

Case Report

Optimize Headache Treatment by Diagnosing all the Headaches and their Triggers

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Abstract

An athletic young girl hit her head during exercise as one of her many sport injuries. She had migraine from she was eight with less than monthly attacks easily treated with triptans. After the head and neck trauma, she got more frequent headache increasing to daily headaches with three days sick leave from school each week. Headache patients often have more than one headache. Her daily headaches were migraine and cervicogenic headache [1]. Treatment of the neck and spine cured her second headache and she had no more sick leaves. Patients with frequent headache and/or a sudden increase of headache days often have more than one headache. The neck is a trigger for headache, particularly in persons with injuries to the head, neck, spine and feet. Treatment of this trigger is often necessary to reduce headache. Whenever the neck trigger headache, direct treatment of the neck will be an additional trigger, so whenever possible treatments should start lower in the spine.

Keywords: Headache Treatment; Migraine; Cervicogenic Headache; Neck Pain; Chiropractor; Triggers

Introduction

Much effort is used to teach doctors and the public how to diagnose and treat migraine because migraine severely reduces quality of life. Too few migraine patients get the correct diagnosis. When a migraine patient with few attacks and optimal treatment seeks the doctor because of increased frequency of headache days and lowered efficacy of the medicine, it might not only be a worsening of the migraine. Before prescribing preventive drugs it is necessary to diagnose additional headaches as well as new triggers for migraine attacks. Patients referred to our headache clinic frequently have up to four different headaches. These are migraine, cervicogenic headache, tension type headache and medication overuse headache.

Case Presentation

A fifteen years old girl sought the headache clinic because of increasing frequency of sick leaves from school due to headaches. She went to a sport academy school. Both the school and the parents were concerned about the high frequency of medication that did not cure her daily headache. The expected level of exercise triggered the most intense headache.

Medical history

Both parents suffered from migraine. She had no previous diseases or hospitalizations. She had several sport injuries starting from an early age. She was dancing from she was seven. She had several distortions of the ankles, injuries to knees, spine, neck and head during play and sports.

Headache history

She had headache from she was eight years old. She had few headache days before she fell and hit her head in an exercise class half a year before attending the headache clinic. Afterwards she suffered from dizziness and daily headaches, which weekly increased in

intensity. She spent up to three days in a dark room at the worst. She woke up every day with bilateral headache starting in the neck and radiating to the top of the head and temples. The pain was constant with varying intensity. It increased to a very strong pain accompanied by sensitivity to light and sound and nausea lasting up to 3 days. She could also wake up with the strongest headache. Her headache was diagnosed as migraine. Sumatriptan led to partial relief of the head pain.

MRI of head and neck were normal. X-rays of the spine showed loss of the normal cervical lordosis. She had negative examination of heart, head, body and blood tests.

Diagnosis and Treatment

Examination of neck: reduced extension and rotation to the left, no flexed rotation to the right. Her head flexed to the right when seated. Pain radiated to the ipsilateral temple when pressing the great occipital nerves. She had a normal neurological examination.

Her headaches were diagnosed as cervicogenic headache CEH [1] and migraine without aura MO [2], both triggered from the neck.

She was treated twice in the lumbar and thoracic spine by a chiropractor. She did daily exercise for spine mobility. After these treatments she got full range of motion in the neck. She also got orthopedic soles in her shoes to correct her walking. She adjusted her sleeping- and eating-routines to avoid lifestyle triggers. During the following ten weeks she had only two migraine attacks and seldom woke up with a headache. Both migraine attacks happened on holiday and they were triggered by very hot weather, lack of sleep and other changes in daily living. They were mild and only lasted for a few hours without medication. She had forgotten to bring medication on holiday. She could exercise as before without triggering headache. She was ready for the next term without worrying about headache to lower her performances.

Discussion

A sudden increase in headache with nausea and vomiting shall always lead to immediate investigation to exclude intracranial, metabolic and other causes for secondary headaches. The majority of these tend to trigger the headaches constantly. When the patients have days or even weeks that are headache free it points in the direction of other headache triggers.

MRI of the head should be accompanied by an MRI of the neck whenever there is a head injury and whenever headache is suspected to be triggered from the neck. The latter is necessary to diagnose cervicogenic headache according to the IHS criteria [2].

Diagnosis of the Four Headaches Often Found in Migraine Patients

The girl in the case above had her headaches diagnosed as cervicogenic headache CEH [1] and migraine without aura MO [2], both triggered from the neck.

Diagnostic criteria for headache are not used often enough by doctors treating the headache patients. This is also true for neurologists. Using the IHS criteria [2] this patient has two headaches. One is migraine without aura. This headache was the same she had before she fell and hit her head only with more frequent attacks. The other headache is NOT a migraine. When it was treated like a migraine her headache became daily and stronger.

She got a second headache after the head trauma (which is also a neck trauma). The pain radiated from the neck to the temples, forehead and it was associated with stiffness in the neck and dizziness. Movements of the head and/or static positioning of the neck elicit this headache. This is a secondary headache triggered from the neck. It is a cervicogenic headache according to the old CHISG criteria [1] still used by many doctors and scientists and in many whiplash studies [3-5]. With a normal MRI of the neck found in our patient and in the majority of young people with headache after neck trauma, it is not a cervicogenic headache according to the IHS criteria [2]. It is not primarily a semantic problem whether a headache like hers is diagnosed as a cervicogenic headache CEH, as a migraine or as a tension type headache TTH. The problem that can arise when the second headache is diagnosed as a TTH is that nothing points to the treatment that will reduce or cure the headache. The more common problem is when both headaches are diagnosed as a migraine with intense attacks. When all headache days are treated with triptans many patients say that the triptans only takes away the "top of the headache". There are two headaches at the same place. The triptans cure the pulsating migraine headache when the patient feels sick. The remaining pain is from the second headache (CEH according to [1]). Both headaches are triggered from the neck. If the neck trigger can be

removed the patient is usually left with migraine attacks that can be treated. If it is not diagnosed the frequent use of triptans might lead to the development of a third headache, a medication overuse headache MOH [2]. MOH mimic the original headache, is weakened daily medication and there are less than 5 [3] headache free days in a row.

Both primary and secondary headaches have lifestyle triggers. These should be targeted from the start, and may have to be reduced for medication to work. Certain foods, hunger, irregular sleep and stress are well known triggers for migraine attacks. Suspect the neck to be a trigger in persons with stiffness and pain in the neck, in persons with neck injuries, sport injuries and in persons working with the neck in a fixed position. Impulses from the upper cervical spine to the trigeminal tract enhance head pain. Lower parts of the spine can add to an injury in the upper cervical spine and thus act as a trigger for headache.

There are many ways to reduce the neck as a trigger. In our patient, the chiropractor treated her lumbar and thoracic spine and without touching the neck this restored normal neck movements. Daily exercises to strengthen the core muscles keep the normal curves of the spine. Instruct your patient how to sit correctly and position the pc to be able to read without straining the neck. Sleeping facing down puts the neck in a fixed static, extreme rotation all night. Botox can help to normalize neck muscles and lower the neck trigger particularly in dystonic or spastic muscles. Treatment of the findings on MRI may be necessary. Be aware of the possibility for the treatment to be an additional trigger of headache. For both chiropractors and physiotherapists it is advised to start treatment from below and preferably not at the same time.

Conclusion

To reduce the burden of headache it can be necessary to diagnose more than one headache. Look for "the gang of four" often found in patients with daily chronic strong headache. Always treat findings in the neck to reduce an important trigger for headache.

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