Specialized Care Plans Needed for Traumatic Brain Injury Patients

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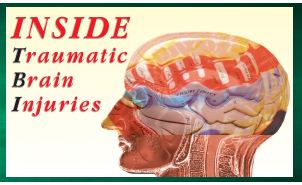


Traumatic Brain Injuries

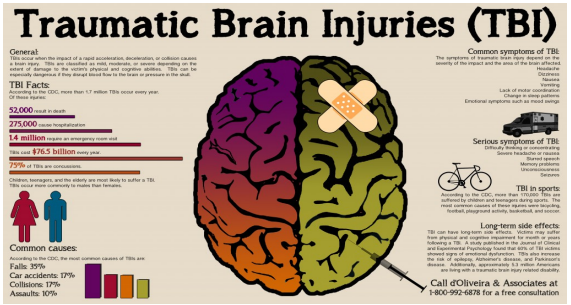
✧Each year in the United States, traumatic brain injuries (TBIs) are responsible for more than **200,000 hospital admissions** and **3.2 billion dollars** spent on healthcare.
✧For children and young adults, TBIs are the **primary cause of death** and disability.
✧ A gap in knowledge exists for the standardized treatment of these patients, which leads to inconsistency in diagnoses necessary for quality patient care.
✧TBI patients are scored based on the Glascow Coma Scale (GCS). GCS of 13-15: mild, GCS of 9-12: moderate, GCS of 3-8: severe.
✧No guidelines are currently available in the United States for the management of moderate TBI patients.

✧Articles were found using CINAHL by searching key words such as "brain injury," "head injury," and "traumatic brain injury."
✧The Level of Evidence in all five articles was graded using: The Johns Hopkins Evidence-Rating Scale.
(Newhouse, Dearholt, Poe, Pugh & White, 2007).

Evaluation of Moderate TBI

- ✧ Descriptive Study
- ✧ Identifies gaps in health care and how they affect patient outcomes.
- ✧ Sample - 40 moderate TBI patients
- ✧ Specific guidelines for standardized treatment would decrease differences in care provided across institutions.
- ✧ Unique subset - Not severe enough to require critical care, yet too critical to be discharged with follow-up care.
- ✧ Level III-A

Bergman, K., Maltz, S., & Fletcher, J. (2010). Evaluation of moderate traumatic brain injury. Journal of Trauma Nursing, 17(2), 102-108. doi:10.1097/JTN.0b013e3181ecc452



Effect of Early Intervention

- ✧ Retrospective Analysis Study
- ✧ Examines the importance of early identification of TBI patients.
- ✧ Sample – 134 moderate to severe TBI patients
- ✧ Early identification leads to an efficient transfer to rehabilitation which is found to be associated with reduced length of stay and higher functional gains at discharge.
- ✧ Initial GCS score, post-traumatic amnesia duration, and time spent in rehabilitation are also factors affecting the level of function measured at discharge.
- ✧ Level III-B

Davenport, A., & Foster, A.M. (2011). The value of early intervention for moderate and severe traumatic brain injury. *Journal of the Australasian Rehabilitation Nurses' Association (JARNA), 14*(3), 14-16.

Effect of an Education Intervention on Nursing Staff

- ✧ Quasi-experimental pretest-posttest study
- ✧ Based on new treatment recommendations emphasizing symptom assessment and brain rest guidelines for optimal recovery.
- ✧ Sample – 25 pediatric trauma nurses
- ✧ Multiple-choice questions regarding knowledge and confidence in patient care were assessed before and 1 month after an educational seminar.
- ✧ Knowledge gaps exist in the care of TBI patients.
- ✧ Keeping trauma staff well educated on current guidelines and best practices is essential.
- ✧ Level II-B

Cook, R.S., Gillespie, G.L., Kronk, R., Daugherty, M.C., Moody, S.M., Allen, L.J., Shebesta, K.B., & Falcone Jr., R.A. (2013). Effect of an educational intervention on nursing staff knowledge, confidence, and practice in the care of children with mild traumatic brain injury. *Journal of Neuroscience Nursing, 45*(2), 108-118. doi:10.1097/JNN.0b013e318282906e

Length of Time Spent in Rehabilitation

- ✧ Retrospective study design
- ✧ Looked back at the electronic medical records of 103 TBI patients to see if length of stay was correctly predicted by the acute rehabilitation coordinator.
- ✧ Length of time spent in rehabilitation is of importance to researchers because of the cost of TBI patients and their treatment plan.
- ✧ Predicting length of stay is difficult and involves many complex variables.
- ✧ Level III-B

Davenport, A., & Foster, A.M. (2013). Early hospital prediction of length of stay in a post-acute inpatient rehabilitation programme for traumatic brain injury. *Journal of the Australasian Rehabilitation Nurses' Association (JARNA), 16*(3), 12-15.

Nursing Interventions

- ✧ Prospective Factorial Survey using quantitative and qualitative analyses
- ✧ Examined the routine interventions performed by nurses, and how patient outcomes were affected.
- ✧ Sample - 67 intensive care unit nurses
- ✧ Without specific guidelines, nurses have a degree of autonomy.
- ✧ 4 categories of interventions: neuro-physiological, psychosocial, injury prevention and maintaining therapeutic milieu.
- ✧ Nurses play in intricate role in patient care that requires extensive knowledge, technical skills and interpersonal skills.
- ✧ Level III-A

McNett, M., & Gianakis, A. (2010). Nursing interventions for critically ill traumatic brain injury patients. *Journal Of Neuroscience Nursing, 42*(2), 71-79.

Summary

✧TBI patients require meticulous care with close monitoring since even a small change can indicate a big problem. Nurses who play a key role in caring for these patients are in need of a vast amount of knowledge to recognize when interventions are needed. When nursing education about patient care is a priority, hospitals can expect efficient care and better patient outcomes.
✧ The research recommends increasing knowledge of specific nursing interventions routinely performed on TBI patients so standardized treatment and best practice guidelines can be established. This knowledge, when put into practice can lead to earlier diagnosis and shorter rehabilitation stay, both of which have resulted in better patient outcomes.
✧ One way these goals could be accomplished would be incorporating educational opportunities at different times of the year for health care workers to attend in order to stay current on best-practice guidelines. Another option would be having clearly documented patient care priorities for workers to follow and reference throughout treatment.

Graphics sources:
Cronk, T. (2010). DOD, VA partnership key in treating brain trauma. www.army.mil
Stone, P. (2013). The basics everyone should know about TBI. *Neurologic Rehabilitation Instituteat Brookhaven Hospital. www.traumaticbraininjury.net*

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