433 Teams

PRIMARY HEALTH CARE

TBL(Headache)

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Outline

Note; read the guidelines before reading this lecture , it will be easier for you to memorize and understand.

- Headache and its types
- Misconceptions
- Diagnostic approach
- Differential diagnosis
- Urgent considerations

Learning objectives

- The best approach to diagnose patients with headache.
- Best practice for migraine prophylaxis.
- Treating tension / cluster headaches.
- Patient education

Background:

Headache: is pain localized to any part of the head, behind the eyes or ears, or in the upper neck.

-is among the most common medical complaints.

-is one of the most common neurological problems presented to GPs and neurologists.

Almost half (50%) of the adult population have had a headache at least once within the last year. (http://www.who.int/mediacentre/factsheets/fs277/en/).

Guideline for primary care management of headache in adults. Canadian Family Physician

- Headache on 15 or more days every month affects 1.7–4% of the world's adult population
- The estimated lifetime prevalence of headache is 66%:
  - 46% to 78% for tension-type headache
  - 14% to 16% for migraine
  - 0.1% to 0.3% for cluster headache.

- Most common primary headache disorders are tension-type headache, migraine and cluster headache.

Misconceptions

- Acute or chronic sinusitis appears to be an uncommon cause of recurrent headaches, and many patients presenting with sinus headache turn out to have migraine.

- Patients frequently attribute headaches to eye strain. Headaches are only rarely due to refractive error alone.

- Hypertension can cause headaches: This is true in the case of hypertensive emergencies, it is probably not true for typical migraine or tension headaches.

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Types of headaches

PRIMARY

- Migraine
- Tension-type
- Cluster
- Other trigeminal autonomic cephalalgias

SECONDARY

- Space-occupying mass
- Vascular lesion
- Infection
- Metabolic disturbance
- Systemic problem.

Case scenario 1

Ahmed is a 14-year-old boy. He attends your clinic accompanied by his mother. He presents with a two months history of headaches that he describes as "banging" and that make his head "very sore".

He says that in the past two months, he has had 6 of these headaches. He also says that light hurts his eyes when he has the headaches. He does not feel nauseous or vomit during the headaches.

Mother tells you that when Ahmed has the headaches he is unable to go to school and that the headaches last from 2 to 4 hours. She gives Ahmed paracetamol and if that doesn't work she also gives him ibuprofen. This combination of medication helps.

MIDAS SCALE FOR MIGRAINE DISABILITY

Fill in how many days in the last three months you ...

3	Could not go to work or school ...
7	Did less than half your usual amount in your job or schoolwork ...
8	Could not do any household work ...
5	Did less than half your usual amount of household work?
5	Missed family, social or leisure activities ...

because of your headaches?

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SCORE

GRADING

0-5	Minimal or infrequent impact	Grade I
6-10	Mild or infrequent impact	Grade II
11-20	Moderate impact	Grade III
20+	Severe impact	Grade IV

You diagnose migraine without aura.

How would you manage this?

- Reassure them that a serious underlying cause is unlikely
- Tell them that migraines are a well-recognised problem although what causes them is not known for certain
- Explain the risk of medication overuse headache

For acute management of migraine

-Taking into account the person's preference, comorbidities and risk of adverse events:

- Offer therapy:

1- **First line**: Simple analgesics (Ibuprofen 400 mg, ASA 1000 mg, naproxen sodium 500-550 mg, acetaminophen 1000 mg)

2- **Second line:** Triptans

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Mild to moderate attacks — not associated with vomiting - simple analgesics (NSAIDs, acetaminophen) or combination analgesics

- **Moderate to severe attacks** — not associated with vomiting -oral migraine-specific agents are first-line, including oral triptans and the combination of sumatriptan-naproxen.
- When complicated by vomiting , non oral migraine-specific medications including subcutaneous sumatriptan OR nasal sumatriptan, non oral antiemetic agents

Managing patients with migraine

- Pay attention to lifestyle and specific migraine triggers.
- Lifestyle factors to avoid include :
  - -irregular or skipped meals
  - -irregular or too little sleep
  - -a stressful lifestyle
  - -excessive caffeine consumption
  - -lack of exercise
  - –obesity
- Use acute pharmacologic therapy for individual attacks
- Use prophylactic pharmacologic therapy, when indicated.
- Evaluate and treat coexistent medical and psychiatric disorders

Guideline for primary care management of headache in adults.
Canadian Family Physician

Managing patients with migraine cont….

- Encourage patients to participate actively in their treatment:

  -self-monitoring to identify factors influencing migraine

  -maintaining a lifestyle that does not worsen migraine

  -practicing relaxation techniques

  -maintaining good sleep hygiene

  -using cognitive restructuring to avoid negative thinking

  -improving communication skills to talk effectively about pain with family and others

  -using acute and prophylactic medication appropriately

Case scenario 2

- Aliya is a 28-year-old woman who was diagnosed with migraine with aura 6 months ago. She has, on average, 1 migraine attack per week, for which she takes an NSAID and an anti-emetic.

