

COMPARISON OF AGENTS USED TO INDUCE ANESTHESIA

| Drug | Induction of anesthesia | | Maintenance of anesthesia | | Comments |
|------------------|-------------------------|--|---------------------------|---|---|
| | ROA | Adult dose | ROA | Adult dose | |
| Ketamine | IV | 1.2 m/kg (0.5 – 4.5 mg/kg) | IV | 50 – 100 % induction dose PRN OR infusion 0.1 – 0.5 mg/min | <ul style="list-style-type: none"> - Analgesic effect, bronchodilation - Hypertension, tachycardia; rare hypotension, bradycardia - Respiratory depression esp. with high doses, rapid administration - As single agent, CV stimulation, emergence reactions (hallucinations, vivid dreams, or delirium). Can be prevented / treated with haloperidol, BZDs |
| | IM | 5 – 10 mg/kg (4 – 13 mg/kg) | IM | 50 – 100 % induction dose PRN | |
| Etomidate | IV | 0.2 – 0.6 mg/kg over 30-60 seconds | IV | (5 – 20 mcg/kg/min) but continuous IV infusion not recommended due to risk of adrenal suppression | <ul style="list-style-type: none"> - Minimal CV, respiratory effects - Cortisol production decreased for 6-8 hours after induction - Transient mild to moderate myoclonus – can be minimized with IV fentanyl 0.1 mg immediately before etomidate administration - Burning at administration site - Higher incidence of nausea |
| Propofol | IV | 40 mg every 10 seconds until induction onset (usual total 2 – 2.5 mg/kg) Elderly, debilitated, ASA III-IV: 20 mg every 10 seconds (total 1 – 1.5 mg/kg) | IV | 0.1 – 0.2 mg/kg/min by infusion (6 – 12 mg/kg/hr) OR 25 – 50 mg PRN Elderly, debilitated, ASA III-IV: one-half of above dose. | <ul style="list-style-type: none"> - Short recovery time, 10 – 30 minutes - Lower incidence of nausea, vomiting - Hypotension (10 - 30 %) - Bradycardia (4 %) - Apnea esp. with doses > 2.5 mg/kg (12 – 24 %) |

References:

1. Various monographs. Parenteral Drug Therapy Manual. Eds: Bedard M, Massicotte A, Prasad S. Thirtieth Edition. The Ottawa Hospital. 2009.
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3. Various monographs. DynaMed [Internet]. Ipswich (MA): EBSCO Publishing. 1995 – . Available from <http://www.ebscohost.com/DynaMed/>. Registration and login required. Accessed 06 June 2012.

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