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A Pilot Study on the Efficacy of Transcutaneous Electrical Nerve Stimulation (TENS) in Labour Pain

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Introduction

Modern trend of labour pain management is towards non-pharmaceutical methods. A systematic review and meta-analysis suggested that the use of a birth ball during labour can reduce pain level. However, not every labouring woman can be mobilized. Labour TENS can then offer alternate pain relief in this group of women. Previous studies of TENS over acupuncture points of limbs have reported positive results in relieving labour pain though there is only limited studies. TENS analgesia has potentially many advantages to women in labour. It is non-invasive, does not affect the conscious level, is readily reversible and can be controlled by the labouring women.

Objectives

To evaluate the efficacy of TENS in relieving labour pain and low back pain (LBP) for women who received oxytocin.

To evaluate the efficacy of labour TENS on management of nausea, dizziness and stress for women who received oxytocin.

Methodology

Midwives screened suitable cases and got verbal consent from pregnant women for TENS in labour ward. Physiotherapist applied TENS with a frequency of 100Hz, burst frequency of 2 Hz and pulse duration of 0.2ms at LI 4, PC 6, SP6 and SP8 points. The current intensity was turned up to a level that provided a comfortable tingling sensation for 120 minutes. Physiotherapists captured the intensity of labour pain, low back pain, nausea, dizziness and stress level before the application of TENS. Reassessment of these parameters, the satisfaction level and willingness to have the same treatment again would be completed on interview after babies were born.

Result

73 women with average age of 31.49 ± 4.40 years completed the trial. Wilcoxon Signed Ranks Test was used to determine the difference in the above-mentioned parameters pre and post TENS treatment. There was a significant decrease in labour

pain intensity ($P=0.000009$), low back pain intensity ($P=0.000001$), level of nausea ($P=0.000006$) and level of stress ($P=0.00034$) after the TENS treatment. The average satisfaction level after TENS was 6.92 ± 2.22 . There were 89% of patient willing to use labour TENS again in the future. Labour TENS has significantly reduced level of labour pain, low back pain, nausea, dizziness and stress level.