

5th International Conference and Expo on

Novel Physiotherapies

March 19-20, 2018 | Berlin, Germany

Effectiveness of transcutaneous electrical nerve stimulation in management of neuropathic pain in patients with post traumatic incomplete spinal cord injuries, at paraplegic center, peshawar, pakistan

Amir Zeb

Paraplegic Center, Pakistan

Introduction: Neuropathic pain is a common secondary complication following spinal cord injury and is associated with incredible human sufferings and financial costs. The objective of this study was to determine the effectiveness of transcutaneous electrical nerve stimulation (TENS) in management of neuropathic pain in patients with post traumatic incomplete spinal cord injuries.

Methods: A Quasi-experimental study was conducted at Paraplegic Centre, Peshawar. 60 incomplete spinal cord injured patients from both genders having age 18 to 70 years were recruited for the study. Patients with associated traumatic brain injury or any other major complication were excluded from the study. TENS was used with high frequency of 80 HZ. Time for one session was 45 minutes, while there were two sessions per day i.e. morning and evening session. TENS was applied for four consecutive days i.e. Monday, Tuesday, Wednesday, and Thursday. Each and every patient who participated in the study was followed for eight weeks. Pain intensity was measured by using VAS (Visual analogue scale) before and after the application of TENS. The data were analyzed using SPSS version 20.

Results: A total of 60 subjects with mean age 52.64 ± 0.48 (ranged from 20-60 years) participated in the study. There were 25% female subjects while remaining 75% subjects were male. The mean decrease in the pain intensity was seen through the array of intervention in consecutive weeks of follow up. At base line week one, the mean pain score was 6.45 which were decreased to 4.77 post intervention at day one and 3.48 at day four respectively. The similar trend was observed in each follow up weeks, on first day of week eighth the mean pain score was 3.78, which further decreased in regular fashion and reached to 1.94 ± 1.67 at the end of day four of week eight. Difference in mean pain score was recorded in each session of transcutaneous electrical nerve stimulation. During the consecutive therapy sessions with TENS, the pain intensity decreases in a linear fashion and there are significant difference ($p < 0.05$) between pre and post treatment sessions.

Conclusion: TENS is a useful and safe adjuvant therapy in patients with spinal cord injuries. Fluctuation at each new day was reported in the present study, but as a whole TENS in patients with post-traumatic incomplete spinal cord injuries is an effective tool in the management of neuropathic pain. Consistent and long term therapy/rehabilitation with TENS in patients with post-traumatic incomplete spinal cord injuries is recommended.

amir_zeb45@yahoo.com