DRUG DOSAGES IN PAEDIATRIC ANAESTHESIA

Antibiotics

Note:
Neonatal dosing to be used till post menstrual age (PMA) of 44 weeks.

PMA is equivalent to gestational age + postnatal age. For example, for a baby born at 28 weeks gestation and is now 21 days old, the PMA would be 31 weeks.

For PMA above 45 weeks, please refer to the dosing indicated for child.

All routes are intravenous (IV) unless otherwise specified

Drug	Dosing		Remarks
Amikacin	**Neonates** PMA ≤ 29 wk:		Infuse over 30-60min. <u>Therapeutic levels:</u> Target peak: 30-40 µg/ml Target trough: <10µg/ml (*ideal trough: 4-5µg/ml, especially if existing nephrotoxic drugs or poor renal function)
		≤ 7 days: 18mg/kg q48h 8-28 days: 15 mg/kg q36h ≥ 29 days: 15 mg/kg q24h	
	PMA 30-34 wk:		
		≤ 7 days: 18mg/kg q36h ≥ 8 days: 15 mg/kg q24h	
	PMA 35-44 wk: 15 mg/kg q24h		
	Child:	15-22.5mg/kg/day q8-12h	

	Adult:	15mg/kg/day q8-12h (max 1.5g/day)	

Drug	Dosing	
Ampicillin	Neonates:	50 mg/kg/dose, interval depends on PMA
		PMA ≤ 29 wk: (≤ 28 days: q12h, >28 days: q8h)
		PMA 30-36wk: (≤ 14 days: q12h, >14 days: q8h)
		PMA 37-44 wk: (≤ 7 days: q12h, >7 days: q8h)
	Child:	25-37.5mg/kg/dose q6h
		50 mg/kg for single dose cardiac prophylaxis
Augmentin	Neonates:	<7 days: 30 mg/kg q12h (based on Co-amoxiclav) ≥7 days: 30 mg/kg q8h (based on Co-amoxiclav)

	Child:	30 mg/kg/dose q8h (up to 40 mg/kg/dose q8h)

Drug	Dosing	
Cefazolin	Neonates:	25mg/kg/dose < 2kg: (≤7 days q12h; >7 days q12h) > 2kg: (≤7 days q12h; >7 days q8h)
	Child:	25-30mg/kg/dose q6-8h
	Cardiac Prophylaxis:	50 mg/kg
Ceftazidime	Neonates:	50 mg/kg/dose, interval depends on PMA
		PMA ≤ 29 wk: (≤ 28 days: q12h, >28 days: q8h)
		PMA 30-36wk: (≤ 14 days: q12h, >14 days: q8h)

		PMA 37-44 wk: (≤ 7 days: q12h, >7 days: q8h)
	Child:	30-50 mg/kg/dose q8h for mild-moderate infections 60-100 mg/kg/dose q8h for severe infections/ meningitis

Drug	Dosing	
Ceftriaxone	Neonates:	<2kg: 50 mg/kg/dose q24h ≥2kg: (≤7 days) 50 mg/kg/dose q24h (>7 days) 75 mg/kg/dose q24h
	Child:	25-50 mg/kg q12-24h 100mg/kg/day q12-24h for meningitis (max 2g q12h)
Ciprofloxacin	Child:	10-15 mg/kg/dose q12h
Clindamycin	Neonates:	5 mg/kg/dose, interval depends on PMA
		PMA ≤ 29 wk: (≤ 28 days: q12h, >28 days: q8h)
		PMA 30-36wk: (≤ 14 days: q12h, >14 days: q8h)
		PMA 37-44 wk: (≤ 7 days: q12h, >7 days: q8h)

