

Effect of Targeted Temperature Method on the ICU Length of Stay for Traumatic Severe Brain Injury Patients

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ABSTRACT

Background and aim: Traumatic Brain Injury (TBI) is a major cause of death and disability worldwide. This study aimed to evaluate the role of Targeted Temperature Method (TTM) on decreasing ICU length of stay in severe TBI patients.

Patients and methods: This study involved 40 patients with severe TBI who were divided into two groups; group A which included twenty patients who were treated according to ICU standard care of brain injury and group B which included other twenty patients who had the same care along with TTM application, in an open label study.

Results: TTM group had significant ($P=0.021$) shorter ICU stay compared to standard care group. Treatment with hypothermia, also showed non-significant ($P=0.38$) improvement in the neurological outcome after 24 h initiating the TTM. The initiation of TTM showed significant effect ($p<0.05$) regarding metabolic profile including less hypokalemia, thrombocytopenia and hyperglycemia. No difference was reported between the two groups regarding the mortality or the risk of pulmonary infection.

Conclusion: The TTM causes significant decrease in length of ICU stay, but regarding neurological outcome in patients with severe TBI, there was no statistically significant amelioration. TTM is proved to be a safe intervention.

Keywords: Severe, Targeted temperature method, Traumatic brain injury, Length of stay

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