

Effects Of Immunonutrition On Biomarkers In Traumatic Brain Injury Patients In Malaysia: A Prospective Randomized Controlled Trial

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Purpose

Head injury is one of the top three diagnosis leading to intensive care unit admission in Malaysia. There has been growing interest in using immunonutrition as a mode of modulating the inflammatory response to injury or infection with the aim of improving clinical outcome. The aim of the present study was to evaluate the effect of an immunonutrition on biomarkers (IL-6, glutathione, CRP, total protein and albumin) in traumatic brain injury patients.

Material and methods

Thirty six patients with head injury admitted to neurosurgical ICU in University Malaya Medical Centre were recruited for this study, over a 6-month period from July 2014 to January 2015. Patients were randomized to receive either an immunonutrition (Group A) or a standard (Group B) enteral feed. Levels of biomarkers were measured at day 1,5 and 7 of enteral feeding.

Results

Patients in Group A showed significant reduction of IL-6 at day 5 ($p < 0.001$) with concurrent rise in glutathione levels ($p = 0.049$). Patients in Group A also demonstrated a significant increase of total protein level at the end of the study (day 7).

Conclusion

These findings indicate the protein of immunonutrition reducing cytokines and increasing antioxidant indices in patients with TBI. However, further studies incorporating patient outcomes are needed to determine its overall clinical benefits.