

Pain Review Monthly

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Quick overview of Primary Headaches

According to the International Classification of Headache Disorders 3rd ed (www.ichd-3.org), there are four types of primary headache disorders:

1. Migraine
2. Tension-type headache
3. Trigeminal autonomic cephalalgias
4. Other primary headaches

Differentiation of the abovementioned types can be difficult. So here is an overview.

1. Migraine:

Diagnostic criteria for migraine WITHOUT aura ⁽¹⁾:

- A. At least five attacks fulfilling criteria B-D**
- B. Headache attacks lasting 4-72hr**
- C. Headache has at least two of the following four:**
 1. unilateral location
 2. pulsating quality
 3. moderate or severe pain intensity
 4. aggravation by or causing avoidance of routine physical activity
- D. During headache at least one of the following:**
 1. nausea and/or vomiting
 2. photophobia and phonophobia

(for criteria for migraine with aura - go to www.ichd-3.org/1-migraine/1-2-migraine-with-aura/)

2. Tension headaches:

Clinically, migraine and tension headaches are the most common. Goadsby ⁽²⁾ comments:

"Migraine at its simplest level is headache with associated features, and tension-type headache is otherwise featureless."

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3. Trigeminal Autonomic Cephalalgia (TAC):

TAC is headache with prominent ipsilateral cranial parasympathetic autonomic features such as lacrimation, rhinorrhea, nasal congestion, eyelid edema, ptosis etc.

4. "Other primary headaches"

are clinically heterogeneous. These include primary exercise headache, cold-stimulus headache, and many others.

The pathophysiology of the headaches

is, in short, poorly understood. However current understanding is that most primary headaches have something to do with "**neurovascular involvement of trigeminovascular system**" ⁽²⁾ that consist of the following key structures:

- the large intracranial vessels and dura matter
- the peripheral terminals of the trigeminal nerve that innervates these structures
- the central terminals and second-order neurons of the trigeminal nucleus

It is proposed that these structures undergo pain-inducing process, resulting in sensitisation of nociceptors, vascular changes (e.g. vasodilation), and other phenomena including autonomic symptoms ⁽²⁻⁴⁾. Vascular changes were once considered as *the* major cause; that is no longer the case. Instead *central sensitization* and sensitization of the nociceptors at the trigeminovascular system is seen as the major contributor ⁽³⁻⁵⁾.

If you are interested in reading more: you can visit www.ichd-3.org. You can also visit our blog for other articles: www.2will.co.nz/pain-blog.

References

1. IHS Classification - International Classification of Headache Disorders 3rd ed. <https://www.ichd-3.org/1-migraine/1-1-migraine-without-aura/>
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