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Low-level laser therapy for neck pain

Dear Sir A recent article (1), published in *The Lancet* entitled 'Efficacy of low-level laser therapy in the management of neck pain: A systematic review and meta-analysis of randomized placebo or active-treatment controlled trials', has come to my attention. The authors studied 16 randomised controlled trials including a total of 820 patients with acute and chronic neck pain, treated with low-level laser therapy (LLLT). A significant reduction in pain intensity immediately after treatment in acute neck pain and up to 22 weeks after completion of treatment in patients with chronic neck pain was found. Side-effects from LLLT were mild and no different from those of placebo.

Unfortunately, the study does not categorise any specific neck pain diagnosis but, nevertheless, is still relevant for the headache practice. Neck pain is faced every day by the headache specialist; in addition, neck pain is mentioned by two-thirds of migraine patients during their attacks.

Laser therapy is a modality that can be viewed with scepticism by physicians or healthcare providers, in part because unwarranted claims are sometimes made in the lay press and in advertising. The mechanism behind laser therapy action also remains unknown, but many drugs that are prescribed every day for neck pain (and headache disorders) have unclear mechanisms of action, sometimes with significant side effects.

LLLT has a potential for efficacy in headache disorders and a very benign side-effect profile, suitable for several patient profiles including its use in pregnancy, the elderly, patients with allergies to medications, and the paediatric population. LLLT is also an option worthy of consideration for a trial in the patient who did not respond to usual therapy. Unlike other lasers in medicine, LLLT devices should not be expensive; treatments can also be cost effective.

This letter is a call for the headache research community to look with more emphasis not only in LLLT use for primary headache disorders but also other non-pharmacological treatments for headaches, since today's medicine is heavily biased towards pharmacological approaches to therapies because of massive investment by pharmaceutical companies, as opposed to a minimal government or public investment in non-commercial oriented therapies.

Further trials of LLLT in migraine, tension-type headache, and neck-related headaches are warranted, the funding source is critical since device companies may bias methodology and interfere with evidence. Trials relevant to headache therapy with unbiased funding should be reinforced by society.

Reference

1. Chow RT, Johnson MI, Lopes-Martins RAB, Bjordal JM. Efficacy of low-level laser therapy in the management of neck pain: a systematic review and meta-analysis of randomised placebo or active-treatment controlled trials. *Lancet* 2009; 374: 1897–1908.

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