**DRUG DOSAGES**

| **Premedication** | |
| --- | --- |
| Atropine | 0.04mg/kg oral, or 0.02mg/kg IM |
| Chloral Hydrate | 50 mg/kg oral, given 30-45 minutes before surgery |
| Clonidine | 2mcg/kg oral |
| Hyoscine hydrobromide | 0.01mg/kg IM, given 30 minutes before surgery |
| Ketamine | 5 mg/kg oral, or 2-4 mg/kg IM |
| Midazolam | 0.5mg/kg oral, given 15 minutes before surgery  0.1-0.2mg/kg IV, or 0.2-0.3mg/kg intranasal (causes a burning sensation) |
| Promethazine | 1 mg/kg oral, given 30 minutes before surgery |

| **Intravenous Induction Agents** | |
| --- | --- |
| Etomidate | 0.3mg/kg IV |
| Ketamine | 0.2mg/kg IV or 5-10 mg/kg IM |
| Propofol | 2-6 mg/kg IV, over 3 months of age |
| Thiopentone | 5 mg/kg IV (if premedicated), 5-8 mg/kg IV (if unpremeditated) |

| **Muscle Relaxants** | |
| --- | --- |
| Atracurium | 0.5mg/kg IV |
| Mivacurium | 0.15mg/kg IV |
| Pancuronium | 0.1mg/kg IV |
| Rocuronium | 0.6-1.2mg/kg IV |
| Suxamethonium | 1-2 mg/kg IV |

| **Reversal Agents** | |
| --- | --- |
| Atropine | 0.02mg/kg IV |
| Glycopyrrolate | 0.01mg/kg IV |
| Neostigmine | 0.05mg/kg IV |
| Sugammadex | 2 mg/kg IV for moderate blockade  4 mg/kg IV for deep blockade  16 mg/kg IV for immediate reversal |

| **Analgesics** | |
| --- | --- |
| Paracetamol | 15 mg/kg oral/IV 6-8 hourly (paediatrics)  7.5-10 mg/kg oral/IV (neonates) |
| Ibuprofen | 5-10 mg/kg oral 6-8 hourly |
| Diclofenac | 1 mg/kg per rectal |
| Oxycodone | 01 - 0.2 mg/kg oral 6-8 hourly |
| Fentanyl | 0.5 - 3 mcg/kg IV |
| Morphine | 0.05- 0.2 mg/kg IV |
| Remifentanil | 0.01-1 mcg/kg/min, titrate to effect |

| **Local Anaesthetics (Toxic dose)** | |
| --- | --- |
| Bupivacaine | ≥ 2.5mg/kg; ≥ 2mg/kg in neonates |
| Levobupivacaine | ≥ 2.5mg/kg, ≥ 2mg/kg in neonates |
| Lignocaine | ≥ 3 mg/kg; ≥ 7 mg/kg (with adrenaline) |
| *\* please refer to chapter on Regional Anaesthesia for dosing guidelines for central neuraxial blocks or peripheral nerve blocks* | |

| **Drugs used for Emergencies/ Resuscitation** | |
| --- | --- |
| **Cardiac resuscitation drugs** | |
| Adrenaline | 0.1ml/kg of 1:10 000 IV/ IO (ie 10 mcg/kg) repeated 3-5 min as required  0.1ml/kg of 1:1000 via ETT  Anaphylaxis: 0.05ml/kg of 1:10 000 IV, or 0.01ml/kg of 1:1000 IM  Severe croup: 0.5ml/kg/dose of 1:1000 (1mg/ml) nebulised (max 5ml) |
| Adenosine | 0.1-0.2mg/kg IV (max 6-12mg) for SVT, and flushed with 10 ml NS |
| Atropine | 0.02mg/kg |
| Amiodarone | 5 mg/kg IV over 3-5 min, may repeat 5mg/kg/dose up to 3 times (max 15mg/kg)  Infusion: 5-15mcg/kg/min |
| Calcium chloride 10% | 0.2ml/kg IV |
| Lignocaine | 1 mg/kg IV, infusion 15-50mcg/kg/min |
| Sodium bicarbonate 8.4% | 1-2 ml/kg IV |

| **Defibrillation** | |
| --- | --- |
| External defibrillation | 4J/kg for pulseless VF/VT |
| Synchronized cardioversion | Initial 0.5-1J/kg then subsequent 2J/kg for unstable SVT |

| **Local anaesthetic toxicity** | |
| --- | --- |
| Lipofundin 20% | Initial bolus 1.5ml/kg IV over 1 minute and start infusion at 15ml/kg/hr  Subsequent bolus 1.5ml/kg IV every 5min, up to a maximum of 3 boluses, and increase infusion to 30ml/kg/hr if hemodynamic stability is not achieved.  \*Not to exceed a maximum cumulative dose of 12 ml/kg.  *Ref: AAGBI guidelines (2010) Management of local anaesthetic toxicity* |

| **Malignant Hyperthermia** | |
| --- | --- |
| Dantrolene | 2.5mg/kg immediate IV bolus  Repeat 1 mg/kg boluses as required to max 10 mg/kg  \*Dilution: mix 20mg dantrolene with 60ml sterile water to make a solution of 1 mg in 3ml.  Initial bolus of 7.5ml/lg (=2.5mg/kg) then further doses of 3 ml/kg (=1 mg/kg) to a max 30ml/kg (10 mg/kg)  *Ref: AAGBI safety guidelines (2011) Malignant Hyperthermia Crisis* |

| **Hypoglycemia** | |
| --- | --- |
| 50% Dextrose | 0.5ml/kg slow IV, or |
| 10% Dextrose | 2.5ml/kg slow IV |

