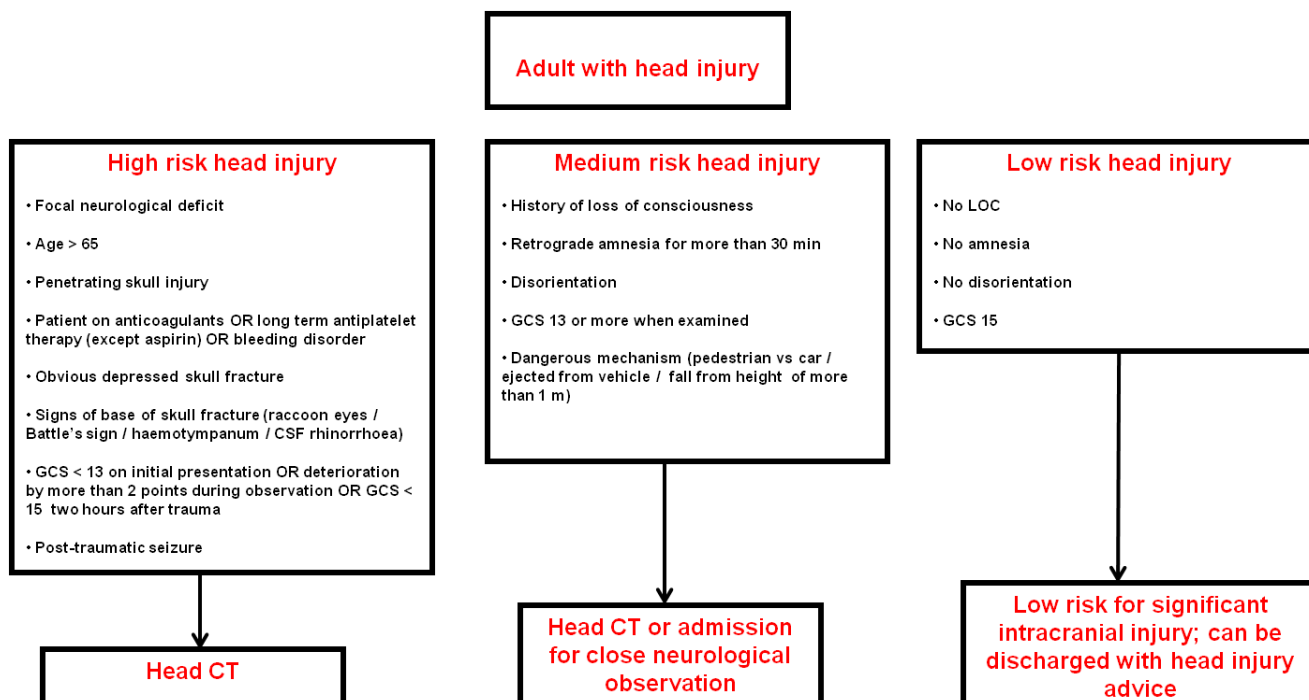


Head injuries in the Emergency Department

ALL closed head injured patients are to be reviewed by Consultant or Registrar.

