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COMMENTARY

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Evidence That Tension-Type Headache and Cervicogenic Headache Are Distinct Disorders

INTRODUCTION

In 1988 the International Headache Society (IHS)[1] published a set of headache classification criteria based on consensus agreements. According to these diagnostic criteria, tension-type headache and cervicogenic headache are 2 distinct syndromes, classified by their clinical characteristics. However, debates about whether these 2 kinds of headaches are 1 or 2 disorders, and the importance of the cervical spine in these headaches, continue.[2-5] Some have argued that headaches with a significant musculoskeletal element should be classified as tension-type headaches,[4] whereas others have argued that musculoskeletal headaches are cervicogenic and should be diagnosed as such.[6,7] Still others have proposed that it is impossible to distinguish between the different musculoskeletal sources of headache and therefore all such headaches should simply be classified as musculoskeletal headache.[8]

Chiropractors classify, or diagnose, diseases for many reasons and on the basis of many different characteristics. In clinical practice, however, the primary reason for classifying disease is to prescribe the best treatment for the patient. In this clinical context, a diagnosis can be described as "a mental resting place on the way to treatment."[9] Treatment response is also a characteristic of a disease; in fact, treatments can be used as tests. Therefore differences in responses to treatments can be used to distinguish and classify disorders. This commentary compares treatment responses in 2 randomized, controlled clinical trials on the effect of spinal manipulation on tension-type headache and cervicogenic headache.

Trial Designs

The effect of spinal manipulation on cervicogenic headache and episodic tension-type headache was studied in 2 separate randomized controlled trials.[10,11] Both trials consisted of a baseline observation period of 1 to 2 weeks before the randomization procedure followed by randomization and a 3- to 4-week treatment period, with a 1-week observation period after treatment.

In both trials, participants were recruited through newspaper advertisements for people with frequent headaches in a town in Denmark. All respondents in both trials went through exactly the same series of telephone interviews, personal interviews, and physical examinations. Those who met the inclusion criteria for either episodic tension-type headache or cervicogenic headache were invited to enter that trial. Inclusion criteria for the 2 trials were defined in accordance with the IHS criteria for periodic tension-type headache or cervicogenic headache. For practical reasons, the IHS criterion for cervicogenic headache of radiologically verified abnormal cervical movement was replaced with a goniometrically verified abnormal cervical movement, the only deviation from the IHS criteria. Because goniometry has been shown to correlate well with radiography in assessing cervical motion, this difference is inconsequential.[12]

The 55 participants in the cervicogenic headache trial[10] entered a 1-week baseline observation period in which headache duration, intensity, and analgesic use were monitored in a headache diary. After 1 week, participants were randomly assigned to either a manipulation treatment group or a control treatment group. Both groups were treated twice a week for 3 weeks. After the treatment period, the participants kept a headache diary for 1 week.

The 75 participants in the tension-type headache trial[9] entered a 2-week baseline observation period. Headache duration, intensity, and analgesic use were monitored in headache diaries. After 2 weeks, participants were randomly assigned to either a manipulation treatment group or a control treatment group. Both groups were treated twice a week for 4 weeks. After the treatment period, the participants kept a headache diary for the next week.

These 2 trials were identical in terms of recruitment methods, patient information, randomization method, the recording of the headaches in diaries, outcome variables, physical surroundings, and support staff. The treatment protocols for the active control groups were also identical. However, there was a minor difference in the treatment protocols for the 2 manipulation groups—the manipulation group with tension-type headache received soft-tissue therapy to the shoulder girdle region in addition to manipulation (Table 1). The 3 chiropractors administering the treatment were given the same instructions on patient information and management and practiced similar manual therapy techniques.

Trial Results

The results from the 2 trials are illustrated as percent change in mean daily hours that a participant had a headache

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Table 1. *A comparison of the therapeutic interventions performed on the control and manipulation groups in the 2 trials*

	Treatment
Episodic tension-type headache trial[10]	
Manipulation group	Spinal manipulation + soft tissue (shoulder region)
Soft-tissue group	Soft tissue (shoulder region) + low-power laser (upper cervical)
Cervicogenic headache trial[11]	
Manipulation group	Spinal manipulation
Soft-tissue group	Soft tissue (shoulder region) + low-power laser (upper cervical)

and the percent change in mean headache intensity per headache episode in the week after treatment compared with the observation period before treatment (Fig 1). The cervicogenic headache group that received spinal manipulation differed significantly from the other groups both in terms of a decrease in the number of hours per day that participants had a headache and in headache intensity per episode. Changes in the use of analgesics could not be used to differentiate the groups (data not shown).

These differences in response may be explained in only 2 ways: either the addition of soft-tissue therapy in the tension-type headache manipulation group somehow negates an underlying effect of manipulation or these 2 headaches differ in their response to manipulation (ie, they are different types of headache). The first explanation seems highly unlikely because no research has substantiated this.

CONCLUSION

Based on the response to spinal manipulation in the 2 trials,[9,10] headache patients who meet the IHS criteria for cervicogenic headache seem to differ from those meeting the criteria for tension-type headache. This supports the view that cervicogenic headache and tension-type headache are 2 distinct disorders and that they should be diagnosed as such, as suggested by the IHS.[1]

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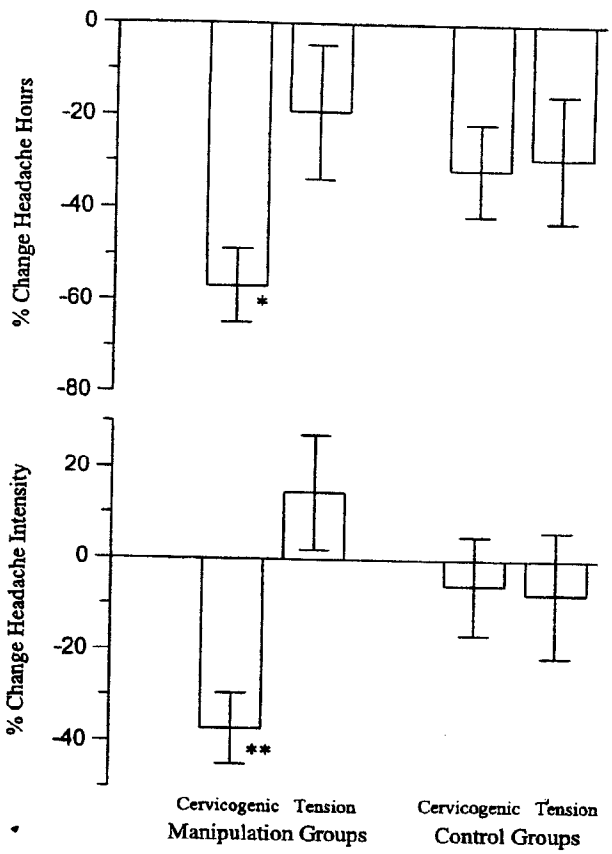

Fig 1. *The change in the number of hours a participant had a headache per day and the intensity per episode from before to after the trial. Although the responses of the control groups were similar, the cervicogenic headache group that received spinal manipulation differed significantly from the tension-type headache group (mean ± 1 standard error of measure).* P *values were calculated with the Mann-Whitney test.* *P = .04. **P = .004.

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