HEADACHE: Benign or Severe

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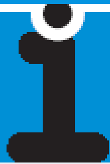
Outlines

1. Introduction
2. Classification of headache
3. **Red flag for headache**
4. Diagnosis of headache
   - History, Examination, Ix
5. Common headache
   - Migraine, TTH, CH,MOH
6. Management

Headache

* Headache is common and causes considerable worry, but rarely represents sinister disease
* Almost all part of general population experiences Headache in any part of his/her life
* 4.4% of consultations in primary care and
* 30% of neurology outpatient consultations are about Headache

I WOULD LOVE TO REMOVE MY HEAD



26.10 Primary and secondary headache syndromes

Primary headache syndromes
• Migraine (with or without aura) • Tension-type headache • Trigeminal autonomic cephalalgia (including cluster headache) • Primary stabbing/coughing/exertional/sex-related headache • Thunderclap headache • New daily persistent headache syndrome
Secondary causes of headache
• Medication overuse headache (chronic daily headache) • Intracerebral bleeding (subdural haematoma, subarachnoid or intracerebral haemorrhage) • Raised intracranial pressure (brain tumour, idiopathic intracranial hypertension) • Infection (meningitis, encephalitis, brain abscess) • Inflammatory disease (temporal arteritis, other vasculitis, arthritis) • Referred pain from other structures (orbit, temporomandibular joint, neck)

Diagnosis of headache

1)History
2)Physical examination
3)Investigations

1) History of headache

- History of headache includes:
  - duration,
  - onset,
  - site,
  - characteristics,
  - severity,
  - radiation,
  - aggravating-relieving factor,
  - any previous episodes (if present same or not)

- Any associated symptoms like fever, rash, neck stiffness, nausea, vomiting, eye pain,visual problem, weight loss, jaw claudication.

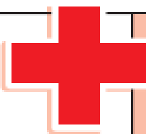
- Any complication like: visual loss, limb weakness, facial weakness,

- Symptoms of underlying etiology like history of migraine, tension, systemic disease, medication, any problems in ear, nose throat or surrounding structures.

* Excludes sinister causes of headcahe
  * Intracranial tumor
  * Meningitis
  * Subarachnoid Hemorrhages
  * Giant Cell Arteritis
  * Primary angle-glaucoma
  * Idiopathic Intracranial Hypertension
  * Carbon Monoxide posioning
  * And other serious causes

Headache diary- pattern of headache

WEEK 1	Please score the pain of your headache out of 10 and indicate if you have any other symptoms as listed.						
	Sun	Mon	Tue	Wed	Thur	Fri	Sat
Headache (0 = none 10 = worse)							
Feeling sick (Yes/No)							
Vomiting (Yes/No)							
Other symptoms (Yes/No)							
Duration of attack (hours)							
Had to lie down (Yes/No)							
Time away from normal activities (hours)							
Number of tablets of medicine taken:							
Prescribed							
Over the counter							
Menstruation (Yes/No)							



26.11 'Red flag' symptoms in headache

Symptom	Possible explanation
Sudden onset (maximal immediately or within minutes)	Subarachnoid haemorrhage Cerebral venous sinus thrombosis Pituitary apoplexy Meningitis
Focal neurological symptoms (other than for typically migrainous)	Intracranial mass lesion Vascular Neoplastic Infection
Constitutional symptoms Weight loss General malaise Pyrexia Meningism Rash	Meningoencephalitis Neoplastic (lymphoma or metastases) Inflammatory (vasculitic)
Raised intracranial pressure (worse on wakening/lying down, associated vomiting)	Intracranial mass lesion
New onset aged > 60 yrs	Temporal arteritis

2) Examination of headache

Neurological examination in patients first presenting with headache:

1. Fundoscopy
2. Cranial nerve assessment especially pupils, visual fields, eye movements, facial power and sensation and bulbar function (soft palate, tongue movement)
3. Motor and sensory system of the limb examination including planter response.
4. Sign of meningeal irritation: neck stiffness and Kernig's sign
5. Any features of systemic diseases

3) Headache: Investigations

Majority of primary headaches do not require neuroimaging

Indication of Neuroimaging in case of headache:

1. Any headache with Red flag sign
2. Any headache suspects to have secondary causes

3) Headache: Investigations

Choice of investigation: (CT versus MRI)

* **The European Federation of Neurological Societies guidelines**
  * MRI is the imaging modality of choice because of this greater sensitivity

* **The US headache consortium**
  * MRI may be more sensitive than CT in identifying clinically insignificant abnormalities,

* **Recomendation:**

  Brain CT should be performed in patients with abnormal neurological signs, unless the clinical history suggests MRI is indicated.

- Primary headache disorders – migraine, tension headache and cluster headache – constitute nearly 98% of all headaches.
- Though they are from benign origin, they can be extremely debilitating and have significant impact on an individual’s quality of life, imposing huge costs to healthcare system.
- A small proportion of headache of serious underlying etiology requires special attention and should be ruled out for early for intervention and treatment.

