

A MULTI-CENTRE OPEN PROSPECTIVE STUDY OF PERCUTANEOUS ELECTRICAL NEURO-STIMULATION IN CHRONIC PAIN

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Background:

Chronic pain conditions are a common problem despite conventional analgesia. According to the gate control theory of pain, percutaneous electrical neuro-stimulation (PENS) may be expected to reduce these hyperalgesiae. PENS is a relatively new electrical therapy for pain relief and its assessments have been limited. It is similar in practical concept to transcutaneous electrical nerve stimulation (TENS) but differs in that needle-like probes are inserted percutaneously into an area of tissue, and then stimulated. Furthermore, it is able to stimulate at high (100Hz) and low (2Hz) frequencies in a rapidly alternating fashion.

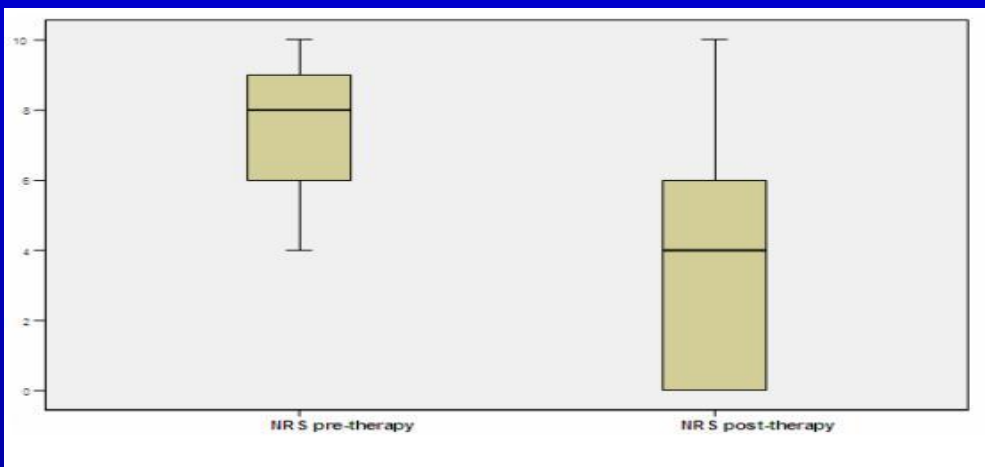
Aim:

To investigate the effect of PENS on pain intensity recorded by the numerical rating scale (NRS) in patients with chronic pain.

Methods:

The NRS for pain has been prospectively recorded in 35 patients with various chronic pain conditions scheduled for PENS. All had been unresponsive to conventional and adjuvant analgesic medications and to local anesthetic/steroid infiltrations. The NRS was measured twice, immediately before and 1 - 7 days post-therapy.

Results:



[Box-and-whisker plot: NRS pre & post-therapy]

The median NRS changed from 8/10 pre-therapy to 4/10 post-therapy, $Z = -4.521$, $n = 35$, $P < 0.0005$ (2-tailed) (Wilcoxon matched pairs signed rank sum test).

Conclusion:

In this study, we have found that percutaneous electrical neuro-stimulation produces a clinically and statistically significant reduction in pain intensity in the short term in patients with chronic pain. A randomised controlled trial is warranted.