropharynx procedures; history of airway instability, tracheal surgery, or tracheal stenosis; active pulmonary infection or disease; cardiovascular disease; CNS masses, abnormalities, or hydrocephalus	Preferred for longer procedures; avoid if hypertension/ tachycardia is a concern; have midazolam available to manage emergence distress; muscle tone is preserved or increased; post-procedure emesis may be mitigated by prophylactic ondansetron
Etomidate	0.1-0.15 mg/kg IV, then 0.05 mg/kg q2-3 min prn		Intra-procedure myoclonus or hypertonicity, as well as post-procedure emesis, are common
Fentanyl	1-2 mcg/kg IV, then 1 mcg/ kg q3-5 min prn		Comparatively delayed onset of action; do not re-dose too quickly
Midazolam	.05 mg/kg IV, then .05 mg/kg q3-5 min prn	Pregnancy, allergy to benzyl alcohol	Comparatively delayed onset of action; do not re-dose too quickly
Pentobarbital	1 mg/kg IV, then 1 mg/kg q3-5 min prn	Pregnancy, porphyria	Use for painless procedures where analgesia is not needed
Reversal Agent	Dose		Caution
Naloxone	0.01-0.1 mg/kg IV or IM (typical adult dose 0.4 mg), max 2 mg		
Flumazenil	0.01 mg/kg IV (typical adult dose 0.2 mg) over 20 seconds, max 1 mg		Only use in benzodiazepine naïve patient

*All doses should be reduced in the elderly and in patients with marginal hemodynamics

consider ideal weight R. Strayer / P. Andrus emupdates.com 11.28.2013 Emergency Department PSA Checklist (page 2) by Reuben Strayer, P. Andrus. emupdates.com



Have you bag mask system ready (Ambu, Kuhn)

Detect hypoventilation early (e.g. etCO2 capnography) Stop the drugs Give O2, e.g. non-rebreather Position the patient Up 30° Jaw thrust Esmarch Suction if needed Laryngospasm notch pressure Nasal airways Consider reversal agents Bag mask or LMA ventilation Oral airway, ventilation Intubate

PSA Intervention Sequence

Proceed down intervention sequence as slowly as patient condition permits
Jaw thrust as illustrated above - thumbs on maxilla, four fingers posterior to ramus

• Laryngospasm notch is behind the earlobe, between mastoid process and condyle of mandible – bilateral, firm pressure medially and cephalad (up and in)

If rescue ventilation is required, bag slowly and gently

· see emupdates.com/psa for details