

**LEGEND**

- Decision Point
- Selection
- Diagnostic Step
- Action Item

# Traumatic Brain Injury (TBI)

## Low Risk? ⚠️

No
Yes

Consult Neurosurgery

Apply SCDs and Repeat CT Head 12-24hrs

**Low Risk TBI** <sup>1,2</sup>

- 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

If BCVI, hold ASA and repeat CTA in 6 hrs

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

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](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.