ROYAL HOSPITAL for SICK CHILDREN, EDINBURGH

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A GUIDE TO SOME PAEDIATRIC SIZES AND DOSES USED IN ANAESTHESIA AND RESUSCITATION

Age	Typical Weights Kg	ETT Bore mm	Length ORAL cm	NASAL cm	Basal fluid ml/kg/hr	Ventilation Settings	Laryngeal Mask	Max size Suction catheter
Prem	2	2.5	8	9.5	3			5
Newborn	3	3	9	11	3	Rate30/min		6
2/12	4.5	3.5	10	11.5	4		1 rarely used	7
6/12	7	3.5	11	12.5	4	Rate25/min	1.5	7
1year	10	4	12	14	4	Rate20/min	1.5	8
18/12	12	4.5	13	15	3		2	8
2	13	4.5 -5	14	16	3		2	8
4	17	5 – 5.5	15	17	3		2	10
6	21	5.5 - 6	16	19	3	Rate16/min	2	10
8	25	6 – 6.5	17	20	2.5	V_T10-15mls/kg	2.5	12
10	31	6.5 - 7	18	21	2.5	Paw 15-25	2.5	12
12	40	7 – 7.5	20	23	2	cm H_2O	3	14

Top up Blood Transfusion:
RCC @4mls/kg/1g rise in Hb reqd
Total BLOOD VOLUME 80mls/kg

Resuscitation in BURNS:
1st 24hrs Parkland Formula
Hartmann's@ 4mls x kg x % area burn
½ over first 8hrs
½ over next 16hrs
In addition to **maintenance fluids**
0.45% NaCl + 5% Glucose
4ml/kg 1st 10kg + 2ml/kg 10-20kg
+1ml/kg each kg after 20kg

ANAESTHETIC DRUGS

Thiopentone	4-6mg/kg
Propofol	2-5mg/kg
Ketamine 2mg/kg	(5-10mg/kgIM)
Suxamethonium	1-2mg/kg
Atracurium	0.5mg/kg
Vecuronium	0.1mg/kg
Mivacurium	0.1-0.2mg/kg
Rocuronium	0.5mg/kg
Glycopyrrolate	0.01mg/kg
Neostigmine	0.04-0.05mg/kg
Glycopyrrolate-Neostigmine 0.5/2.5mg dilute to 10mls then 1ml/5kg	
Fentanyl	2-5mcg/kg
Remifentanil	0.1-1mcg/kg/min
Codeine (IM)	1-1.5mg/kg (not IV)
Morphine	40-100mcg/kg
Alfentanil	20-50mcg/kg
IV Paracetamol	15mg/kg [max 60mg/kg/24]

INFUSIONS

MORPHINE
Body wt in kg = mg in 50mls NaCl
(up to 50mg in 50mls)
Run at **10 - 40mcg/kg/hr = 0.5 -2mls/hr**
If + Cyclizine 1mg/kg then make up in 5% Glucose

RELAXANT/ FENTANYL
Vecuronium 10mg + Fentanyl 500mcg in 10mls at 0.1ml/kg/hr
(gives **Vec 0.1mg/kg/hr + Fent 5mcg/kg/hr**)
Atracurium 50mg + Fentanyl 200mcg in 10mls at 0.1ml/kg/hr
(gives **Atrac 0.5mg/kg/hr + Fent 2mcg/kg/hr**)

SEDATION Midazolam **0.1-0.2mg/kg/hr**
Clonidine **0.1-0.5mcg/kg/hr** (0.3mg/kg in 50mls)

EPIDURAL 0.1% Bupivacaine + Fentanyl 2mcg/ml
0.2 –0.4ml/kg/hr

Magnesium Sulphate 50mg/kg (0.2mmol/kg) dilute to 10%
(100mg in 1ml) with 5% glucose give IV over 10- 15min : 25mg/kg/hr

mcg = micrograms

D Kerr/J McCormack: Anaesthesia & Critical Care, RHSC

RESUSCITATION DRUGS

Adrenaline(1/10,000)	0.1ml/kg
Atropine	0.02mg/kg
Ca Chloride(10%)	0.2ml/kg
Na Bicarb(8.4%)	1ml/kg
{1/2 correct[Base XS x kg x 0.3] x 0.5}	
Glucose(10%)	3 - 5ml/kg
{HYPERKALAEMIA + Insulin 0.1 unit/kg}	

