

LEGEND

- Decision Point
- Selection
- Diagnostic Step
- Action Item

Traumatic Brain Injury (TBI)

Low Risk?

- No
- Yes

Consult Neurosurgery

If BCVI, hold ASA and repeat CTA in 6 hrs

Apply SCDs and Repeat CT Head 12-24hrs

Low Risk TBI ^{1,2}

- Diffuse Axonal Injury (Non-brainstem)
- Subdural <4mm without mass effect
- Epidural < 4mm
- Isolated subarachnoid hemorrhage Grade 0, 1 or 2
- No more than 1 contusion per lobe
- Largest single contusion ≤ =2cm

OK to start ASA for BCVI prior to repeat CT head

CT Head Stable and Neuro Exam Stable

- No
- Yes

Consider Neurosurgery consult

Repeat CT Head 24hrs

CT Head Stable and Neuro Exam Stable

- No
- Yes

Start Enoxaparin 30mg SC BID

Consult Neurosurgery
 B/L LE screening
 Doppler q7d
 IVC filter if positive for DVT
 Continue use of SCDs

Note: TBI patients in ICU may be enrolled in PROTEST study. See protocol here:
<https://docs.google.com/document/d/1TksML9PygMBH7b11SBVmWaa5eSnhF2YwazB74yUA-Kg/edit?usp=sharing>

Benjamin et al. Pharmacological Thromboembolic Prophylaxis in Traumatic Brain Injuries Low Molecular Weight Heparin Is Superior to Unfractionated Heparin, *Annals of Surgery*. 2017; 266(3): 463-469.

Margolick, J., Dandurand, C., Duncan, K. et al. A Systematic Review of the Risks and Benefits of Venous Thromboembolism Prophylaxis in Traumatic Brain Injury. *Canadian Journal of Neurological Sciences*. 2018; 45(4): 432-444.

Signer, R., Ogilvy, C. & Rordorf, G. (2020). Subarachnoid hemorrhage grading scales. In J. Biller & R. Goddeau, Jr (Eds.), *UpToDate*. Retrieved January 25, 2021, from https://www.uptodate.com/contents/subarachnoid-hemorrhage-grading-scales?search=fisher%20scale&source=search_result&selectedTitle=1~4&usage_type=default&display_rank=1#H7.

Stormann, P., Osinloye, W., Freiman, T. et al. Early Chemical Thromboprophylaxis Does not Increase the Risk of Intracranial Hematoma Progression in Patients with Isolated Severe Traumatic Brain Injury. *World Journal of Surgery*. 2019; 43(11): 2804-2811.