META-ANALYSIS: EFFECT OF TRANSCUTANEOUS ELECTRIC NERVE STIMULATION UPTAKE DURING PREGNANCY ON LABOR PAIN

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ABSTRACT

Background: Transcutaneous electrical nerve stimulation (TENS) therapy is a non-invasive peripheral stimulation technique that involves the use of low-voltage electric currents to treat pain. It is widely available in hospital settings and has been proposed as a means of reducing pain in labor. This study aimed to examine the effect of transcutaneous electric nerve stimulation uptake during pregnancy on labor pain.

Subjects and Method: A systematic review and meta-analysis was conducted by collecting articles from PubMed, Google Scholar, and Science Direct databases. Keywords used "pregnancy" OR “pregnant" AND "pregnant women" AND "pregnant" AND "Transcutaneous electrical nerve stimulation" AND "labor pain" AND "Randomized Controlled Trial". Article search is carried out by considering the eligibility criteria, including population= pregnant women, intervention= transcutaneous electric nerve stimulation, comparison= common pregnancy care, and outcome= labor pain. The inclusion criteria were full text, articles were published from year 2001 to 2021, and reported mean and standard deviation. Articles that met the criteria were analyzed by Revman 5.3.

Results: A meta-analysis using 5 primary studies showed that transcutaneous electric nerve stimulation reduced labor pain 0.78 units than common pregnancy care (SMD= -0.78; 95% CI= -1.92 to 0.37; p= 0.190).

Conclusion: Transcutaneous electric nerve stimulation reduces labor pain.

Keywords: transcutaneous electrical nerve stimulation, labor pain

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