

Investigating the simultaneous effect of TENS electrical stimulation at points LI4 and SP6, and premature rupture of the amniotic sac, on the progress of labor in primiparous women: A clinical trial

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Abstract

Background and Objective: The lack of progress during labor can cause fear and anxiety, especially in first-time mothers. This can lead to stalled labor and increase the likelihood of cesarean delivery. Study on how premature rupture of amniotic sac affects labor progress in primiparous women by investigating nerve movement in LI4 and SP6 areas.

Methods: This clinical trial, conducted between 2022-2023 at Mousavi Zanzan Hospital, involved 124 primiparous women who were selected through a simple random sampling method (lottery). The women were divided into three groups of 42 people each, which included LI4, SP6, and control groups. The progress of labor was monitored and recorded in the labor sheet based on clinical examinations. The collected data was analyzed, and a significance level of $p < 0.05$ was considered.

Results: In terms of background factors such as residence, education, occupation of mother and wife, decision to get pregnant and participation in birth preparation classes, there was no significant difference observed. ($p\text{-value} > 0.05$). During the initial four hours, there was no statistically significant difference observed between the three groups in regards to the condition of the water bag ($p\text{-value} > 0.05$). However, from the fifth hour onwards, there was a significant difference observed between the groups ($p\text{-value} < 0.001$). The study also observed a statistically significant difference in the labor progress rate among the three groups for 5 hours and later ($p\text{-value} < 0.05$). The duration of labor progress in the LI4 group was found to be significantly shorter (5 hours and 15 minutes) than in the SP6 group and the control group (6 hours and 30 minutes) ($p\text{-value} < 0.003$).

Conclusion: The use of TENS in specific acupressure points during rupture of the water sac can shorten labor, particularly in point LI4.

Keywords: Transcutaneous electrical nerve stimulation, Labor duration, SP6 acupoint, LI4 acupoint