



hemorrhage or GI bleed; thrombocytopenia, coagulation defects, proven or necrotizing enterocolitis, significant renal impairment, congenital heart disease where patency or the patent ductus arteriosus (PDA) is necessary for pulmonary or systemic blood flow

### **Ipratropium**

**Name** — Atrovent®

**Class** — Anticholinergics, respiratory

**Pharmacologic Action** — Anticholinergic (parasympatholytic) agent; inhibits vagally mediated reflexes by antagonizing acetylcholine action; prevents increase in intracellular calcium concentration that is caused by interaction of acetylcholine with muscarinic receptors on bronchial smooth muscle

**Indications** — For the management of asthma and chronic obstructive pulmonary disease (COPD)

**Contraindications** — Documented hypersensitivity to ipratropium, atropine, or derivatives.

### **Isopropyl Alcohol**

**Name** — No brand name available

**Class** — Secondary alcohol

**Pharmacology** — In addition to traditional role as antiseptic, may be used as antiemetic

**Indications** — Nausea and vomiting

**Contraindications** — None

### **Ketamine**

**Name** — Ketalar®

**Class** — General anesthetics, systemic

**Pharmacologic Action** — Produces dissociative anesthesia. Blocks N-methyl D-aspartate (NMDA) receptor

**Indications** — For the management of agitated or violent behavior

**Contraindications** — Hypersensitivity

*RELATIVE/CONTROVERSIAL CONTRAINDICATIONS:* Head trauma, intracranial mass/hemorrhage, hypertension, angina, and stroke, underlying psychiatric disorder

*WARNING:* Overdose may lead to panic attacks and aggressive behavior; rarely seizures, increased ICP, and cardiac arrest. Very similar in chemical makeup to PCP (phencyclidine), but it is shorter acting and less toxic

### **Ketorolac**

**Name** — Toradol®

**Class** — Non-steroidal anti-inflammatory drug (NSAID)

**Pharmacologic Action** — Inhibits synthesis of prostaglandins in body tissues by inhibiting at least 2 cyclo-oxygenase (COX) isoenzymes, COX-1 and COX-2. May inhibit chemotaxis, alter lymphocyte activity, decrease proinflammatory cytokine activity, and inhibit neutrophil aggregation; these effects may contribute to anti-inflammatory activity

**Indications** — For the acute management of moderately severe pain

**Contraindications** — Allergy to aspirin, ketorolac, or other NSAIDs; women who are in active labor or are breastfeeding, significant renal impairment particularly when associated with volume depletion, previous or current GI bleeding, intracranial bleeding, coagulation defects, patients with a high-risk of bleeding

### **Labetalol**

**Name** — Trandate®