

Headache – Migraine

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Laser acupuncture in children with headache: A double-blind, randomized, bicenter, placebo-controlled trial.

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To investigate whether laser acupuncture is efficacious in children with headache and if active laser treatment is superior to placebo laser treatment in a prospective, randomized, double-blind, placebo-controlled trial of low level laser acupuncture in 43 children (mean age (SD) 12.3 (+/-2.6) years) with headache (either migraine (22 patients) or tension type headache (21 patients)). Patients were randomized to receive a course of 4 treatments over 4 weeks with either active or placebo laser. The treatment was highly individualised based on criteria of Traditional Chinese medicine (TCM). The primary outcome measure was a difference in numbers of headache days between baseline and the 4 months after randomization. Secondary outcome measures included a change in headache severity using a 10cm Visual Analogue Scale (VAS) for pain and a change in monthly hours with headache. Measurements were taken during 4 weeks before randomization (baseline), at weeks 1-4, 5-8, 9-12 and 13-16 from baseline. The mean number of headaches per month decreased significantly by 6.4 days in the treated group ($p < 0.001$) and by 1.0 days in the placebo group ($p = 0.22$). Secondary outcome measures headache severity and monthly hours with headache decreased as well significantly at all time points compared to baseline ($p < 0.001$) and were as well significantly lower than those of the placebo group at all time points ($p < 0.001$). We conclude that laser acupuncture can provide a significant benefit for children with headache with active laser treatment being clearly more effective than placebo laser treatment.

Neurological Sciences. 2003; 24, Suppl 2.

Non-pharmacological approaches to chronic headaches: transcutaneous electrical nerve stimulation, laser therapy and acupuncture in transformed migraine treatment.

Allais G, De Lorenzo C, Quirico P E, Lupi-G et al.

In an open, randomized trial, we evaluated transcutaneous electrical nerve stimulation (TENS), infrared laser therapy and acupuncture in the treatment of transformed migraine, over a 4-month period free of prophylactic drugs. Sixty women suffering from transformed migraine were assigned, after a one month run-in period, to three different treatments: TENS (Group T; n=20), infrared laser therapy (Group L; n =20) or acupuncture (Group A; n=20). In each group the patients underwent ten sessions of treatment and monthly control visits. In Group T patients were treated for two weeks (5 days/week) simultaneously with three TENS units with different stimulation parameters (I: pulse rate = 80 Hz, pulse width = 120 micros; II: 120 Hz, 90 micros; III: 4 Hz, 200 micros). In Group L an infrared diode laser (27 mW, 904 nm) was applied every other day on tender scalp spots. In Group A acupuncture was carried out twice a week in the first two weeks and weekly in the next 6 weeks. A basic formula (LR3, SP6, LI4, GB20, GV20 and Ex-HN5) was always employed; additional points were selected according to each patient's symptomatology. The number of days with headache per month significantly decreased during treatment in all groups. The response in the groups differed over time, probably due to the different timing of applications of the three methods. TENS, laser therapy and acupuncture proved to be effective in reducing the frequency of headache attacks. Acupuncture showed the best effectiveness over time.

[N Y State Dent J](#). 2002 Jun-Jul;68(6):24-6.

Migraine, tension-type headache and facial pain. A common intraoral etiology and treatment.

[Friedman MH](#).

A maxillary alveolar mucosal inflammation, demonstrated by local tenderness and increased temperature, is present in migraine, tension-type headache and facial pain patients even when the patient is asymptomatic. Research is presented showing effective treatment of these conditions with fewer side effects than with standard medication by local anti-inflammatory methods. These alternative methods include: chilling, application of anti-inflammatory gel and low-level (non-cutting) laser. Local treatment also mediates cervical muscle spasm, adding to its overall effectiveness.

Acupunct Med. 2005 Mar;23(1):13-8.

The effects of laser acupuncture on chronic tension headache--a randomised controlled trial.

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OBJECTIVE: Headache affects the quality of life for many people throughout the world. Tension headache is among the commonest forms. Acupuncture is the most widely practised non-medicinal treatment for headaches. The purpose of this study was to explore the effects of laser acupuncture in this type of headache. **METHODS:** Fifty patients with chronic tension-type headache were randomly allocated to treatment or placebo groups. Patients in the treatment group received low energy laser acupuncture to LU7, LI4, GB14, and GB20 bilaterally. Points were irradiated for 43 seconds, and the intensity was 1.3J (approximately 13J/cm²). Ten sessions were given, three per week. The placebo group was treated in a similar way except that the output power of the equipment was set to zero. The outcome variables were headache intensity (VAS), duration of attacks, and number of days with a headache per month, by daily diary, assessed monthly to three months after treatment. **RESULTS:** There were significant differences between groups ($P < 0.001$) in changes from baseline in months one, two and three, in median score for headache intensity (treatment group -5, -3 and -2, placebo group -1, 0 and 0), median duration of attacks (treatment group -6, -4 and -4, placebo group -1, 0 and 0 hours), and median number of days with headache per month (treatment group -15, -10 and -8, placebo group -2, 0 and 0). **CONCLUSION:** This study suggests that laser acupuncture may be an effective treatment for chronic tension-type headache, but the results should be confirmed in larger and more rigorous trials.

LOW-LEVEL LASER FOR TREATING TENSION-TYPE HEADACHE

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A new technique for treating patients with chronic headache and pericranial muscular-skeletal dysfunction has been developed (methodological recommendations of RF Ministry of Public Health 961/255, 1997). This technique includes low-level laser therapy, manual therapy and training on muscular relaxation. Good and excellent results were seen in 61,7% of patients after treatment. The frequency of headache attack was reduced by 73%, duration - by 66%, intensity - by 40%. Low-level laser therapy promotes muscular and joint trigger points inactivation and is perspective for treating chronic tension-type headache.