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Case report

Menstrually-related stabbing headache in a patient without migraine: case report

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Abstract

Introduction
Stabbing headache is considered a primary headache and is a prevalent entity in the general population.
Objective
To present an unusual case of stabbing headache associated with menstruation.
Method: Data collected through complete anamnesis.
Case report
The authors report a case of a woman suffering from a stabbing headache which features that has not been previously described – a menstrual pattern in the presentation of stabbing headache attacks.
Conclusions
We conclude that this menstrual pattern of stabbing headache attacks is unusual in patients with primary stabbing headache and that it does not fulfil diagnostic criteria for migraine or tension-type headache.

Keywords:
Stabbing headache
primary headache
menstruation

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Introduction

Stabbing headache is considered a primary headache and is a prevalent entity in the general population.[1-6] Interestingly, it is little known, and few articles have been published regarding its clinical presentation.[2,3,7,8] Cases of secondary stabbing headache have also been published.[9-15] The authors report a case of a woman suffering from a stabbing headache which features that has not been previously described – a menstrual pattern in the presentation of stabbing headache attacks.

Case report

Female, 40 years old, with stabbing pain in a fixed point in the right anterior temporal region for two years, lasting 2-3 seconds, intensity 8/10, severe enough to cause the patient to close her eyes. Pain is not precipitated by head movement or the Valsalva maneuver. The patient noticed that the episodes at the beginning were more spaced, but in the last year, it has been occurring in the premenstrual period, in the seven days before menstruation, and the first two days of menstruation. In this period, it is almost daily, occurring up to three episodes a day, with hours between attacks.

The patient denies a history of arterial hypertension and diabetes mellitus. The serum concentration of free T4 and TSH and the levels of triglycerides, and cholesterol and its fractions were normal.

On MRI, a focus of hypersignal on T2 FLAIR was observed in the right frontal white matter (Figure 1), suggestive of gliosis due to microvascular alteration. In diffusion, there are no areas of restriction to water diffusion. The MRI angiography shows an anatomic variation of the polygon of Willis, with a fetal pattern of both posterior cerebral arteries, which originated from internal carotid carotids (Figure 2).

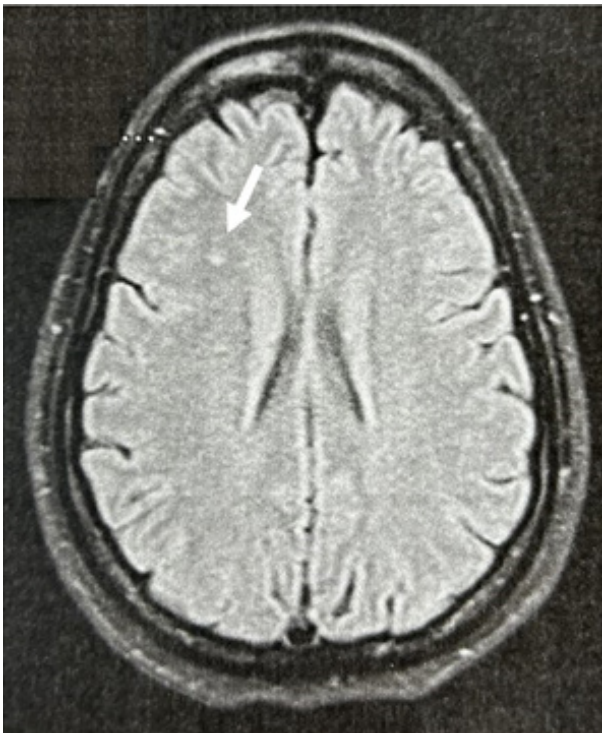

Figure 1. On MRI, a focus of hypersignal on T2 FLAIR was observed in the right frontal white matter (white arrow), suggestive of gliosis due to microvascular alteration.

