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Correspondence

Dear Editor,

EMG biofeedback and headache

In the textbooks it is said that muscular (tension) and vascular (migraine) headaches can be differentiated between according to criteria such as laterality, speed of onset and the presence or absence of symptoms such as nausea and visual upsets. However, as authors such as Blanchard *et al.* (1982) have pointed out, the clinician sometimes has to deal with patients who present with symptoms which overlap between the two types of headache. Indeed, it is quite reasonable to suppose that people may suffer from the two types simultaneously, or experience the one followed shortly by the other.

I have recently seen two middle-aged female outpatients whose complaint was of a clearly unilateral temporal headache, which had not responded to antimigraine medication such as ergotamine tartrate. As neither complained of visual disturbances, nausea or any other migrainous symptom associated with these headaches, it was decided to try a therapeutic approach which assumed their being muscular in origin.

The patients were given training in muscle relaxation along Jacobson lines, and were provided with a cassette recording of these instructions to practise with, if possible daily, at home. They were also both given a total of six sessions of EMG biofeedback training (each session lasting approximately 45 min, using frontalis electrode placement). During these sessions, according to common practice, they were asked to concentrate on relaxing muscles in the head and shoulders. As these sessions progressed, it became increasingly clear that, for both patients, relaxation of the masseter (jaw) muscles was maximally effective in reducing amplitude readings. Both were seen after therapy for 3-month follow-up. One patient reported marked improvement, with headaches occurring on average only once monthly; the other was still experiencing headaches once or twice a week but these were reported as considerably less severe in intensity and duration than previously. Both patients found that they could "abort" headaches by concentrating on relaxing their masseter muscles.

Judging from the results of this therapeutic approach, it seems reasonable to infer that both patients were suffering a unilateral tension headache of origin in the masseter, and perhaps radiating to the temporalis and/or auricularis musculature. Most commonly, initial tension in the trapexius muscles is implicated in the onset of tension headaches. However, the masseter muscles

are comparable in size and strength to the trapezius, and both sets of muscles are likely to be in at least partial contraction in daily life, as most of us adopt the posture of keeping our heads up and our mouths closed. The mechanical nature (the "set") of the jaw may result in a slightly uneven "bite" of the closed teeth, with associated unequal tension in either masseter muscle. One of the two patients referred to had a full set of false teeth, which she in fact described as having this uneven "bite".

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Reference

BLANCHARD, E. B. and ANDRASIK, E. (1982). Psychological assessment and treatment of headache: recent developments and emerging issues. *Journal of Consulting and Clinical Psychology* **50**, 859–879.