Cervicogenic headache: the importance of sticking to the criteria

Ottar Sjaastad
Torbjørn A. Fredriksen

Departments of Neurology and Neurosurgery
University of Trondheim Hospitals,
Regionsykehuset, Trondheim, Norway

Reprint requests to: Prof. O. Sjaastad,
Departments of Neurology and Neurosurgery,
Regionsykehuset i Trondheim, University Hospitals,
N-7006 Trondheim, Norway
E-mail: berit.mjoe@medisin.ntnu.no

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Summary

Cervicogenic headache (CEH) is a headache, but its origin is in the neck. Recently, two cases of intracranial tumour, which unfortunately were originally diagnosed as CEH, were published. The authors felt that this sequence of events demonstrates the insufficiency of the current CEH criteria. We – on the other hand – feel strongly that, on the contrary, this small challenge may have demonstrated the robustness of the CEH criteria. The criteria of CEH were actually not fulfilled at any time. We marshal our arguments in support of this view and concentrate on one of their cases (no. 1).

KEY WORDS: Cervicogenic headache, headache diagnostic criteria.

Introduction

The cervicogenic headache (CEH) diagnostic criteria were described in 1990 (1) and revised in 1998 (2). In the revised edition (2), the unilaterality criterion was toned down, but it was still emphasised that unilaterality is desirable for scientific work. Anaesthetic blockades were introduced in the revised version as being highly desirable for diagnostic work-up. Otherwise, the framework of the first version was kept up: signs of neck involvement are important, such as reduced range of motion in the neck; ipsilateral shoulder/arm pain; and precipitation of attacks or exacerbations by neck movements and/or pressure against nuchal/occipital structures.

If one entirely sticks to these criteria, one will probably be on rather safe ground diagnostically. Recently, two cases from Limburg were published (3), in which the authors claim that the CEH criteria may not have been applied in an optimal way.

Brief outline of case no. 1 (3)

A 41-year-old woman had had a right-sided headache for 4 weeks, the pain apparently first being felt in the neck and from there spreading to the temporal area. The pain was apparently severe enough to hinder sleep – and she partly could not lie down. The headache was chronic from the beginning. Another somewhat dubious symptom was that she would get an exacerbation of pain on stooping (and on physical exercise). A reduced cervical lordosis was observed. And a diagnosis of CEH was made.

Assessment of the case

The information given

The first 4 points highlighted (in italics) in the case history are consistent with a CEH diagnosis, but represent no proof thereof. The last 3 highlighted features are not necessarily indicative of CEH and are, moreover, not indisputably “innocent” ones. And the 4-week-long headache history (one of the first four highlighted points) may also be viewed in another light: CEH is, as far as we are concerned, mainly episodic and low-degree in the early phase of a non-traumatic case. Over time, the intensity generally increases, and it becomes chronic-fluctuating. But this development takes years, possibly months, but not weeks, in our experience (see Fig. 1). It is of interest in this regard that in two good-sized clinical series, the duration of headache was 1.8-6.7 years and 2.5-9 years, respectively (4,5).

Although it may not have been looked into carefully enough, it is our rather clear impression that it is rare for CEH to hinder sleep. (A CEH patient may wake up with a morning headache exacerbation that started during the night – having been precipitated mechanically (7), but that is a feature essentially different from hindering sleep). The combination of chronic headache right from the outset and an intensity that keeps its victim awake casts doubt on a CEH diagnosis. The exacerbations caused by stooping are ominous per
CEH attacks/exacerbations may be caused by mechanical precipitation involving the neck: rotation, extension — and flexion. Of these, flexion is the most unspecific — being observed also in intracranial disorders, e.g., brain tumour as well as in disorders around the foramen magnum.

The information lacking

To substantiate the diagnosis of CEH, it is mandatory that all CEH criteria (2) be searched for — the criteria are briefly summarised at the beginning of this article and have also been set out in detail elsewhere (3). We lack information on the following criteria:

– Shoulder/arm pain on the ipsilateral side. This a frequent accompaniment of CEH; thus it was present in 20 of 28 cases (71%) in Zwart’s series (6).

– Reduced range of motion in the neck. This is another important feature implicating the neck (6,7).

– Anaesthetic blocks may yield highly desirable, supportive evidence (6). Since stooping produced exacerbation, it would be mandatory to know the result of other, less equivocal provocation tests, such as neck rotation/extension. It would also be of great interest to know the result of iatrogenic precipitation.

The differential diagnostic alternatives

The combination of unilaterality of pain with an intensity sufficient to render the patient sleepless and a chronicity of 4 weeks’ duration forces us to arrange a list of differential diagnostic alternatives like this: intracranial disorders/brain tumour would be first on the list when the patient was seen after 4 weeks of headache. A brain tumour in the early stage not infrequently gives rise to a unilateral headache (before the CSF drainage system is affected). In this case, one would suspect the tumour to be on the right side. The head pain of brain tumour has a tendency to appear during night (like in the present patient), because of the horizontal position; and the pain may be provoked by stooping. CEH would be a diagnostic alternative further down on the list in a case like this and only after neuroimaging — and also the other, aforementioned tests — had been carried out.

Temporal arteritis could be an alternative, but ESR and local findings are not given. Neither temporal arteritis nor dental pain would probably fit with exacerbation on stooping. There may also be other alternatives.

Conclusion

CEH is a secondary headache. It is important that possible other, underlying disease is ruled out. As far as we are concerned, the diagnosis in this case — when first seen — would be brain tumour until proven otherwise. There were strong counter-arguments against a CEH diagnosis in the case history presented. Several symptoms and signs, characteristic of CEH were not mentioned in the report. In a case like this, CEH would preferably be a diagnosis by exclusion. If the headache is typical, having lasted for 3-5 years, and anaesthetic blockades take away the headache etc., then the situation is essentially a different one. We, therefore, tend to disagree with our Dutch colleagues as to the cause of the misdiagnosis made in case 1. If used properly, the CEH criteria should have averted this false diagnosis. The CEH diagnostic criteria are accordingly not negatively influenced by this case. On the contrary, they seem to have demonstrated their robustness, as far as we are concerned.

References