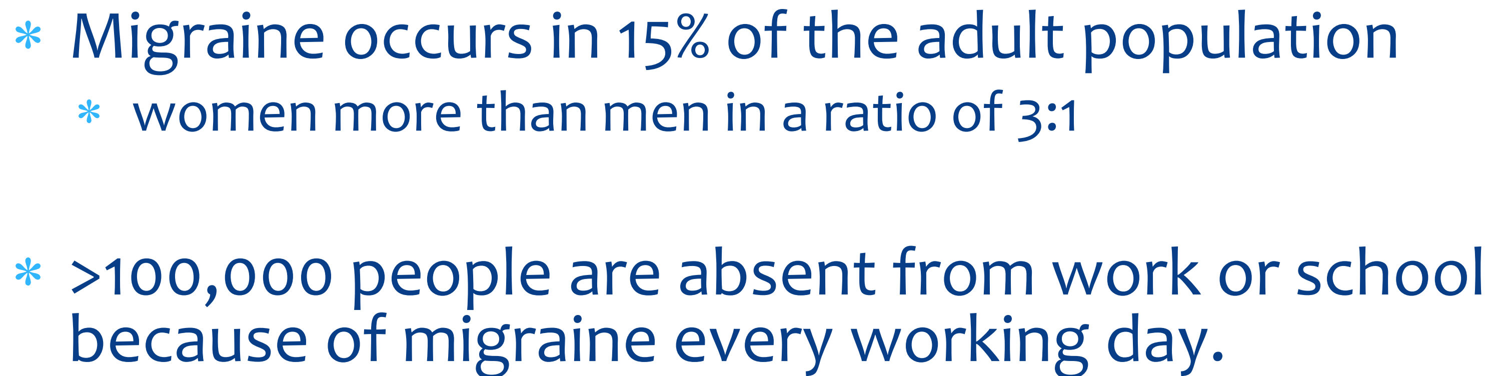
Common types of

Headaches

Sinus:	Cluster:	Tension:	Migraine:
pain is usually behind the forehead and/or cheekbones	pain is in and around one eye	pain is like a band squeezing the head	pain, nausea and visual changes are typical of classic form

Migraine

* Recurrent headache disorder
* 4-72 hours.
* Typical characteristics : **unilateral** location, **pulsating** quality, **moderate or severe intensity**, aggravation by routine **physical activity** and association with **nausea** and/or **photophobia** and **phonophobia**.



* Migraine occurs in 15% of the adult population
  * women more than men in a ratio of 3:1
* >100,000 people are absent from work or school because of migraine every working day.

Migraine with aura: Diagnostic criteria

A. At least two attacks fulfilling criteria B and C
B. One or more of the following fully reversible aura symptoms:
  1. visual
  2. sensory
  3. speech and/or language
  4. motor
  5. brainstem
  6. retinal
C. At least two of the following four characteristics:
  1. at least one aura symptom spreads gradually over ≥5 minutes, and/or two or more symptoms occur in succession
  2. each individual aura symptom lasts 5-60 minutes[1]
  3. at least one aura symptom is unilateral[2]
  4. the aura is accompanied, or followed within 60 minutes, by headache
D. Not better accounted for by another ICHD-3 diagnosis, and transient ischaemic attack has been excluded.

Scintillating scotoma

Migraine without aura: Diagnostic criteria

A. At least five attacks[1] fulfilling criteria B–D

B. Headache attacks lasting 4-72 hours (untreated or unsuccessfully treated)[2,3]

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.

Possible Triggers of a Migraine Attack

- Food and food additives: Chocholates
- Bright lights/glare
- Smells/odors
- Dieting/hunger
- Loud noises/sounds
- Changes in altitude/ air travel
- Stress
- Weather changes
- Caffeine
- Alcoholic beverages
- Changes in sleep habits
- Hormonal fluctuations/ menstrual cycle

Wober C et al. *J Headache Pain*. 2006;7(4):188-195.
Friedman DI and De Ver Dye T. *Headache*. 2009;49(6):941-952.

Diagnostic criteria: TTH

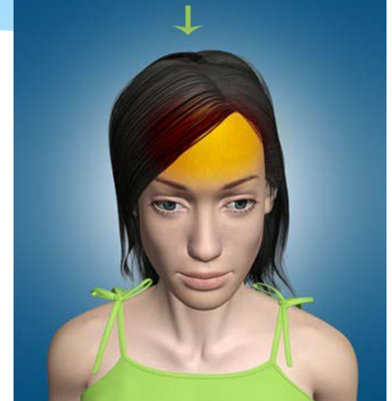
A. At least 10 episodes of headache occurring on <1 day per month on average (<12 days per year) and fulfilling criteria B-D

