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Original Research Article

Immediate Effect of TENS on Painful Post-Partum Uterine Contractions in Primipara

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ABSTRACT

Background: The antinociceptive action mechanism behind TENS has been suggested to be based on the afferent activity set up by TENS, which inhibits the nociceptive transmission in the spinal cord through pre- as well as postsynaptic inhibitory mechanisms. Breastfeeding provides age specific nutrients, immunological factors, and antibacterial substances.
Objective: To find out the immediate effect of TENS on painful post-partum uterine contractions in primipara.
Methodology: 60 samples were randomly selected according to inclusion criteria, one to one allocation were done to divide into 3 groups.
Results: In Group A mean NRPS Pre 8.05 ± 0.3940 and post 1-0.3078 and P Value <0.0001, in group B Pre 8-0.000 and Post 1-0.3078, P Value <0.0001, in group C Pre 7.95 ± 0.3940 Post 1.05 ± 0.2236 P Value <0.0001
Conclusion: In this study, we concluded that high TENS, Low TENS and breast feeding equally effective on pain and anxiety in post-partum primipara.

Key Words: TENS, Primipara, NPRS, Hamilton Anxiety Scale, Breastfeeding

INTRODUCTION

Breastfeeding in the postpartum period is known to induce intense uterine contractions resulting in intensive pain in the abdomen. The uterine contractions seem to be mediated via the release of oxytocin in response to the stimulation of the nipple. The antinociceptive action mechanism behind TENS has been suggested to be based on the afferent activity set up by TENS, which inhibits the nociceptive transmission in the spinal cord through pre- as well as postsynaptic inhibitory mechanisms. [1] Transcutaneous electrical nerve stimulation (TENS) is widely used for chronic or postoperative pain control, either replacing or complementing analgesic drugs, and is based on the gate theory of pain proposed by Melzack and Wall in 1965. It is further thought that by reducing anxiety, increasing a sense of control and by providing distraction, TENS increases a woman's sense of well-being and thereby reduces pain in labour. [2] As TENS may provide relief from pain, it may help to avoid adverse effects related with pharmacological analgesia. [3]

TENS is a form of electrical current that can be applied to the skin with the aim of providing pain relief. The physiological intention of TENS is to generate a muscle twitch which is believed to increase activity in small diameter afferent nerve fibres in

muscles leading to activation of descending pain inhibitory pathways. [4]

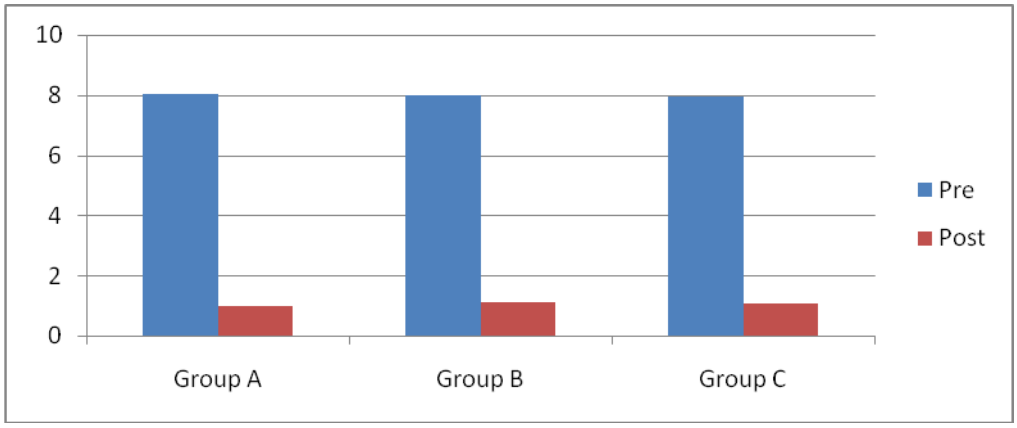
Transcutaneous electrical nerve stimulation (TENS) has been used to diminish postoperative pain1 and many forms of chronic pain with reportedly good results. There have been few reports of the use of TENS during childbirth in the physical therapy literature. [5]

To improve the effect of TNS, we suggested that stimulation should also be given over the lower abdomen in order to reduce anterior pain. [6] There is no evidence that TENS causes any harm to mother and baby. TENS stimulates A-beta fibers which are thick fibers with low threshold and are related to touch sensation. Based on gate-control theory, stimulation of A-beta fibers inhibits transmission of action potential to A-delta and C fibers in the dorsal horn of the spinal column. This, in turn, inhibits transmission of pain to brain centers. [7] Uterine contraction in breastfeeding the TENS also induced contraction but helps in reduces pain hence we need to study immediate effect of TENS on painful post-partum uterine contraction in primipara. [8]

