All Need High Flow (100%) OXYGEN

5 Kg

RED

ACUTE AIRWAY OBSTRUCTION

Senior help needed (Anaesthetics/A&E)
Calm Environment.
Close Observation.
ADRENALINE(1:1000) (Neb) **2ml**
may repeat every 10 minutes
BUDESONIDE (Neb):**2mg**

ANAPHYLAXIS

ADRENALINE(1:1000)(**IM**):**0.05ml**
consider repeat in 5 min.
If using auto injector syringe use **150mcg**s
HYDROCORTISONE(IV/IO):**25mg**
CHLORPHENIRAMINE(IV/IO):**1.25mg**
do not use in neonates
(mix with 10 ml 0.9% .saline, give over 1 min.)
IV Adrenaline 1microgram/Kg may be considered but **must** be discussed with Senior/Anaesthetics

WARM FLUID CHALLENGE

100 ml
(consider repeat dose)
Give in **50ml** aliquots in TRAUMA/CARDIAC

DUCT-DEPENDANT CONGENITAL HEART DISEASE

Alprostadil (Prostaglandin E2) (IV/IO)
Initial dose **25 nanograms (0.025mcg)/min** may be increased in **25 nanogram/min** increments up to **100 nanogram (0.1mcg) /min**
****Beware May Cause Apnoeas****

SEPTICAEMIA

Including ? Meningococcal Sepsis,
Significant volume expansion may be required,
(Blood cultures, Bone, CRP, Coag, PCR, Glucose, Blood Gas)
May need ventilation & Inotropes,
CEFOTAXIME(IV/IO): **250mg**

ANALGESIA

MORPHINE(IV/IO):**0.5mg**

HYPOGLYCAEMIA

10% DEXTROSE(IV/IO):**10ml**
Followed by an infusion of 0.9% Saline 5% Dextrose at maintenance volume; adjust dextrose content if required.

FITS/CONVULSIONS

Check Blood Sugar & Temperature
IV/IO access: **LORAZEPAM**(4mg/ml):**0.5mg**
Or **DIAZEPAM** (PR):**2.5mg**
Or **BUCCAL MIDAZOLAM**:**2.5mg**
Repeat after 10 minutes if no improvement
PHENYTOIN (IV/IO):**100mg** over 20 minutes
Consider **PARALDEHYDE** (PR) **2ml** mixed with **2ml** olive oil
Call for anaesthetic help if still fitting when phenytoin is commenced

Senior/ Specialist Supervision Required:

Raised Intracranial Pressure:
20% Mannitol (IV/IO):**12.5ml** over 30 mins
Or Hypertonic Saline 2.7% (IV/IO):**15ml**
Tricyclic overdose with ECG changes:
8.4% Sodium Bicarbonate (IV/IO):**5ml**
SVT rate >220 Following vagal manoeuvres:
Adenosine (3mg/ml) (IV/IO):**0.5mg** then **1mg** then **1.5mg**
VT with pulse: Amiodarone 25mgs over 20mins.
Consider cardioversion if unstable: 5J, 5J, 10J

5 Kg

RED

Head: Neutral

Unresponsive
Not breathing or only occasional gasps

Call resuscitation team
(1 min CPR first, if alone)

CPR
(5 initial breaths then 15:2)
Attach defibrillator/monitor
Minimise interruptions

Assess rhythm

Shockable
(VF/Pulseless VT)

Non-shockable
(PEA/Asystole)

1 Shock
20 J

IV/IO access, intubate

Immediately resume **CPR for 2 min**
Minimise interruptions

Adrenaline
0.5 ml (1:10,000)
alternate cycles

Immediately resume **CPR for 2 min**
Minimise interruptions

CPR

Minimise interruptions

If pulse absent
or < 60/min (with poor circulation)
Depth: **at least**
⅓ rd chest
Rate:
100-120 /min
1 finger breadth above xiphisternum

ET tube size:
Uncuffed 3.5 (± 0.5mm)
Cuffed 3.0 (± 0.5mm)
Monitor ETCO2

When To Stop. The outcome for a child with no signs of life after 30 minutes of non-shockable resuscitation is likely to be very poor. Discontinuation may be justified except in poisoning & extreme hypothermia

Consider **Amiodarone** (300mg/10ml): **0.8 ml** (after 3rd and 5th shock)

Consider **Bicarb** (8.4%): **5 ml**

Consider **Fluid challenge**: **100 ml**

CORRECT REVERSIBLE CAUSES:

Hypoxia, Hypovolaemia, Hyper/hypokalaemia /metabolic, Hypothermia, Tension pneumothorax, Tamponade, Toxins, Thromboembolism

Other Useful Drugs and Information

INFUSIONS:

Dopamine*:
To make standard solution: 15mg/kg in 50ml 5% dextrose
Concentration: 1ml/hr = 5 micrograms/kg/min
Dose Range: 5 – 20 micrograms/kg/min

