A multi-centre open prospective study of Percutaneous Electrical Neuro-Stimulation in Post-Surgical Scar Pain

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Introduction

Post-surgical scar pain is 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. However, it is relatively new and its assessments have been limited.

Aim

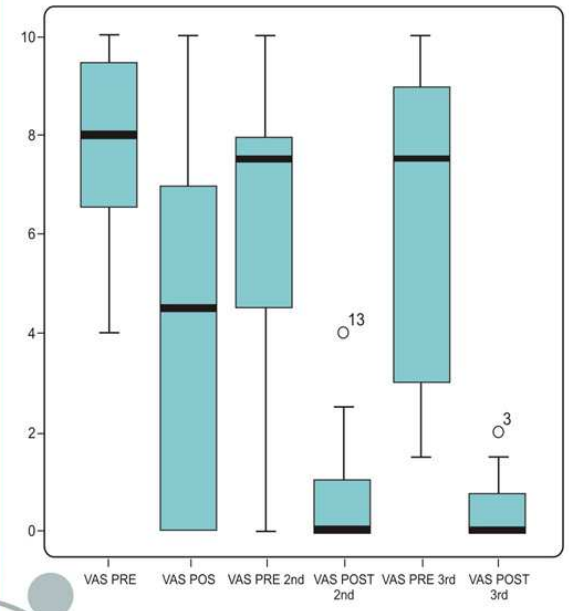
To investigate the effect of PENS on pain intensity recorded by the visual analogue scale (VAS) in patients with post-surgical scar pain.

Methods

We have prospectively recorded the VAS for pain in 22 patients with long standing post-surgical scar pain scheduled for PENS. All had been unresponsive to conventional and adjuvant analgesic medications and to local anesthetic/steroid infiltrations. The VAS was measured immediately before and 1 - 7 days post-therapy. We have similarly measured the VAS of those patients who had repeated therapy.

Results

The median VAS for the first therapy changed from 8/10 pre-therapy to 4.5/10 post-therapy. Z= -3.58, P< 0.0005 (2-tailed), n=22.
The median VAS for the second and third therapies changed from 7.5/10 pre-therapy to 0/10 post-therapy in both cases (Z= -2.67, P= 0.004 (2-tailed), n=10) and (Z= -2.38, P= 0.016 (2-tailed), n=7) respectively (Wilcoxon matched pairs signed rank sum test).



Graph: Visual analogue scale results.

Conclusion

In this multi-centre open prospective study, we have found that Percutaneous Electrical Neuro-Stimulation produces a clinically and statistically significant reduction in pain intensity, repeatedly in patients with post-surgical scar pain. A randomised controlled trial is warranted.

Key words/subject of abstract:

Post-surgical scar pain, electrical neuro-stimulation, gate control theory.

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