Acupuncture for a patient with whiplash-type injury

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ABSTRACT
A 69-year-old woman presented in the surgery because of a whiplash-type injury. Because of persistent headache and dizziness since the accident, and because she had developed rhinitis and intermittent flashes of the left visual field, she was admitted to the neurological department on suspicion of subdural haematoma and possible fracture of the skull. Neurological examination and a CT scan were normal and she was discharged. Because of persisting headaches, and dizziness, her own general practitioner decided to use acupuncture treatment. Acupuncture was given at points GB20, GB21 and SI16 bilaterally and directly over the site in the forehead, where she fell. After 6 weeks of treatment, the dizziness disappeared, and after two additional treatments the rhinitis and headache disappeared. At follow-up 6 months after cessation of treatment, the patient had only intermittent dizziness, with no headaches, visual disturbances or rhinitis.

INTRODUCTION
We report a case of whiplash-type injury or postconcussion syndrome which was successfully treated with acupuncture, since there are few previous reports of the use of this treatment.

CASE HISTORY
A 69-year-old woman presented in the surgery because of a head injury sustained in a fall directly on the head in the street on 28 August 2007. The patient had sustained a gash over her left eyebrow which was sutured. Because of progressive headache and dizziness after the accident, combined with rhinitis and intermittent flashes of the left visual field, she consulted her general practitioner on 16 October 2007 and was admitted to the neurological department, on suspicion of skull fracture and subdural haematoma. Neurological examination and a CT scan showed no abnormality. On 18 October the patient was discharged without treatment.

Because of persistent and increasing headaches with rotatory dizziness, she consulted her own doctor on 5 February 2008 and requested acupuncture treatment. The doctor doubted that acupuncture would work, but agreed to give three treatments and then assess the results.

Pain was localised to the neck with radiation to the temporal region and the area where she received the laceration. She described her pain as constant, throbbing and stinging and woke up several times at night because of headaches. The dizziness was constantly present and the patient had to hold on to walls and the furniture when she moved around.

On physical examination, there was tenderness on palpation of the trapezius, the splenius capitis, the levator scapulae and the erector spinae muscles. Mobility in the neck was essentially normal.

Acupuncture was given at points GB20, GB21 and SI16 bilaterally and as well as directly over the place in the forehead where she fell, located approximately 0.5 cm lateral to the point GB14. At the points GB20, GB21 and SI16, 0.30 × 30 mm needles were used, and over the point on the forehead a 0.22 × 13 mm needle was used. After inserting the needles and eliciting the de qi sensation, the needles were stimulated manually for 5 s, then left in situ for 20 min and removed without further stimulation. The patient was treated once a week. At the first treatment the patient was instructed to fill in a form giving details of dizziness, headache and rhinitis.

At each visit, the patient was asked to assess the severity of her rhinitis, headache and dizziness on visual analogue scales, where 0 indicates no symptoms and 10 indicates the worst possible symptoms.

OUTCOME
After the first acupuncture treatment the patient thought that there was a marginal improvement assessed on a visual analogue scale, but from the second treatment onwards, there was continuous improvement of all three symptoms, as shown in figure 1. On 18 March 2008, 6 weeks after the start of treatment, the dizziness had disappeared. After two additional treatments the rhinitis and headache disappeared, and no further treatments were given. Treatment was stopped on 1 April 2008.

On a follow-up on 3 October 2008, 6 months after terminating treatment, the patient had only minimal symptoms in the form of a slight intermittent dizziness. There were no headaches, visual disturbances or rhinitis.

DISCUSSION
The diagnosis for this patient’s problem is not entirely clear. There is no clear definition of whiplash injury, and the term ‘whiplash associated disorder (WAD)’ is sometimes used to indicate a range of symptoms following neck injury. This patient experienced direct trauma to the head and might be classified as having postconcussion syndrome—another clinical label without a clear definition.
However, the diagnostic label is rather an academic question, and from a practical point of view the question is not important. It is interesting that the patient had rhinitis symptoms, which are not included in any of the definition of WAD or postconcussion syndrome. However, we report what we observed even though we are unable to suggest an explanation.

The authors of a Cochrane review suggested that the expression WAD should be used, and this may be an appropriate term for this case report. The meta-analysis included 23 studies and a total of 2344 patients. However, owing to poor methodological quality, and insufficient homogeneity in the studies, it was impossible to allow pooling of results, and no conclusion could be drawn.

WAD is generally associated with severe trauma, such as traffic accidents, but may also occur after minor trauma. The condition often recovers spontaneously, and it is estimated that 80% of patients are asymptomatic after 6 months. However, in 10% of patients, protracted symptoms occur that can last for several years. Treatment of WAD is often difficult, but short-term relief may be obtained with analgesics and exercise. However, this treatment is often unsatisfactory, and then other treatment approaches may be tried, including acupuncture. It is known that acupuncture can have an impact on headache and neck pain. The literature regarding acupuncture for WAD is scanty. In two studies by Fattori et al., the effect of acupuncture was assessed in patients with balance disorders after a whiplash injury. After treatment of acupuncture points BL10 and GB20, a significant improvement was noticed compared with the control group, who received non-steroidal anti-inflammatory drugs only. In a study by Rabi et al. the effect of acupuncture was assessed in 153 patients after a head injury, among them whiplash injuries. The authors concluded that acupuncture had a significant effect on pain and on movement impairment.

The most prominent symptoms in the patient’s history were progressive headache, visual disturbances and dizziness. It is known that acupuncture can be beneficial for headache, often of myogenic origin. For a possible effect of acupuncture on dizziness, we have some evidence for an effect, possibly mainly in those cases that are of myogenic origin. For an effect of acupuncture on rhinitis we have no convincing evidence from the literature, and no explanation of the symptoms in this case.

The patient had progressive symptoms for about 6 months and so it is unlikely that she recovered spontaneously. She noticed a clear improvement after two treatments with acupuncture, and after a total of seven treatments, all her symptoms had disappeared. Thus it seems reasonable, from the time course of this response, to assume that the effect was a direct result of acupuncture and not a spontaneous process. However, one cannot exclude the possibility that there was some placebo effect. The patient asked the doctor for acupuncture, and is therefore likely to have had some positive expectations. Placebo reactions are well known throughout all forms of medicine, including acupuncture. However, the patient’s response is not typical of a placebo response, from our personal experience, as we would expect a major effect on symptoms after the first treatment. This patient only started to improve after the second treatment, and actually had a continuous improvement spread over the course of seven treatments, which corresponds to a normal treatment course. We therefore argue that the contribution of the placebo effect in this case was minor.

**SUMMARY**

Whiplash-type injury is generally associated with severe trauma, but this case history shows that it may be caused even by minor trauma. It appears that acupuncture can sometimes be a useful tool in the treatment of whiplash-type injury.

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