

Effect of Transcutaneous Electrical Nerve Stimulation on Pain, Inspiratory Capacity and Cough in Patients Undergone Median Sternotomy

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ABSTRACT

Introduction: Median sternotomy is the thoracic incision, which is used to gain access to the heart and mediastinal structures. A significant reduction in inspiratory capacity and coughing out is reported in patients after Median Sternotomy. Pain is considered as one of the most relevant factor for influencing the reduction in inspiratory capacity and coughing. TENS is a low frequency modality used to relieve pain and is been reported to be effective in reducing post-operative pain and improving inspiratory capacity and coughing and avoiding any pulmonary complications.

Aim: To see the effect of transcutaneous electrical nerve stimulation (TENS) on pain, inspiratory capacity & cough (PIC score) in post median sternotomy patients.

Method: This was a randomised controlled trial enrolling 30 patients who underwent median sternotomy, they were divided two groups, group A (experimental) & group B (control) each group had(n=15) patients. Patients' PIC score was assessed pre intervention, Conventional TENS was applied from post-operative day 1- post-operative day 5 and on post-op day 5 PIC score was again assessed.

Result: Baseline for outcome measure PIC score were matching between two groups ($p=0.965$). While a significant improvement was observed in both groups post intervention, with more improvement in group A ($P=0.02$).

Conclusion: The present study concluded that Conventional TENS is effective in reducing pain and improving inspiratory capacity and coughing (PIC Score) in patient's undergone median sternotomy.

Keywords: Sternotomy, TENS, PIC score.

