Non-noxious, superficial warmth stimulation vs. transcutaneous electrical nerve stimulation for pain relief in women with fibromyalgia

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TENS and non-noxious warmth stimulator (Appilox).

Conclusion

Sensory stimulation with non-noxious superficial warmth and HF TENS is effective in relieving pain intensity in women with FM compared to base-line values. Patients rated the short- and long-term effectiveness of the two stimulation modalities to be similar. If the patients were to choose type of stimulation, more patients preferred treatment with non-noxious warmth.

Introduction

A pharmacological approach is the most commonly used for pain in fibromyalgia (FM). These are unfortunately associated with adverse events. Treatment with sensory stimulation for pain relief has not yet been assessed in patients with FM. One advantage with sensory stimulation is the low frequency of unwanted side effects.

Objective

To assess effects of sensory stimulation with transcutaneous electrical nerve stimulation (TENS) and non-noxious, superficial, warmth.

Method

32 female patients with FM were treated with high-frequency (HF) TENS and non-noxious superficial warmth (Appilox) in a randomised, cross-over design.

Each treatment period lasted approx. 3 weeks and the effect on pain intensity was evaluated usin a 0-100 numerical rating scale (NRS).

The study was approved by the Regional Ethics Approval Board in Stockholm.

Results

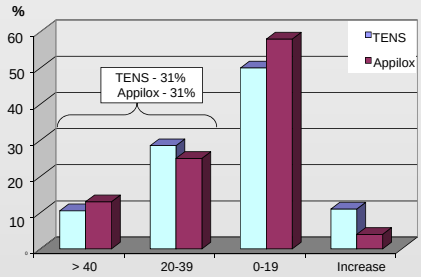

Figure 2. Change in ratings of pain intensity in NRS categories.

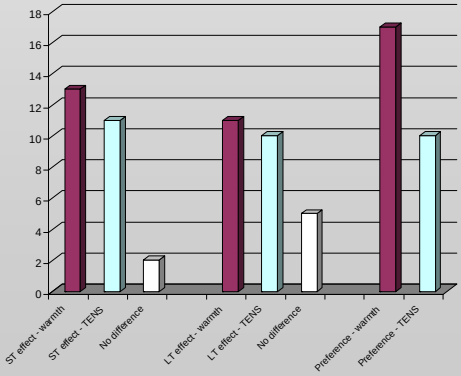

Figure 3. Subjective report of stimulation effeciveness and preference

Treatment with high-frequency TENS and non-noxious superficial warmth both reduced pain significantly compared to baseline values, p=0.001 and p<0.001 respectively.

The number of responders on the two treatment modalities was equal with 31% reporting a decrease in pain intensity of 20 units or more on a 0-100 NRS.

For subjective reports of long- and short-term effects of TENS and non-noxious warmth stimulation similar effects were reported. However, more patients would choose non-noxious warmth (53%) compared to TENS (31%) if beeing to choose treatment for continuing stimulation.

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