

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)

IV Levetiracetam 40mg/kg
(max 2.5g) over 5 minutes

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 adrenaline,
phenylephrine or
noradrenaline to achieve
targets

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 early use of blood as indicated**

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**

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