## عنوان مقاله:

Erythropoietin for Traumatic Brain Injury: A Systematic Review and Meta-Analysis

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### خلاصه مقاله:

Context: Traumatic brain injury (TBI) is a leading cause of mortality and morbidity; despite the use of neuroprotective agents for TBI management, no evidence-based recommendation for any particular neuroprotective agent with favorable outcomes and less adverse effects has been made in TBI management. Objectives: We aimed to assess the efficacy of erythropoietin (EPO) use for TBI management. Data Sources: This study is part of a review on neuroprotective agents used for traumatic brain injury: A systematic review and meta-analyses was done, based on a wide search strategy incorporating information from Cochrane CENTRAL, MedLine/PubMed, SCOPUS, Thomson Reuters Web of Science, SID.ir, Barekat Foundation, and clinicaltrials.gov databases up to September of, Yold. Study Selection: The present study limited the retrieved search results only to those using EPO for TBI management. Data Extraction: The retrieved randomized clinical trials (RCTs) were assessed for their quality of reporting according to the consolidated standards of reporting trials (CONSORT) checklist prior to extracting the data for meta-analysis. The meta-analyses in this review was conducted using the extended Glasgow outcome scale (GOS-E) for acute TBI patients, mortalities, and adverse-effects. Results: Four RCTs were retrieved on EPO use for acute TBI, and two of them were kept for the final analysis. The analysis of the enrolled ۶۴۵ participants in these studies showed insignificant but slightly better outcomes in the placebo group, while a significant reduction in mortality rates among EPO users was observed. Slightly better outcomes in vascular and non-vascular side-effects were also observed in the intervention group. Conclusions: EPO may be considered as effective in reducing TBI mortality and vascular sideeffects, while there is no evidence to support any benefits in other outcomes or for the elimination of non-vascular side-effects. Further studies, especially well-designed phase-III dose-controlled trials, are needed for building a .stronger body of evidence for recommending the use of EPO for acute TBI

# كلمات كليدى:

head injury, Traumatic Brain Injury, Neuroprotective Agent, Erythropoietin, review

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