Efficacy of Acupuncture Therapy for Facilitating Recovery in Comatose Patients: A Systematic Review of Randomized Controlled Trials

Mohammad Hasan Mehrafza[1], Alireza Iraj[1], Minoo Sabet Nejad[1], Arefeh Sayyar[1], Lida Ya'ghoub Manesh[1], Arpi Manookian[2*]

[1]Student Scientific Center, Tehran University of Medical Sciences, Tehran, Iran
[2]School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran

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***Corresponding Author:**
School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran

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ABSTRACT

Introduction: Coma, a state of profound unconsciousness, is a serious medical condition that can result from various causes, including traumatic brain injury (TBI). The recovery process from a coma is often challenging and unpredictable, with limited treatment options. Acupuncture therapy (AT), an ancient Chinese medical practice, has been proposed as a potential complementary treatment for promoting recovery from coma. The present systematic review aimed to evaluate the effectiveness of AT in promoting recovery from coma in patients with TBI.

Search Study: This study followed PRISMA guidelines and Cochrane systematic review principles. Scholarly databases, including PubMed, Scopus, and Web of Science, were searched without time limitations. Additionally, grey literature was explored using the Google Scholar search engine. Keywords such as "Acupuncture Therapy", "Coma", "recovery," and their related synonyms were used. Inclusion criteria encompassed randomized controlled trials (RCTs) focusing on evaluating the effect of acupuncture on patients with a Glasgow Coma Scale (GCS) score of under eight due to TBI compared to control groups. Exclusion criteria included review articles, observational studies, letters to editors, and articles lacking primary data or clear method descriptions. Two authors independently performed screening and data extraction, and any disagreements were resolved through consensus involving a third author. The ROB2 critical appraisal tool was used to assess the quality of the included articles, and the final data were presented in an extraction table.

Results: A total of 398 articles were initially identified, with 63 duplicates and 325 irrelevant titles and abstracts removed, resulting in the inclusion of 10 RCTs in the study. Significant differences between the intervention and control groups were observed in several key outcomes, including improvements in the GCS (n = 8), Glasgow Outcome Scale (n = 3), Coma Recovery Scale(n = 5), Barthel Index (n = 4), and Modified Ashworth Scale (n = 1). Additionally, reductions in length of stay in the ICU and hospital (n = 1), wake-up time (n = 1), lowering the health care utilization cost (n = 1), as well as the incidence of coma-related complications (n = 1) were observed.

Conclusion and Discussion: AT shows potential in promoting recovery from coma in TBI patients, but evidence is limited. High-quality RCTs with larger sample sizes and standardized protocols are needed to confirm their effectiveness.

Keywords: Acupuncture therapy, Systematic review, Traumatic Brain Injuries

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