| **Hyperkalemia** | |
| --- | --- |
| Soluble Insulin (Actrapid) | 0.1unit/kg/dose IV (max 10 units/dose), to be given with IV dextrose |
| 50% Dextrose | 1 ml/kg/dose IV, given with IV insulin as above |
| 10% Dextrose | 5 ml/kg/dose IV, given with IV insulin as above |
| Calcium chloride 10% | 0.2ml/kg IV |

| **Severe asthma** | |
| --- | --- |
| Aminophylline | Loading dose 5 mg/kg IV over 30 min, then infusion 15-20 mg/kg over 24h  \*avoid loading dose in patients on theophylline therapy |
| Hydrocortisone | 4-5 mg/kg IV 4-6 hourly (max 100mg) |
| Magnesium sulphate | Loading dose 50 mg/kg (0.2mmol/kg) IV over 30 min (max 2g/dose)  Maintenance dose: 20-40mg/kg/hr (max dose 40g/day, max rate 40 mg/kg/hr) |
| Salbutamol | Loading dose 5 mcg/kg IV, diluted in 10 mls NS given over 10 min  Maintenance dose: 1-5mcg/kg/min (max rate 10 mcg/kg/min) |

| **Vasoactive Drug Infusions** | | | |
| --- | --- | --- | --- |
| **Drug** | **Paediatric dilution** | **Concentration\*** | **Dose Range** |
| Adrenaline | (weight x 0.3)mg in 50ml | 1ml/hr = 0.1mcg/kg/min | 0.01 to 0.5 mcg/kg/min |
| Dobutamine | (weight x 30)mg in 50ml | 1 ml/hr = 10mcg/kg/min | 2 to 15 mcg/kg/min |
| Dopamine | (weight x 30)mg in 50ml | 1 ml/hr = 10mcg/kg/min | 2 to 15 mcg/kg/min |
| Isoprenaline | (weight x 0.3)mg in 50ml | 1ml/hr = 0.1mcg/kg/min | 0.05 to 2 mcg/kg/min |
| Milrinone | (weight x 3)mg in 50ml | 1 ml/hr = 1mcg/kg/min | 0.3 to 0.7 mcg/kg/min |
| Noradrenaline | (weight x 0.3)mg in 50ml | 1ml/hr = 0.1mcg/kg/min | 0.01 to 0.5 mcg/kg/min |
| Nitroglycerin | (weight x 3)mg in 50ml | 1 ml/hr = 1mcg/kg/min | 0.5 to 10 mcg/kg/min |
| Nitroprusside | (weight x 1.5)mg in 25ml | 1 ml/hr = 1mcg/kg/min | 0.5 to 8 mcg/kg/min |
| Phenylephrine |  |  | 2-10 mcg/kg IV bolus  Infusion:  1-5mcg/kg/min |

| **Miscellaneous drugs** | |
| --- | --- |
| Dexamethasone | 0.15-0.2mg/kg IV - for nausea and vomiting  0.25-0.5mg/kg IV - for airway oedema, then 0.1mg/kg q6h |
| Dexmedetomidine | 1 mcg/kg IV over 15 min, then 0.2-0.7mcg/kg/hr (prepared as either neonatal concentration of 1 mcg/ml or adult concentration of 4 mcg/ml) |
| Esmolol | 0.5mg/kg IV, repeated as needed |
| Flumazenil | 5 mcg/kg IV every 60 seconds to a max 40 mcg/kg total dose.  Infusion 2-10mcg/kg/hour |
| Frusemide | 0.5-1 mg/kg IV (max 20-40 mg)  Infusion 0.1-1 mg/kg/hour |
| Hydrocortisone | 1-2 mg/kg IV q6h |
| Hyoscine N Butylbromide (Buscopan) | 0.6mg/kg/dose IV 6-8 hourly  >12 years old: 10-20mg 3-4 times daily |
| Levetiracetam (Keppra) | Loading dose 50 mg/kg/dose IV (max 2.5g)  Maintenance: 30-60mg/kg/day divided twice daily |
| Lorazepam | 0.1mg/kg IV, up to 4 mg. May repeat in 5min, for status epilepticus |
| Mannitol 20% | 0.25-0.5g/kg IV (1.25-2.5ml/kg of 20% Mannitol) |
| Metoclopramide | 0.15mg/kg/dose IV q6h |
| Naloxone | 0.002mg/kg/dose for post op sedation  (0.4mg diluted to 20 ml, give 0.1ml/kg/dose, repeat every 2-4 min x 4 if required)  0.01mg/kg, max 0.4mg for opiate overdose  (0.4mg diluted to 10 ml, give 0.25ml/kg/dose, repeat every 2min x 4 if required) |
| Omeprazole | 0.7-3.3mg/kg/day IV/oral once daily to 8 hourly  (max 40 mg/dose) |
| Ondansetron | 0.15-0.2mg/kg/dose 8 hourly (max 8mg/dose) |
| Phenobarbitone | Loading dose 20 mg/kg IV over 30 min, may repeat up to 60-80 mg/kg |
| Phenytoin | Loading dose 20 mg/kg IV over 20 min (max rate 1 mg/kg/min, max dose 1.5g)  May repeat 5 mg/kg x 2 in status epilepticus |
| Promethazine | ≥ 2 years: 0.125-0.2mg/kg oral (max 10mg/dose) TDS |
| Propranolol | 0.1mg/kg IV |
| Ranitidine | 1 mg/kg IV 6-12 hourly |
| Tranexamic acid | Loading 10 mg/kg IV over 1 hour, then infusion at 1 mg/kg/hour.  Loading 25 mg/kg IV over 1 hour, then infusion at 2.5mg/kg/hour for cardiac surgical cases |