ABI case

Mr. A, 27 y.o. right hand dominant male had a snowboarding accident (non-helmeted) two weeks ago. As he was alone at the time of the accident, unclear how long down time was. He was found by ski patrol and upon EMS arrival, GCS was 3. No evident facial lacerations or skull fracture. During transfer, he awoke and became agitated. In the ER, GCS was 11. In the trauma bay, he had a generalized tonic-clonic seizure, which was aborted with Ativan. GCS dropped to 8, requiring intubation. Head CT revealed multicompartmental hemorrhages, including bilateral frontal lobe and left temporal lobe contusions, bilateral subdural hematomas, and a subarachnoid hemorrhage. Multiple follow-up head CTs showed stability of the hemorrhages. Neurosurgery recommended non-surgical management.

At 2 weeks post injury, he is transferred from the Intensive Care Unit (ICU) to the regular neurosurgical ward. You are asked to see him to evaluate if he is an inpatient rehab candidate. At this time, chart notes indicate that he is GCS 14 - Eyes (4), Verbal (4) Motor (6), and he continues to be agitated.

1. The family have requested an update about his traumatic brain injury (TBI). How would you grade the severity of his TBI and why?

2. You note that he continues to require physical restraints and haloperidol PRN consistently. *What would be your approach to manage his agitation?*

3. You also note that he is on Keppra 500 mg BID. His sister asked what his risks factors are of having further seizures and how long he should be kept on this medication. What would you respond regarding her questions?

4. With your recommendations, his behaviors and his cognition improve over the next few weeks to a point where he can be transferred to your inpatient rehabilitation unit. On admission, his Montreal Cognitive Assessment (MoCA) score is 17/30 and he presents with low insight and judgement. He initially participates, but after a few days of being on the inpatient rehabilitation unit, the rehabilitation team asks you to reassess him as he wants to leave rehab and go home today, stating it "feels like a prison".

What will you do to assess him? What do you evaluate to assess his capacity and determine if he is safe to return home? NB. There is no formal capacity assessor available.

5. He decides to stay to complete his inpatient rehabilitation. Over the next few weeks in inpatient rehabilitation, he continues to build insight into his impairments. Close to his discharge, he asks you about returning to sport and work as an optician. He is currently independent with his mobility and doing well on higher level balance assessments in PT. As he was previously very active, he is eager to return to his usual physical activities, including snowboarding (before the season ends!), mountain biking and rock climbing. The team notes that he continues to have short term memory difficulty, decreased attention and executive dysfunction.

What are your recommendations regarding return to sport and work?

Be prepared to present your answers to the larger group