Chapter 1
Migraine Without Aura

Christian Lampl

1.1 Case Description

A 39-year-old female was admitted to our headache outpatient center with a 1-month history of three headache attacks with nausea. She was very anxious about that because her mother died with a history of stroke a few months ago. She reported that the first attack of her headache was exploding, with a relatively sudden onset. This first attack lasted 6 h. She was not able to move because while walking, her headache got worse. Therefore, she stayed at home, had bed rest, and she had to put up the blackout curtains. After a short sleep, she felt a little better but was even more anxious, so she went to her GP the same day. After a general examination, the GP advised her to undergo a CT scan of the brain. She was admitted to the emergency hospital the next day. After examination of blood pressure and routine blood tests, all of them were normal and due to persisting moderate headache, she was given an infusion with 500 mg aspirin and 1 g metamizole. Headache suspended within the next 1–2 h, leaving her completely ran out. At home, she felt sleepy and slept for 12 h. The day after, the headache returned. Besides nausea, she was extremely hypersensitive to sound and light, anxious, and somewhat dizzy. Her husband, who is a lawyer, brought her to the next emergency hospital. Again, an MRI scan was performed—without any pathology. Thereafter, she was admitted to the neurological department where she underwent complete neurological status examination, electroencephalography (EEG), and visual evoked potentials (VEP), all of them without any abnormality. After 2 days of hospitalization, she was dismissed with the

C. Lampl
Headache Medical Center Seilerstaette Linz, Hospital Sisters of Charity,
Linz, Austria
e-mail: christian.lampl@bhs.at

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diagnosis of migraine without aura. One week after, the third attack started with a severe pulsating headache, vertigo, nausea, and sensitivity to light and sound aggravated by walking or moving the head. Aspirin 330 mg did not relieve the pain. This attack nearly lasted 15 h.

1.2 Differential Diagnosis and How to Work Up This Kind of Patient

Although this is a typical case of migraine without aura, some points have to be raised: The first attack started rather fast with a sudden onset of exploding headache; although the patient herself did not observe any abnormality like hemihypesthesia, weakness of upper or lower extremities, visual and sensory disturbances, or any other pathological signs, the probability of an intracerebral pathology may be considered; the consulting physician has to perform a complete neurological examination and needs to rule out any pathological intracerebral event. In that particular case, after a normal neurological examination, a CT scan of the brain would be sufficient.

1.3 Diagnostic Workup of the Case

Migraine without aura is typically manifest by episodic disabling headache and concomitant symptoms. It easily can be diagnosed with an extensive exploration of history, signs, and symptoms. Especially in the absence of any abnormal neurological sign, with the broad description of the headache phase, the character, and the quality of the headache, the certainty of that particular kind of headache is high. If migraine without aura occurs for the first time, it is advised to perform, once, a CT scan of the brain. Migraine usually lasts hours to days; the average attack frequency is once a month. Migraine should be distinguished from tension type headache (TTH); however, TTH is often chronic and it is present more often than it is absent. The second differential diagnosis is cluster headache, which is relatively rare and causes recurrent unilateral headache with autonomic dysfunction. The third challenging differential diagnosis is medication overuse headache (MOH). This typically complicates migraine which is then transformed into a chronic daily headache similar to chronic TTH often with some migrainous features. The frequency and periodicity of migraine is important: migraine-like headache more than twice every week is unlikely to be migraine without aura alone, but it may be migraine without aura, complicated by MOH and/or TTH (Table 1.1).

Table 1.1 Definition of migraine without aura according to the ICHD 3-beta version

A. At least five attacks, 1 fulfilling criteria B–D
B. Headache attacks lasting 4–72 h (untreated or unsuccessfully treated)
C. Headache has at least two of the following four characteristics:
1. Unilateral location
2. Pulsating quality
3. Moderate or severe pain intensity
4. Aggravation by or causing avoidance of routine physical activity (e.g., walking or climbing stairs)
D. During headache at least one of the following:
1. Nausea and/or vomiting
2. Photophobia and phonophobia
E. Not better accounted for by another ICHD-3 diagnosis

ICHD International Classification of Headache Disorders

1.4 Summary of the Case

A 39-year-old female with a severe pulsating headache, vertigo, nausea, and sensitivity to light and sound aggravated by walking or moving was presented. These typical signs and symptoms of headache without any neurological findings and a normal CT scan of the brain lead us to the diagnosis of migraine without aura.

1.5 Brief General Information

One in ten people have migraine. As shown in our case, the patient's history is the essential diagnostic tool. From a pathophysiological point of view, spontaneous overactivity and abnormal amplification in pain and other, predominantly sensory, pathways in the brainstem may lead to migraine. Current opinion favors a primarily neural cause, involving feedback loops through innervation of cranial arteries in the trigeminovascular system. Ongoing research is studying the relevance of calcium channel abnormalities and peptides such as calcitonin gene-related peptide, which may be closer than 5-HT to the underlying cause.

Management of lifestyle can appear to be very helpful, though evidence is largely anecdotal. Analgesics and antiemetics are effective for many migraine patients. Some of them prefer a nonsteroidal anti-inflammatory drug (NSAID), aspirin, or paracetamol. Triptans are only slightly more effective than simple analgesics with an antiemetic on the number needed to treat (NNT) basis. These data conceal substantial inter- and intra-patient variation. Ergot alkaloids may still have an occasional place in the acute management of migraine. Daily drug treatment to prevent

migraine should be considered after acute treatment has been optimized, medication overuse abolished, lifestyle modification tried, and a migraine diary recorded for a month or three. Comorbid disease may suggest initial drug choice. It is unusual to offer prophylaxis for less than three attacks a month. Treatment should be titrated first for tolerability and then for efficacy.

Suggested Readings

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