METHODS

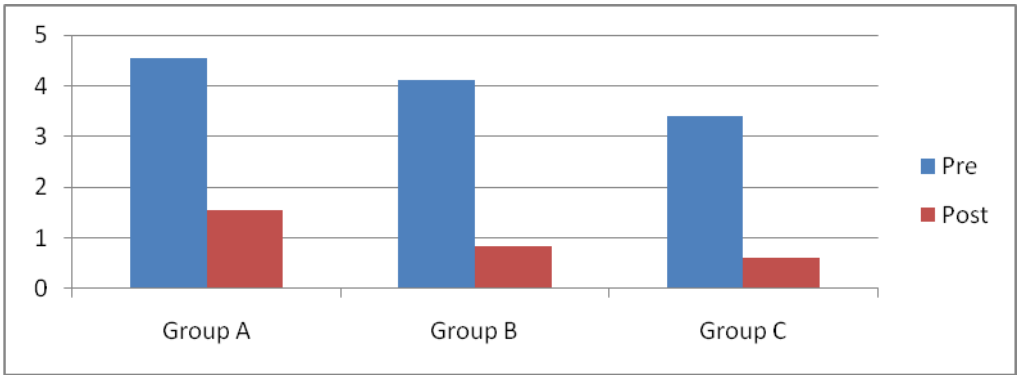
In this experimental study 60 samples were randomly selected according to inclusion criteria, one to one allocation was done to divide into 3 groups. Group A was given 20 minutes for low-intensity and high-frequency of TENS. Treatment was given for 3 days after baby birth. Group B was given low TENS for 20 minutes Group C: was Breast Feeding Group (Control Group)

RESULT



Graph No.1

Interpretation: Graph 1 that in Group A mean NRPS Pre 8.05 ± 0.3940 and post 1-0.3078 and P Value < 0.0001 , in group B Pre 8-0.000 and Post 1-0.3078, P Value is <0.0001, in group C Pre 7.95 ± 0.3940 Post 1.05 ± 0.2236 P Value is <0.0001.



Graph No.2

Interpretation: Graph 2 interprets that in Group A Mean Hamilton Anxiety Test was in Pre 4.55± 1.317 and in post 1.55± 0.7592, P Value <0.0001, in group B was 4.1± 0.9679, post was 0.85± 0.5871 and P Value <0.0001 in group C was in pre 4 ± 1.142, post 0.6 ± 0.5982 and P Value is < 0.001.

DISCUSSION

In Graph 1 we are shown only females patient and the age groups in Group A there are 20-27 age groups are there and age mean SD is 23.9 ± 2.049, group B there are 20-27 age group are there and mean SD is 24.4 ± 2.186 and group C there are 20-27 age group are there and is mean SD 23.75 ± 2.074.We found in Graph 2 was NPRS interprets that in Group A was high TENS we found that Pre score was 8.05% and post was 1 % and mean SD is 8.05 ± 0.3940 and post score 1-0.3078 and P Value < 0.0001 and in group B was low TENS we found pre score is 8% and post was 1.1% and mean SD was Pre 8-0.000 and Post 1-0.3078,and there P Value is <0.0001, In group C was Breastfeeding pre score is 7.95% and post was 1.05% there mean SD was Pre 7.95 ± 0.3940 Post 1.05 ± 0.2236 P Value is <0.0001. Patient selects a number between 0 (no pain) and 10 (extreme pain or other label) to rate current pain intensity at rest or with activity. What do the results mean? Higher score = more intense pain MDC: 3 points (or 27%) in patients with musculoskeletal problems receiving physical therapy MCID: For OA and low back pain, MCID is 30%7 and post-orthopaedic surgery is 29%. And in previous study he found that Dr. Marie Westby Validity: Concurrent validity – excellent, highly correlated to the Visual Analogue Scale (VAS); Face, convergent and divergent validity– excellent, better than the VAS and McGill Pain Questionnaire in post-surgical patients (mean age = 52 years) Reliability: Test-retest – excellent, in literate and illiterate patients with rheumatoid arthritis1 and chronic pain. In Graph 3 there is Hamilton Anxiety scale in that we found interprets that in Group A was high TENS we found that pre score was 4.55% post was 1.55% and mean SD was Pre 4.55± 1.317 and in post 1.55± 0.7592, and is P Value <0.0001, in group B was low TENS we found in that pre score was pre 4.1% and post was 0.85% and mean SD was 4.1± 0.9679, post was 0.85± 0.5871 and P Value <0.0001 in group C was Breastfeeding pre score is 3.4% and post 0.6% and mean SD was in pre 4 ± 1.142, post 0.6 ± 0.5982 and P Value is < 0.001.

CONCLUSION

In this study, we concluded that high TENS, Low TENS and breast feeding equally effective on pain and anxiety in post-partum primipara.

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