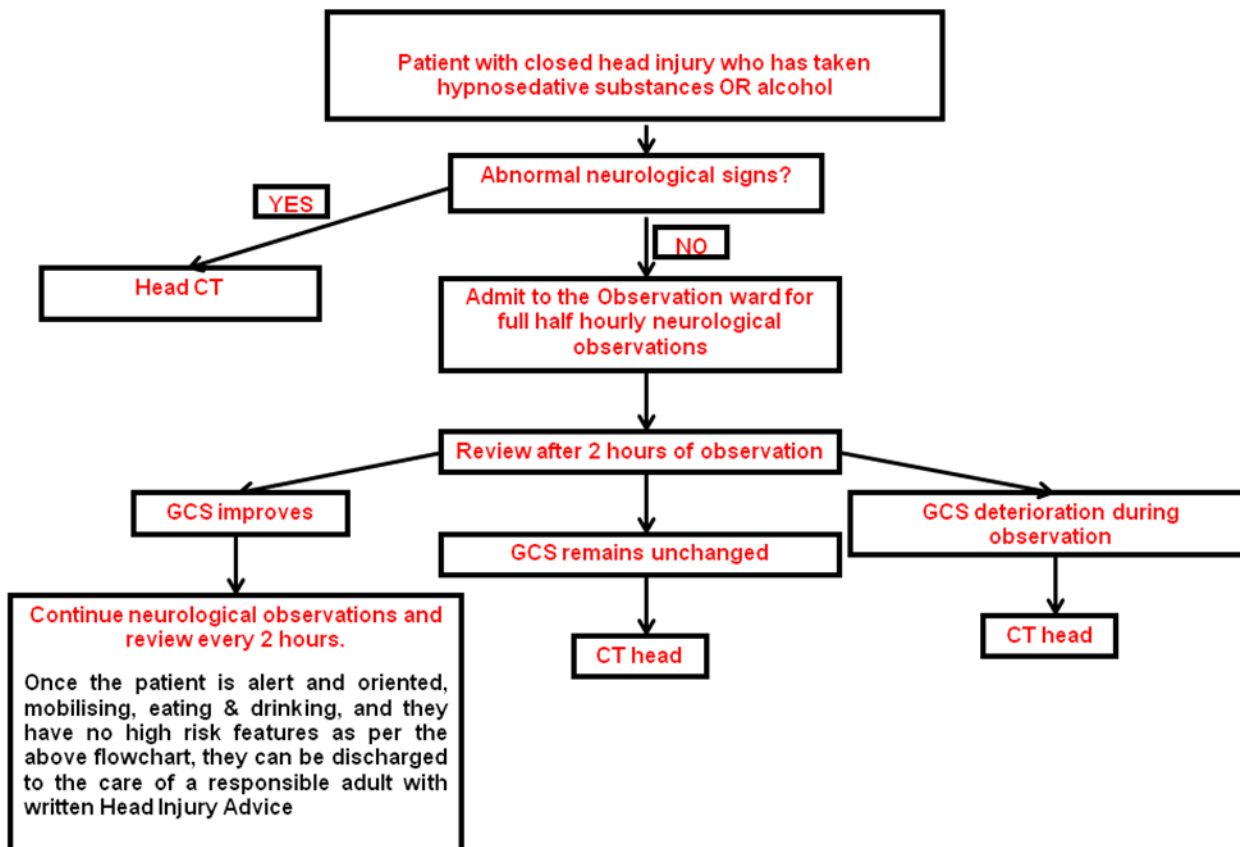
Please follow the flowchart below for risk stratification.



ALL closed head injured patients on anticoagulants or on long term antiplatelet therapy (except aspirin) should have a non-contrast CT head

ALL patients who have altered mental state should be closely examined for signs of head injury.

ALL intoxicated patients who have signs or history suggestive of a head injury should either have a CT head or be closely observed as per the flowchart below.



ALL closed head injured patients who are fully conscious and orientated (time, place and person) AND have no abnormal neurological symptoms or signs or significant amnesia AND have no other high-risk features, may be discharged to the care of a responsible adult with written Head Injury Advice and instructions to return to hospital if they develop concerning symptoms.

Studies show that delayed intracranial bleed occurs in about 6% of head injured patients who are on warfarin or clopidogrel (and the same risk should be considered to exist for patients on antiplatelet agents and new oral anticoagulants). While we cannot do levels or formally assess bleeding risk for all agents, the risk is considered to be higher if the patient is on warfarin and the INR is > 3.0 or if they are on dabigatran or rivaroxaban and the level is > 200 ng/mL.

Patients with medium or high risk head injuries, who have normal CT head and are discharged home, should be followed up by their GP within one week. They should be advised not to play any contact sports till they are reviewed by the GP.

Patients under 65 years of age, who are discharged but have ongoing post-concussive symptoms can be discussed with the State Head Injury Unit here at Sir Charles Gairdner Hospital on 9346 4488 regarding follow up.

References:

1. Diagnostic Imaging Pathways WA Department of Health
<http://www.imagingpathways.health.wa.gov.au/> accessed May 3rd 2014
2. Stiell IG et al. Comparison of the Canadian CT Head Rule and the New Orleans Criteria in Patients with Minor Head Injury. *Journal of the American Medical Association*. 2005;294(12):1511-8.
3. Stiell IG et al. The Canadian CT Head Rule for patients with minor head injury. *The Lancet*. 2001;357(9266):1391-6.
4. Nishijima DK et al. Immediate and delayed traumatic intracranial hemorrhage in patients with head trauma and preinjury warfarin or clopidogrel use. *Ann Emerg Med*. 2012;59(6):460-8
5. Menditto VG et al. Management of minor head injury in patients receiving oral anticoagulant therapy: a prospective study of a 24-hour observation protocol. *Ann Emerg Med*. 2012;59(6):451-5