Phenytoin

The current Brain Trauma Foundation recommendation for antiseizure prophylaxis is phenytoin during the first 7 days after traumatic brain injury (TBI)

93 adult patients (43 [46%] No phenytoin group vs. 50 [54%] phenytoin group). The two groups were well matched. Contrary to expectation, more seizures occurred in the PP group as compared with the NP group; however, this did not reach significance (PP vs. NP, 2 [4%] vs. 1 [2.3%], p = 1). There was no significant difference in the two groups (PP vs. NP) as far as disposition are concerned, mortality caused by head injury (4 [8%] vs. 3 [7%], p = 1), discharge home (16 [32%] vs. 17 [40%], p = 0.7), and discharge to rehabilitation (30 [60%] vs. 23 [53%], p = 0.9). However, with PP, there was a significantly longer hospital stay (PP vs. NP, 36 vs. 25 days, p = 0.04) and significantly worse functional outcome at discharge based on Glasgow Outcome Scale (GOS) score (PP vs. NP, 2.9 vs. 3.4, p < 0.01) and modified Rankin Scale score (2.3 ± 1.7 vs. 3.1 ± 1.5, p = 0.02).

Phenytoin prophylaxis may not decrease early posttraumatic seizure and may suppress functional outcome after blunt TBI. These results need to be verified with randomized studies before recommending changes in clinical practice and do not apply to penetrating trauma [1)]

1)
Bhullar IS, Johnson D, Paul JP, Kerwin AJ, Tepas JJ 3rd, Frykberg ER. More harm than good: antiseizure prophylaxis after traumatic brain injury does not decrease seizure rates but may inhibit functional recovery. J Trauma Acute Care Surg. 2014 Jan;76(1):54-60; discussion 60-1. doi: 10.1097/TA.0b013e3182aafd15. PubMed PMID: 24368357.