



Queensland
Trauma Education

TRAUMATIC BRAIN INJURY

Management of mild closed head injury

Role play

Participant resource kit

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Queensland Trauma Education**Traumatic Brain Injury - Management of mild closed head injury: Role play - Participant resource kit
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Queensland Trauma Education

The resources developed for Queensland Trauma Education are designed for use in any Queensland Health facility that cares for patients who have been injured as a result of trauma. Each resource can be modified by the facilitator and scaled to the learners needs as well as the environment in which the education is being delivered, from tertiary to rural and remote facilities.

National Safety and Quality Health Service (NSQHS) Standards



About this training resource kit

This resource is for facilitators to explore the discharge management of mild traumatic brain injury (TBI) after initial assessment and treatment.

Learning objectives

By the end of this session the participant will be able to:

- Demonstrate knowledge of discharge management for mild traumatic brain injury.
- Communicate appropriate discharge advice to patients following a mild head injury.

Supporting resources

- Canadian CT Head Rule - infographic poster.

Overview of mild traumatic brain injury

A traumatic brain injury (TBI) is an injury caused to the brain by an external force and accounts for 50% of trauma deaths and 70% of all road trauma deaths. TBI is classified based on severity including mild, moderate and severe.

The incidence of mild TBI is far more prevalent accounting for approximately 75% of those who experience brain trauma. Knowledge of appropriate assessment and management strategies for patients with mild TBI is essential to risk stratify this cohort of patients.

Further reading

Queensland Health, Clinical Excellence Division - Emergency Department factsheets:

- Concussion
<https://clinicalexcellence.qld.gov.au/sites/default/files/2018-03/concussion-adult.pdf>
- Concussion - returning to work & sport
<https://clinicalexcellence.qld.gov.au/sites/default/files/2018-03/concussion-work-sport.pdf>
- Minor head injury without concussion
<https://clinicalexcellence.qld.gov.au/sites/default/files/docs/resources/emerg-depart/minor-head-injury.pdf>



TRAUMATIC BRAIN INJURY

Canadian CT Head Rule

CT head is only required for minor injury patients with any one of these findings:

High risk (for neurological intervention)

1. GCS score < 15 at 2 hours after injury
2. Suspected open or depressed skull fracture
3. Any sign of basal skull fracture*
4. Vomiting ≥ 2 episodes
5. Age ≥ 65 years

Medium risk (for brain injury on CT)

6. Amnesia before impact ≥ 30 min
7. Dangerous mechanism**
(pedestrian, occupant ejected, fall from elevation)

*Signs of basal skull fracture

- Hemotympanum, 'raccoon' eyes, CSF otorrhea/rhinorrhea, Battle's sign.

**Dangerous mechanism

- Pedestrian struck by vehicle.
- Occupant ejected from motor vehicle.
- Fall from elevation ≥ 1 metre or 5 stairs.

Rule not applicable if:

- Non-trauma cases.
- GCS < 13 .
- Age < 16 years.
- Coumadin or bleeding disorder.
- Obvious open skull fracture.

References

1. DeKosky, S.T., Ikonovic, M.D. & Gandy, S. (2010). Traumatic Brain Injury — Football, Warfare, and Long-Term Effects. *The New England Journal of Medicine*, 363:1293-1296. <https://www.nejm.org/doi/full/10.1056/NEJMp1007051>
2. Menon, D.K, Schwab, K., Wright, D.W. and Maas, A.I. (2010). Position Statement: Definition of Traumatic Brain Injury. *Archives of Physical Medicine and Rehabilitation*, 91:11, 1637-1640. <https://doi.org/10.1016/j.apmr.2010.05.017>
3. van Gils, A., Stone, J., Welch, K., et. al. (2020). Management of mild traumatic brain injury. *Practical Neurology* 2020;20:213-221. <http://dx.doi.org/10.1136/practneurol-2018-002087>

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