B. Lasting from 30 minutes to 7 days

C. At least two of the following four characteristics:
   1. bilateral location
   2. pressing or 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 nausea or vomiting
   2. no more than one of photophobia or phonophobia

E. Not better accounted for by another ICHD-3 diagnosis.



Diagnostic Criteria: Cluster headache

A. At least five attacks fulfilling criteria B–D
B. Severe or very severe unilateral orbital, supraorbital and/or temporal pain lasting 15–180 minutes (when untreated)[1]
C. Either or both of the following:
   1. at least one of the following symptoms or signs, ipsilateral to the headache:
      a) conjunctival injection and/or lacrimation
      b) nasal congestion and/or rhinorrhoea
      c) eyelid oedema
      d) forehead and facial sweating
      e) forehead and facial flushing
      f) sensation of fullness in the ear
      g) miosis and/or ptosis
   2. a sense of restlessness or agitation
D. Attacks have a frequency between one every other day and eight per day for more than half of the time when the disorder is active
E. Not better accounted for by another ICHD-3 diagnosis.

TAC : Cluster headache (CH)

* CH affects mostly men
  * (male to female ratio 6:1)

* Age 20 or older and very often smokers.

Medication overuse headache (MOH)

* **≥ 15 or more days per month**
* regular overuse of medication for more than 3 **months.**
* It usually, but not invariably, resolves after the overuse is stopped
* may take weeks to months for the headache to resolve after withdrawal.

Overused meds	frequency/month	duration
ergotamine	≥10 days	>3 months
Triptan	≥10 days	>3 months
paracetamol	≥15 days	>3 months
acetylsalicylic acid	≥15 days	>3 months
NSAIDs	≥15 days	>3 months
opioid	≥10 days	>3 months
combination analgesic medication	≥10 days	>3 months
multiple drug classes not individually overused	≥10 days	>3 months
unverified overuse of multiple drug classes	≥10 days	>3 months
one or more medications other than those described above	≥10 days	>3 months

Medication overuse headache (MOH)

* Nature of pain
  * worst on awakening in the morning
  * increases after physical exertion
  * In the end-stage, headache persists all day, fluctuating with medication use repeated every few hours.

General Treatment Options for Common Types of Headache

MIGRAINE WITH OR WITHOUT AURA

Acute treatment

- **Monotherapy:** oral triptan, NSAID, aspirin or paracetamol
- **Combination:** Oral triptan + an NSAID/ paracetamol.
- **Anti-emetics** Prochlorperazine, domperidone, metoclopramide, domperidone

Do not offer ergots or opioids

Caffeine?? Evidence was limited to the inclusion of caffeine with combinations of other drugs

Prophylactic treatment

- First line: Topiramate or propranolol.
- Diet: riboflavin (400 mg OD) may be effective in reducing migraine frequency

TENSION-TYPE HEADACHE

Aspirin, paracetamol or an NSAID

Do not offer opioids

Prophylactic treatment: TCA can be used

CLUSTER HEADACHE

- 100% O2 and Verapamil
- Do not offer paracetamol, NSAIDS, opioids, ergots or oral triptans

Medication overuse headache

* Treated by withdrawing overused medication- abruptly rather than gradually for ≤ 1 month

* prophylactic treatment for the underlying primary headache disorder

* Consider specialist referral for people who are using strong opioids withdrawal (Addiction team)

* Review the diagnosis & mx 4–8 weeks after the start of withdrawal of overused medic

Headaches That Require Emergency Attention

* Stroke
  * (focal neurological deficit, nausea, vomiting)
* Aneurysm
  * (The worst headache ever!)
  * subarachnoid hemorrhage (SAH)
* Meningitis
  * (fever & neck pain)

Finally….

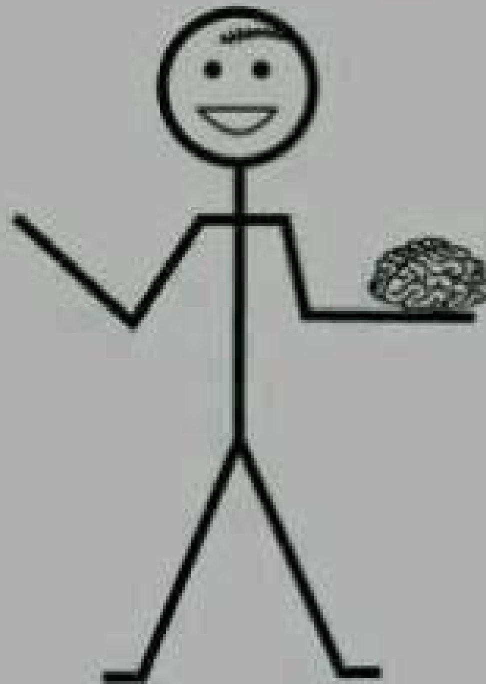
Myths about Headache

Headache = Migraine

Headache = CT scan

Thank you

No Brain,



No Headache!

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