HYPOVOLAEMIC SHOCK:
Initial Fluid Infusion **N.Saline 20mls/kg**
then consider PPS or more saline

DC Defibrillation 4 joules / kg

SEDATION (oral)

Alimemazine	2-3mg/kg [max 90mg]
Diazepam	0.25-0.5mg/kg [max10mg]
Midazolam	0.5mg/kg [max20mg]
Chloral / Triclofos	30-50mg/kg [max2g]
Clonidine	2-4 mcg/kg [premed]
[Weaning sedation	1-5mcg/kg 8hrly]

ANALGESICS

Paracetamol	15mg/kg 4-6hrly [max 90mg/24]
	<3months [max 60mg/24]
Ibuprofen	5-10mg/kg 6-8hrly
Diclofenac(O/PR	1-2mg/kg [max1mg/kg/8hrly]
Codeine(O/PR)	1mg/kg 4hrly [max 240mg/24]
Dihydrocodeine	0.5-1mg/kg 6hrly [max 30mg]
Morphine >1yr	0.2-0.3mg/kg (oral)[max10mg]
Morphine(IM/IV)	<1yr 0.1mg/kg
{reduce IV dose with GA}	>1yr 0.2mg/kg

IV : Dilute dose in 10mls NaCl give slowly

Naloxone	10mcg/kg
Flumazemil	10mcg/kg

A&E [over 1yr only]

Intranasal Diamorphine 0.1mg/kg
In vol of 0.2ml when no IV access

Aminophylline	5mg/kg
Chlorphenamine	0.1-0.25mg/kg
Hydrocortisone	4mg/kg
Furosemide	1mg/kg
Mannitol(10%)	5ml/kg (0.5g/kg)
Cyclizine	1mg/kg
Dexamethasone	0.15mg/kg
Metoclopramide	0.15mg/kg
Ondansetron	0.1mg/kg
Prochlorperazine 1-4yrs	2.5mg PR
5-12yrs	5mg PR

ANTIBIOTICS (Loading Dose)

Amoxycillin	25mg/kg
Ampicillin	50mg/kg
Augmentin	30mg/kg
Benzylpenicillin	30mg/kg
Cefotaxime	50mg/kg
Ceftriaxone	50-80mg/kg
Cefuroxime	30mg/kg
Clarithromycin (Pen allergy)	7.5mg/kg(infusion)
Clindamycin	5mg/kg (over 1/2hr
Flucloxacillin	25mg/kg
Gentamicin	2-5mg/kg(3mg/kg
Metronidazole	7.5mg/kg
Vancomycin	15mg/kg(over 1hr)

* Penicillin allergy or if amoxycillin in prev month

SEIZURES

Lorazepam	0.1mg/kg[max4mg]
Midazolam (buccal / nasal)	0.2mg/kg[max10mg]
Diazepam	0.2-0.3mg/kg[max10-20mg]

LOCAL ANAESTHETICS (max dose)

Bupivacaine 2.5mg/kg/6hrs (1ml/kg of 0.25% or 0.5ml/kg of 0.5%)
Lignocaine 3mg/kg (0.3ml/kg 1%)
+ Adrenaline 7mg/kg (0.7ml/kg 1%)
CAUDAL: 0.25% Levobupivacaine 0.5-1ml/kg
+ Ketamine 0.5mg/kg (10mg/ml) preservative free
or + Clonidine 1-2 mcg/kg
SPINAL: Heavy Bupivacaine 0.5% 0.13ml/kg

CARDIAC

Dopamine: (3mg/kg in 50mls)
Dobutamine : **1ml/hr = 1mcg/kg/min**
(dose 5-20mcg/kg/min)
Adrenaline: (0.3mg/kg in 50mls)
Noradrenaline: **1ml/hr = 0.1mcg/kg/min**
(dose 0.01-2mcg/kg/min)
Prostin (75 mcg/kg in 50mls) **0.4ml/hr=10nanograms/kg/min**
(dose10-50 nanograms/kg/min) **Prostaglandin E2**

VF (shock resistant) Amiodarone 5mg/kg rapid IVbolus
{use 5% glucose if dilution reqd} then 5-15mcg/kg/min

SVT Adenosine 50 – 300 mcg/kg [max 3mg]

DISCLAIMER: all drug doses must be checked in accordance with local prescribing policies