	Child:	5mg/kg/dose q6-8h
	Adult:	600mg-1.2g/day

Drug	Dosing		Remarks
Cloxacillin	Neonates:	< 2kg: (≤7 days) 50 mg/kg q12h (>7 days) 50 mg/kg q8h > 2kg: (≤7 days) 50 mg/kg q8h (>7 days) 50 mg/kg q6h	
	Child:	25 mg/kg/dose q6h 50 mg/kg/dose q6h in meningitis	
Erythromycin	Neonates:	10mg/kg/dose < 1kg: (≤14 days q12h; 15-28 days q8h) ≥ 1kg: (≤7 days q12h; 8-28 days q8h)	IV infusion over 30-60min.
	Child:	10-12.5mg/kg/day q6h	

Drug	Dosing		Remarks
Gentamicin	**Neonates**		Infuse over 30-60min. Do not mix with ampicillin. <u>Therapeutic levels:</u> Target peak: 8-10 µg/ml Target trough: <2 µg/ml (ideal trough: <1 µg/ml, especially if nephrotoxic drugs or poor renal function)
	PMA ≤ 29 wk:	≤ 7 days: 5mg/kg q48h 8-28 days: 4 mg/kg q36h ≥ 29 days: 4 mg/kg q24h	
	PMA 30-34 wk:	≤ 7 days: 4.5mg/kg q36h ≥ 8 days: 4 mg/kg q24h	
	PMA 35-44 wk:	4 mg/kg q24h	
	Child:	2-2.5mg/kg q8h 5 mg/kg q24h for uncomplicated UTI over 1 month old	

Drug	Dosing		Remarks
Meropenem	Neonate:	20 mg/kg/dose, interval depends on PMA	
		PMA < 32wk: (≤ 14 days: q12h, >14 days: q8h)	
		PMA ≥ 32wk: (≤ 7 days: q12h, >7 days: q8h)	
	Child:	20 mg/kg q8h 40 mg/kg q8h for meningitis	
	For all ages:	20mg/kg/dose for sepsis	

		40mg/kg/dose for meningitis/ pseudomonas sepsis	
Imipenem	Child:	15-25 mg/kg q6h (max 4g/day)	May cause convulsions, adjust dose in renal dysfunction

Drug	Dosing	
Metronidazole	Neonate:	Loading dose 15 mg/kg Maintenance dose 7.5mg/kg/dose, dosing interval depending on PMA
		PMA ≤ 29 wk: (≤ 28 days: q48h, >28 days: q24h)
		PMA 30-36wk: (≤14 days: q24h, >14 days: q12h)
		PMA 37-44 wk: (≤7 days: q24h, >7 days: q12h)
	Child:	7.5-10 mg/kg q6-8h
Piperacillin/ Tazobactam (Tazocin)	Neonates:	50-100mg (piperacillin) /kg/dose
		PMA ≤ 29 wk: (≤ 28 days: q12h, >28 days: q8h)
		PMA 30-36wk: (≤14 days: q12h, >14 days: q8h)

		PMA 37-44 wk: (≤7 days: q12h, >7 days: q8h)
	Child:	<2 months: 80mg Piperacillin /kg/dose q8h
		≥2 months: 80 mg Piperacillin /kg/dose q6h

Drug	Dosing		Remarks
Vancomycin	Neonates:	15mg/kg/dose	Each dose is infused over 60 min.
		PMA ≤ 29 wk: (≤ 14 days: q18h, >14 days: q12h)	
		PMA 30-36wk: (≤14 days: q12h, >14 days: q8h)	
		PMA 37-44 wk: (≤7 days: q12h, >7 days: q8h)	Therapeutic levels: Peak: 30-40 µg/ml Trough: 15-20 µg/ml (complicated infections); 10-15 µg/ml (others)
	Child:	15mg/kg/dose q6h	
	Adult:	2-4g/day q6-12h	

References:

1. *KKH Neonatal Drug Dosing Booklet, 3rd edition (2014), available on KKH intranet*
2. *KKH Paediatric Medicine Clinical Guidelines, Appendix - Drugs – Infections (March 2015), available on KKH intranet*