LETTERS

Treatment of chronic pain with an auricular acupuncture device (P-Stim) in Singapore

The P-Stim (Biegler GmbH, Mauerbach, Austria) is a portable auricular electroacupuncture stimulation device used for the treatment of pain. Compared to conventional acupuncture, it has the advantage of continuous auricular stimulation for up to 4 days. Its tolerability and efficacy has been demonstrated in studies involving European patients with chronic pain.\(^1\)\(^2\) However, no data exists regarding its use in patients living in the tropics, where the weather tends to be hot and humid year-round. These are factors that may affect the wearable of P-Stim, especially if it’s to be worn over a prolonged period of time. Here we report the use of P-Stim in a series of subjects with chronic pain in a tropical country like Singapore.

METHODS

Nine subjects with chronic pain who had P-Stim treatment at the Complementary and Integrative Medicine Clinic of Tan Tock Seng Hospital in Singapore were studied. All subjects received two consecutive P-Stim treatment cycles. Each cycle involved wearing P-Stim for 4 days followed by 3 days without P-Stim. Three auricular acupuncture points were needled and these depended on the site and cause of pain. The acupuncture points were continuously stimulated with 2 mA of biphasic constant current at a low frequency of 1 Hz.

The outcome measure was pain intensity over the past week as assessed on a Visual Analogue Scale (VAS) of 0–10, with 0 indicating no pain and 10, severe pain. Pain was evaluated at baseline and at week 1 (after completion of first P-Stim cycle), week 2 (after completion of second cycle of P-Stim) and week 4. Adverse events related to use of P-Stim were documented.

RESULTS

A total of nine subjects (eight female, one male) were studied. The median age was 51 years and median duration of pain 24 months. The diagnosis of pain was cervical spondylosis (four), lumbar spondylosis (three) and migrainous headaches (two). Acupoints included Shenmen, Lumbar Vertebrae, Cervical Vertebrae, Forehead, Occiput, Kidney and Subcortex.

The VAS pain scores over time are shown in figure 1. Only six subjects completed the study. Three subjects withdrew from the study after completing the first P-Stim cycle because their pain was not alleviated by P-Stim treatment. For the remaining six subjects, there was a reduction in VAS scores from baseline to week 4, with the median VAS score decreasing from 7 at baseline, to 4, 2 and 3 at week 1, week 2 and week 4 respectively.

A total of eight adverse events were reported during the study. All were considered mild and were as follows: local pain as a result of stimulation of the device (three), nausea (two), dizziness (one) and local itch (two). Inconveniences with wearing the P-Stim device included difficulty sleeping on the side where the P-Stim was applied (one) and inability to wash one’s hair during the period the P-Stim was worn (one).

DISCUSSION

The results of this small case series suggests that auricular acupuncture with P-Stim generally effective in reducing pain severity in subjects with chronic pain, with four of nine subjects experiencing significant pain relief and better quality of life, and these improvements were maintained at up to 2 weeks after completion of treatment.

The effectiveness of P-Stim in the treatment of chronic cervical and low back pain had been shown by Sator-Katzenschlager et al previously.\(^1\)\(^2\) In both studies, no adverse events were reported and the device was well tolerated with only four patients finding it unpleasant and declining possible future treatment. In our study, eight adverse events and two inconveniences were reported respectively. All adverse events were considered mild. The fact that subjects in our study were required to wear P-Stim continuously for 72 hours as opposed to 48 hours in the studies by Sator-Katzenschlager et al could have contributed to the greater number of adverse events and inconveniences in our study.

Apart from the small number of subjects studied, the biggest limitation of this study is the short follow up period. In conclusion, this small case series of subjects with a variety of chronic pain conditions in Singapore suggests that auricular acupuncture with P-Stim is generally well tolerated, with four of nine subjects experiencing significant pain relief. Larger studies are probably needed to ascertain its long-term efficacy as compared to conventional body acupuncture.

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Acupuncture in the treatment of temporo-mandibular disorders in Sydenham’s chorea patient: A case report

A case report for a woman with Sydenham’s chorea is presented, and suggests that this treatment may be worth trying in other patients with this condition.

CASE HISTORY

A 33-year-old woman, a housewife with two daughters, initially presented at the acupuncture clinic with rapid, irregular and aimless involuntary movements of the arms and legs, trunk and facial muscles. The medical history revealed that at age of four the patient developed her first episode of rheumatic fever, which was treated with antibiotics. The distal LI4, LR3 and ST36 were used on the third appointment she claimed to be better. In addition, the involuntary movements in the hands were also reduced and the patient was able to go back to her embroidery. The patient received a similar treatment solution suggests that the acupuncture treatment approaches (occlusal splint and transcutaneous electrical nerve stimulation), the symptoms improved after a single acupuncture session and did not return within one year follow up period. Evidently, a placebo effect cannot be excluded through this case report, thus further studies must be performed to validate our current findings with a larger number of patients and a control group.

Although numerous approaches have been described for this condition, acupuncture is increasingly being used as an alternative to conventional treatment. In this single case report, the relation between time and treatment solution suggests that the acupuncture contributed to its resolution. Expectation may also have played a role. This report is the first known published description of the use of acupuncture in the treatment of temporo-mandibular disorders in a patient with Sydenham’s chorea.

There are several factors in this case that favour causality rather than coincidence. First, spontaneous improvement or resolution in less than 1 year from presentation is rare. The second reason to attribute the improvement to acupuncture is a plausible physiological mechanism. The gate control theories and modern pain physiology try to provide a scientific ground for the actions of acupuncture. Acupuncture acts as a pain reliever by stimulating the acupuncture points, which affect the A-β nerve fibres. With the constant twirling of the needle, a steady stream of non-pain impulses is transmitted to the substantia gelatinosa causing the gate to close. Once the gate is closed, subsequent pain impulses coming from the slowly conducting C fibres cannot pass through. Thus, no pain is felt. The impulses from the A-β fibres can be relayed to the thalamus, which relays the impulses down the spinal cord. After the impulses arrive in the spinal cord, the impulses are relayed to the spinothalamic tract. The impulses then travel to the thalamus, where they are carried to the brain. The impulses are then relayed to the brain, where the impulses are relayed to the brain, where the impulses are relayed to the brain.

REFERENCES

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