Dobutamine*:
To make standard solution: 15mg/kg in 50ml 5% dextrose
Concentration: 1 ml/hr = 5 micrograms/kg/min
Dose Range: 5 – 20 micrograms/kg/min

Adrenaline:
To make standard solution: 0.3mg/kg in 50ml 5% dextrose
Concentration: 1 ml/hr = 0.1 micrograms/kg/min
Dose Range: 0.1 - 4 micrograms/kg/min

Noradrenaline:
To make standard solution: 0.3mg/kg in 50ml 5% dextrose
Concentration: 1 ml/hr = 0.1 micrograms/kg/min
Dose Range: 0.1 - 4 micrograms/kg/min

Morphine*:
To make standard solution: 1mg/kg in 50ml 5% dextrose
Concentration: 1 ml/hr = 20 micrograms/kg/hr
Dose Range: 10 - 40 micrograms/kg/hr

Midazolam*:
To make standard solution: 3mg/kg in 50ml 5% dextrose
Concentration: 1 ml/hr = 1 micrograms/kg/min
Dose Range: 1 - 4 micrograms/kg/min

*To be doubled for infants less than 10kg.
Use 0.9% Saline rather than 5% Dextrose to mix infusions in head injury / meningitis / encephalitis / seizure.

Other Useful Drugs and Information (continued):

Alprostadil (Prostaglandin E2):
To make standard solution: 30micrograms/kg in 50ml 5% dextrose
Concentration: 1 ml/hr = 10 nanograms/kg/min
Dose Range: 5 - 20 nanograms/kg/min

Amiodarone:
Initial loading dose 5mg/kg over 20 minutes followed by infusion.
To make standard solution: 15mg/kg in 50ml 5% Dextrose
Concentration: 1ml/hr = 5micrograms/kg/min
Dose Range: 5 – 15 micrograms/kg/min/hour

Aminophylline:
Initial loading dose of 5mg/kg (maximum 500mg) over at least 20 minutes followed by infusion.
To make standard solution: 1mg/ml solution in 5% Dextrose
Concentration: 1ml/kg/hr = 1mg/kg/hr
Dose Range: 0.5 – 1mg/kg/hr

Insulin for DKA:
0.05-0.1units/kg/hour
http://www.bsped.org.uk/clinical/docs/DKAcalculator.pdf

Calcium (for hyperkalaemia, hypocalcaemia and calcium channel blocker overdose):
0.3ml/kg of 10% Calcium Gluconate (i.e. 0.1mmol/kg Ca) to maximum of 4.5mmol (20ml) over 30 minutes **OR**
0.1mls/kg of 10% Calcium Chloride to a maximum of 4.5mmol (6.5mls) over 30 minutes.

Atropine (stat dose after vagal stimulation induced bradycardia)**:**
20 micrograms/kg iv (minimum 100mcg to maximum 600mcg)
Birth – 1 month 15 micrograms/kg iv

GLASGOW COMA SCALE

SUITABLE FOR **UNDER 4 YEARS**

Best = 15, Worst = 3

RESPONSE	SCORE
EYE OPENING	
Spontaneously	4
To verbal stimuli	3
To pain	2
No response to pain	1
BEST MOTOR RESPONSE	
Spontaneous or obeys verbal command	6
Localises to pain or withdraws to touch	5
Withdraws to pain	4
Abdominal flexion to pain (decorticate)	3
Abnormal extension to pain (decerebrate)	2
No response to pain	1
BEST VERBAL RESPONSE	
Alert, babbles, coos, words to usual ability	5
Less than usual words/ spontaneous irritable cry	4
Cries only to pain	3
Moans to pain	2
No response to pain	1

GLASGOW COMA SCALE

SUITABLE FOR **4 YEARS AND OVER**

Best = 15, Worst = 3

RESPONSE	SCORE
EYE OPENING	
Spontaneously	4
To verbal stimuli	3
To pain	2
No response to pain	1
BEST MOTOR RESPONSE	
Obeys verbal command	6
Localises to pain	5
Withdraws from pain	4
Abnormal flexion to pain (decorticate)	3
Abnormal extension to pain (decerebrate)	2
No response to pain	1
BEST VERBAL RESPONSE	
Orientated and converses	5
Disorientated and converses	4
Inappropriate words	3
Incomprehensible sounds	2
No response to pain	1

Normal fluid requirements

Body weight	Fluid req / day (ml/kg)	Fluid req /hour (ml/kg)
First 10 kg	100	4
Second 10 kg	50	2
Subsequent kilograms	20	1

Normal Paediatric Ranges

Age (Years)	Heart Rate / min	Respiratory Rate / min	Systolic BP (mmHg)
<1	110 – 160	30 – 40	80 – 90
1 – 2	100 – 150	25 – 35	85 – 95
2 – 5	95 – 140	25 – 30	85 – 100
5 – 12	80 – 120	20 – 25	90 – 110
>12	60 - 100	15 - 20	100 - 120