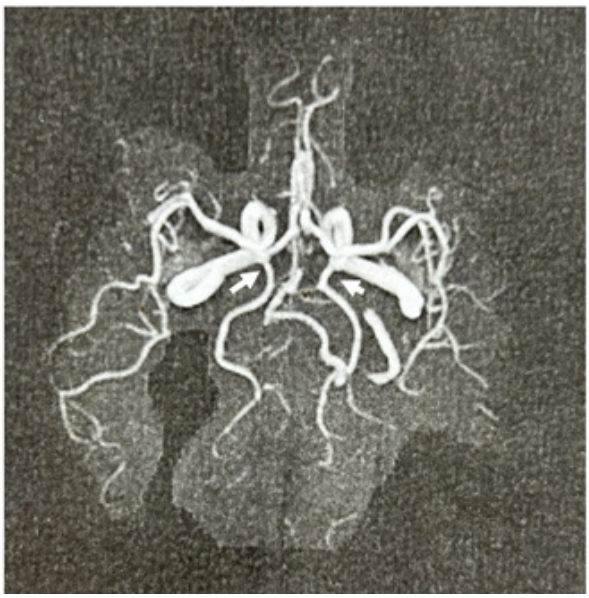

Figure 2. The MRI angiography shows an anatomic variation of the polygon of Willis, with a fetal pattern of both posterior cerebral arteries, which originated from internal carotid carotids (white arrows).

Comments

A stabbing headache is a frequent type of headache

that is negligibly appreciated, perhaps because it has a sudden onset and short persistence (a few seconds) and a rare frequency, with intervals between attacks of months or years.[2-4,16] The vast majority of individuals with stabbing headache are idiopathic.[3] The attacks often occur on different regions of the head in the same individual but can occur fixed in the same area.[3,17,18] We recently described a series of patients with stabbing headache secondary to intracranial lesions, such as tumors and aneurysms.[9] Interestingly, these lesions touched the dura mater, suggesting the cause was an irritation of the neural structures innervating the dura mater.[9] In secondary cases of stabbing headache, some patients reported characteristics that seem to be linked to the association of this type of headache with intracranial lesions.[9] These characteristics are: a crescent pattern, triggered by head movement, precipitated by Valsalva's maneuvers, and always being in the same point of the head.

Despite the patient presenting some characteristics of a secondary stabbing headache, the imaging investigation did not show alteration in the brain or the dura mater that would suggest a reaction. Only a non-specific alteration in the cerebral white matter, common in patients with migraine, was observed. We do not think that the change observed on MRI is related to the occurrence of stabbing headache.

The reason for ordering an EEG was to rule out the possibility of an ictal headache, possible in mesial temporal lobe epilepsy. These epileptic seizures can start as a severe headache on the same side of the hippocampal sclerosis; they are abrupt in onset, lasting a few seconds.

Apparently, people with migraine would more often have a stabbing headache.[4] This woman that we present now said that she did not suffer from any other type of headache, including migraine. As we know, women with migraine more frequently have migraine attacks during their menstrual period, some exclusively during this period.[19-23]

Differential diagnosis is important, as drug treatment can be specific. Some primary headache disorders are more prevalent in women than men, such as migraine, tension-type headache, paroxysmal hemicrania, hemicrania continua, SUNCT, and hypnic headache. Many of these headaches have hormonal influence with increasing intensity during pregnancy, lactation, breastfeeding and menstruation.[24]

Menstruation is a common trigger for women with migraine and tension-type headache[25,26] and appears to be unrelated to other primary headache disorders. It is believed that headache is due to the action of sex hormones, mainly estrogen. This hormone modulates the hypothalamus, pituitary, ovary and endometrium, in addition to acting on serotonergic and central opioid neurons, regulating neuronal activity and receptor density.[27]

Primary stabbing headache is considered an indomethacin-responsive headache, due to good response to therapeutic doses of indomethacin in up to 60% of patients.[28] The dose ranges from 75 to 250 mg/day in two doses. Its mechanism of action is anti-inflammatory through reversible inhibition of cyclooxygenase (COX)-1 and -2, but it can inhibit nitric oxide release and decrease cerebral blood flow and cerebrospinal fluid pressure.[29] In case of contraindication to indomethacin or inadequate response, other drugs are used, such as melatonin, onabotulinumtoxin A, gabapentin and topiramate.[2]

Conclusions

We conclude that this menstrual pattern of stabbing headache attacks is unusual in patients with primary stabbing headache and that it does not fulfil diagnostic criteria for migraine or tension-type headache.

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