Chronic migraine and chronic tension-type headache

A Clinician’s Questions

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Introduction

– Chronic migraine and chronic tension type headache are very difficult headaches.
– Diagnosis is often ambiguous and pathophysiology is complicated.
– They are often resistant to treatment.
• My clinical questions are;

- How do we diagnose CM and CTTH using ICHD-III?
- Which factors contribute to the chronification of migraine and TTH?
- What are the roles of central sensitization in the chronification of migraine and TTH?
- How can we treat CM and CTTH patients?
Case: 30-year-old woman

• Current history
  – Severe headaches **five to six days** every week
  – Associated features
    • Throbbing, moderate or severe pain
    • Sometimes **bilateral pressing/tightening pain**
    • Nausea (mild)
    • No vomiting, no photophobia
    • Aggravated by routine physical activity
• **Past history**
  – Occasional throbbing headache in the teens associated with nausea
  – **Acute treatment:**
    No medication overuse of NSAIDs, OTCs
    Triptans; not effective with chest discomfort
    Ergots; not effective
  – Preventive treatment: none

• **Family history**
  – None

• **On examination**
  – General and Neurological examination normal

• **Imaging**
  – MRI normal
This case seems to be fulfilling revised IHS criteria for chronic migraine

Revised IHS criteria for chronic migraine

A. Headache (tension-type and/or migraine) on ≥15 days per month for at least 3 months

B. Occurring in a patient who has had at least five attacks fulfilling criteria for 1.1 Migraine without aura

C. On ≥8 days per month for at least 3 months headache has fulfilled C1 and/or C2 below, that is, has fulfilled criteria for pain and associated symptoms of migraine without aura

1. Has at least two of a–d
   (a) unilateral location
   (b) pulsating quality
   (c) moderate or severe pain intensity
   (d) aggravation by or causing avoidance of routine physical activity
      (e.g. walking or climbing stairs)

   and at least one of a or b
   (a) nausea and/or vomiting
   (b) photophobia and phonophobia

2. Treated and relieved by triptan(s) or ergot before the expected development of C1 above

D. No medication overuse and not attributed to another causative disorder
This case also seems to be fulfilling IHS criteria for chronic tension-type headache

Diagnostic criteria for Chronic tension-type headache by ICHD-II

A. Headache occurring on $\geq 15$ days per month on average for $>3$ months ($\geq 180$ days per year) and fulfilling criteria B-D
B. Headache lasts hours or may be continuous
C. Headache has at least two of the following characteristics:
   1. bilateral location
   2. pressing/tightening (non-pulsating) quality
   3. mild or moderate intensity
   4. not aggravated by routine physical activity such as walking or climbing stairs
D. Both of the following:
   1. no more than one of photophobia, phonophobia or mild nausea
   2. neither moderate or severe nausea nor vomiting
E. Not attributed to another disorder
This case seems to be fulfilling ICHD-II criteria for both chronic migraine and chronic tension-type headache.

Do we give two diagnoses for this patient?

How do we diagnose CM and CTTH using ICHD-III?
Pathophysiology
Is “Central sensitization” a common contributing factor to the chronification of both migraine and TTH?

Peripheral Sensitization?

Factors?

Migraine
Dura?
Dural artery?

Central Sensitization?

TTH
Muscle?

Hyperalgesia
Alldynia

Chronification?

Allodynia is also observed in episodic migraine.
Is there any difference between alldynia in episodic migraine and in chronic migraine?
How can we treat CM and CTTH patients?