VU EMS
Custom Emergency Medical Solutions

Expeditionary Prehospital TBI Drug Guide:
Treat hypotension prior to treating increased intracranial pressures:

Glasgow Coma Scale		
Best Eye Response (E)	Spontaneous – Opening with blinking at baseline	4
	Opens to verbal command, speech or shout	3
	Opens to pain, not applied to face	2
	None	1
Best Verbal Response (V)	Oriented	5
	Confused conversation, but able to answer questions	4
	Inappropriate responses, words discernable	3
	Incomprehensible speech	2
	None	1
Best Motor Response (M)	Obeys commands for movement	6
	Purposeful movement to painful stimulus	5
	Withdraws from pain	4
	Abnormal (spastic) flexion, decorticate posture	3
	Extensor (rigid) response, decerebrate posture	2
	None	1

Drug options are to be used in conjunction with other basic measures for management of moderate & severe TBI with GCS scores of **3-12**: or physical findings of elevated intracranial pressure (ICP) (papilledema, optic nerve sheath diameter **ONSD>5**, etc.) in addition to oxygen and 110mmhg BP.

Hypertonic Saline For elevated ICP:
Keep sodium (Na) below 160, when no sodium monitoring is available do the following:
Hypertonic Saline (HTS) 3% NaCl 250ml bolus over 20 minutes every 3 hrs. as needed, up to two dosages for elevated ICP. For more than two dosage neurocritical care expert consultation is recommended.

Tranexamic Acid (TXA): CRASH III Study
- 2gm IV/IO administered over 1 minute/ most beneficial in 1st hour post trauma
- 3-hour window after trauma, do not give if 3 hours has passed since trauma.

Analgesia: Decrease the Cerebral Metabolic Rate, decreasing oxygen consumption:

- **Ketamine** Slow 30mg IV/IO Repeat 20mns PRN or **50-100mg** IM/IN Repeat 20-30mns PRN

If casualty is hypotensive avoid all drugs below this point:

- **IV Fentanyl** 50-100mcg q1-2hr PRN ALT 0.5-1.5mcg/kg/h IV Repeat Q30mns PRN

Additionally: Consider adding an anxiolytic: **Midazolam** 1-2mg IV/IO for agitation or anxiety.