

Management of Severe Traumatic Brain Injury (GCS 8 or less)

Neuroprotective measures

- Avoid desaturation
- Avoid hypotension
(See age specific SBP targets)
- Sedate and muscle relax
- 30° head up tilt
Head in midline
- Normothermia
- Normoglycaemia
- Keep Na > 135 mmol/l
(Use 3mls/kg NaCl 3% if needed)
- Phenytoin 20 mg/kg

Systolic Blood Pressure targets (age specific)

< 1 year	> 80 mmHg
1-5 years	> 90 mmHg
5-14 years	> 100 mmHg
> 14 years	> 110 mmHg

Exclude/treat haemorrhage

Titrate peripheral Dopamine or central Noradrenaline to achieve targets

Signs of critically raised ICP

- Unequal pupils
- Unreactive pupils
- Bradycardia/hypertension

Management of critically raised ICP

- Sedate and fully muscle relax
- Ensure collar not too tight
- Hyperventilate to a PaCO₂ of 4.0-4.5 kPa
- Maintain SBP ≥ age specific targets
- Hyperosmolar therapy
NaCl 3% 3 mls/kg
And/or
Mannitol 10% 2.5-5 mls/kg
(0.25-0.5 g/kg)
- Maintain normothermia

A

**Intubate and ventilate
with cervical spine control**

B

**Avoid desaturation
Aim for PaO₂ > 13 kPa
Aim for PaCO₂ 4.5 – 5.0 kPa**

C

**Avoid hypotension
Do not delay CT for arterial/central access
Consider blood after 20ml/kg fluid**

D

**CT head and cervical spine ≤ 30 mins
Institute neuro-protection
Call SORT on 02380 775 502
SORT WILL LIAISE WITH NEUROSURGEONS**

**Time Critical
injury on CT**

NO

**CALL SORT ON
02380 775 502**

**SORT WILL
Liaise with Neurosurgeons
Transfer to PICU**

YES

**Local team to arrange
URGENT TRANSFER**

**SORT WILL
Liaise with Neurosurgeons
Confirm destination**