# Migraine Misery:

## Pounding Out the Pain

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According to the 1998/99 Statistics Canada National Population Health Survey, 7.9% of Canadians over age 12 have been diagnosed with migraine, with the ratio of females to males being three to one.[1]

### *Is there a practical approach to diagnosing migraines?*

Disability is a well-known predictor of the diagnosis of migraine, but its absence does not rule out migraine. Once the suspicion of migraine has been raised, the care provider should ensure other causes of headache (especially dangerous causes) have at least been considered.

The Landmark Study suggests considering episodic, disabling headaches in a patient (with an otherwise normal physical exam) to be migraine unless there are "red flags," which would suggest a secondary headache disorder.[2]

Dodick invented the mnemonic SNOOP to help remember the important secondary causes of headaches:[3]

**S**ystemic symptoms
Fever weight loss, myalgias, focal infection

**S**ystemic disease
Malignancy, AIDS

**N**eurologic signs or symptoms

**O**nset sudden
First or "worst headache of my life"

"Thunderclap" headache (reaches severe peak intensity within seconds to minutes)

**O**nset after 40

**P**attern change
Change in quality, location or frequency of headaches

Progressive headache with loss of headache-free periods

### Allison's Ache

Allison, 40, is an administrator. About two years ago, she noted the onset of episodic blindness and presented to the emergency department. She was referred to the stroke clinic and, from there, to the headache clinic.

Allison experiences:

- a number of "wiggly line" episodes, which start gradually and last about 20 minutes;
- a bilateral, frontal throbbing headache, associated with photophobia and
- headache that is frequently worse on the left and lasts for several hours.

She rarely notes any nausea or vomiting and denies any provocation of her headches with chocolate, cheese or alcohol. Her computed tomography scan is normal.

Allison's headaches occur approximately once every two or three months.

**For more on Allison, see page 88.**

*7.9% of Canadians over age 12 have been diagnosed with migraine.*

Table 1

### IHS diagnostic criteria

**Diagnostic criteria of IHS migraine without aura:**

**A.** At least five attacks fulfilling criteria B to D
**B.** Headache attacks lasting 4 to 72 hours
**C.** Headache has at least two of the following:
- unilateral location
- pulsating quality
- moderate to severe pain intensity
- aggravation by or causing avoidance of routine physical acitivity

**D.** At least one of the following during headache:
- nausea and/or vomiting
- photophobia or severe pain intensity

**E.** Not attributed to another disorder

**Diagnostic criteria of IHS migraine with aura:**

**A.** At least two attacks fulfilling criteria B to D
**B.** Aura consisting of at least one of the following, but no motor weakness:
- fully reversible visual symptoms including positive features (*i.e.*, flickering lights) and/or negative features (*i.e.*, loss of vision)
- fully reversible sensory symptoms including positive features (*i.e.*, pins and needles) and/or negative features (*i.e.*, numbness)
- fully reversible dysphasic speech disturbance

**C.** At least two of the following:
- homonymous visual symptoms and/or unilateral sensory symptoms
- at least one aura symptom develops gradually over ≥ 25 minutes and/or different aura symptoms occur in succession over ≥ 5 minutes
- each symptom lasts ≥ 5 and ≤ 60 minutes

**D.** Headache fulfilling criteria B to D for "Migraine without aura" and begins during aura or follows aura within 60 minutes
**E.** Not attributed to another disorder

IHS: International Headache Society

## *Which tests should be ordered?*

An electroencephalogram is not helpful in migraine unless seizure is also suspected or unless the patient has significant confusion or other changes in mental status,[4] which raises the possibility of other diagnoses. If the patient has a typical migraine, a computed tomography scan of the brain is not required unless there is concern regarding secondary causes of headache (see "SNOOP").

## More on Allison

Over the last six months, Allison has experienced a new type of headache she refers to as her "regular hadache." This headache might occur up to four times a month.

- This headache is not associated with visual disturbances.
- It is a throbbing headache, but she does not note any photophobia or osmophobia.
- She notices this type of headache is worse with exertion.

In addition, she has noticed the onset of another type of headache on specific occasions, such as when she coughs, sneezes or bends forward.

- Allison denies any history of head trauma or excessive caffeine intake.
- Her menstrual periods are regular.
- She denies any other health problems.
- Her neurologic examination is normal.

**What do you recommend?**

**For the answer, go to page 90.**

## *What are the barriers to diagnosis?*

Misdiagnosis and underdiagnosis of migraine are major problems. In one study, only 48% of those meeting the diagnostic criteria for migraine were diagnosed.[5]

Only 50% of patients with a diagnosis of migraine had an initial diagnosis of the same.[2] These headaches are frequently misdiagnosed as sinus headaches, although as many as 98% of "sinus headaches" are actually migraine.[6,7]

Time pressure also limits the ability of the primary care provider to address complicated headache problems. Patients often feel they are suffering from a "tension headache" and if a patient's headache is only addressed in one visit, there is a very high probability the patient's self-diagnosis will strongly influence the physician's diagnosis.[2]

Many physicians are not aware of the International Headache Society diagnostic criteria, which was initially developed to ensure accurate diagnosis in clinical trials (Table 1).

One of the best examples of abbreviated diagnostic criteria is the Canadian Migraine Questionnaire in which three sequential questions are given by the physician to the patient and are most predictive of a diagnosis of migraine (Table 2).[8]

**Table 2**

**Canadian migraine questionnaire**

A. Do you have a headache every day?
B. Is your headache on one side of the head only?
C. Does your headache stop you from doing things?

A negative answer to question 1, followed by affirmative answers to question 2 or 3 yields a high probability of having migraine.

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## How do I treat migraine?

Before embarking on pharmacologic therapy, all patients should keep a detailed headache diary to determine whether they have any modifiable lifestyle factors or triggers. If any factors are noted, they should determine whether avoidance or modification of these factors can alter their headache frequency or severity.

Mild to moderate migraines can be treated with conventional analgesics, such as acetylsalicylic acid, acetaminophen, ibuprofen or other non-steroidal anti-inflammatory drugs.

For patients with moderate to severe migraine, triptans are indicated. Patients should be instructed to take the medications as soon as possible after the onset of migraine pain, since the migraine tends to

## Take-home message

- Migraine is one of the most common moderate to severe headaches in a primary care practice.
- Rule out secondary causes of headache with "SNOOP."
- Consider triptans for acute therapy of moderate to severe migraine, but encourage the patient to take them early in the migraine.
- If patients have more than four moderate to severe migraines per month, consider migraine prophylaxis.

## Easing Allison's Aches

Allison is instructed to take triptan at the first sign of migraine pain, rather than when the pain is already severe. She is also placed on nadolol for migraine prophylaxis.

When she returns for her followup, her migraine frequency has dropped to only one every one or two months.



become refractory later on in its course. However, triptans should be avoided in patients with Prinzmetal's angina, Raynaud's disease, uncontrolled hypertension or atherosclerotic heart disease.

Prophylactic treatment should be considered in patients who fail treatment, suffer unacceptable side-effects with abortive agents or suffer from more than one to two migraines per week.

## *When should the patient be referred?*

The patient should be referred to a neurologist or a headache specialist if:

- there are warning signs, but routine laboratory or imaging studies do not reveal a cause;
- the diagnosis remains unclear;
- treatment with conventional acute or prophylactic management is not effective, tolerated or contraindicated or
- frequency of attacks exceed one per week or attacks are prolonged and disabling despite the use of specific acute and preventative medications.

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