- Because Aliya has migraine about 4 times per month, she is unlikely to develop medication overuse headache. You are therefore happy with her current treatment plan.

- However, during an attack, she is unable to work or continue her normal daily activities. She also worries a lot about when the next attack is going to happen and their frequency causes her to take a lot of time off work.

- You want to confirm that she is not a taking combined hormonal contraceptive for contraception purposes.

  Why?

- The World Health Organization, 2009 (medical eligibility criteria) recommends that the oral contraceptive pill should not be used in women with **migraine with aura at any age**.

- There is an increased risk of ischaemic stroke in people with migraine with aura. This risk is increased in women using combined hormonal contraception.

You suggest propranolol for migraine prophylaxis.

a) How would you assess the effectiveness of the propranolol?

Headache diary

b) When would you review the need to continue this prophylaxis?

- -It might take 4-8 wk for substantial benefit to occur
- -If the prophylactic drug provides substantial benefit in the first 2 mo of therapy, this benefit might increase further over several additional months of therapy.
- 6-12 months after the start of prophylactic treatment.

She wants to become pregnant in the future, but still needs migraine prophylaxis, what should you do?

- Migraine without aura often improves during pregnancy. However, migraine with aura is more likely to continue throughout pregnancy.
- Seek specialist advice if prophylactic treatment for migraine is needed during pregnancy.
- Offer pregnant women paracetamol for the acute treatment of migraine.

Case scenario 3

Abdullah is a 31-year-old man. He has a history of severe headaches, which are the worst pain he has ever felt. When he gets these headaches, he has pain on 1 side of his head, around his eye and along the side of his face. He also experiences watery eye and nasal congestion, on the same side as the headache.

He experienced the headache for the first time 2 weeks ago. The CT scan done was normal and you have been asked to evaluate him.

He tells you that, since his first severe headache 2 weeks ago, he has experienced 6 more headaches. He says that on average his severe headaches last from 30 to 90 minutes.

What advice and support can you offer about his diagnosis?

- Management primarily pharmacologic
- Offer O2 or a subcutaneous or nasal triptan for the acute treatment.
- What prophylaxis for cluster headache could you offer him?
- Prophylactic medication: consider offering him verapamil.
- Seek specialist advice before starting verapamil
- Early specialist referral recommended

What medications would you **not** offer for the acute management of his cluster headache attacks?

- You would not offer paracetamol, NSAIDS, oral triptans, ergots or opioids as there is no evidence to suggest that they would have any clinical benefit in the treatment of cluster headache.

General practice points for managing primary headache in adults

- Rule out secondary headache .
- Imaging is not recommended for the routine assessment of patients with headache with normal neurologic examination findings, and no red flags.
- History and physical examination findings are usually sufficient to make a diagnosis
- Migraine should be considered in patients with recurrent moderate or severe headaches and normal neurologic examination findings.

General practice points cont....

- Consider a diagnosis of migraine in patients with a previous diagnosis of recurring "sinus" headache.
- Medication overuse is considered when patients with migraine or tension-type headache use combination analgesics,
  - Opioids, or triptans on **≥10 d/mo**

    or
  - Acetaminophen or NSAIDs on **≥15 d/mo**
- Comprehensive migraine therapy includes management of lifestyle factors and triggers, acute and prophylactic medications, and migraine self-management strategies

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SNOOP(red flag signs)

Systemic symptoms	fever, weight loss, cancer, pregnancy, immunocompromised state
Neurologic symptoms	confusion, impaired alertness, papilledema, neurologic signs, meningismus, or seizures
Onset	Age >40 years or sudden, "thunderclap“
Other associated conditions	head trauma, headache awakens from sleep, worse with Valsalva maneuvers, precipitated by cough, exertion
Previous headache history	headache progression or change in attack frequency, severity

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Characteristics of migraine, tension-type, and cluster headache syndromes

Symptom	Migraine	Tension-type	Cluster
Location	Adults: Unilateral in 60 to 70 percent, Children and adolescents: Bilateral in majority	Bilateral	Always unilateral, usually begins around the eye or temple
Characteristics	Gradual in onset, crescendo pattern; pulsating; moderate or severe intensity; aggravated by routine physical activity	Pressure or tightness which waxes and wanes	Pain begins quickly, reaches a crescendo within minutes; pain is deep, continuous, excruciating, and explosive in quality
Patient appearance	Patient prefers to rest in a dark, quiet room	Patient may remain active or may need to rest	Patient remains active
Duration	4 to 72 hours	30 minutes to 7 days	15 minutes to 3 hours
Associated symptoms	Nausea, vomiting, photophobia, phonophobia; may have aura	None	Ipsilateral lacrimation, redness of the eye; stuffy nose; rhinorrhea; pallor; sweating; Horner syndrome;

- Warning signs of Headache :

Headache with visual impairment

Acute glaucoma

Temporal arteritis

Headache with numbness

Thunderclap headache

New headache with cognitive change

Headache with neck and face pain

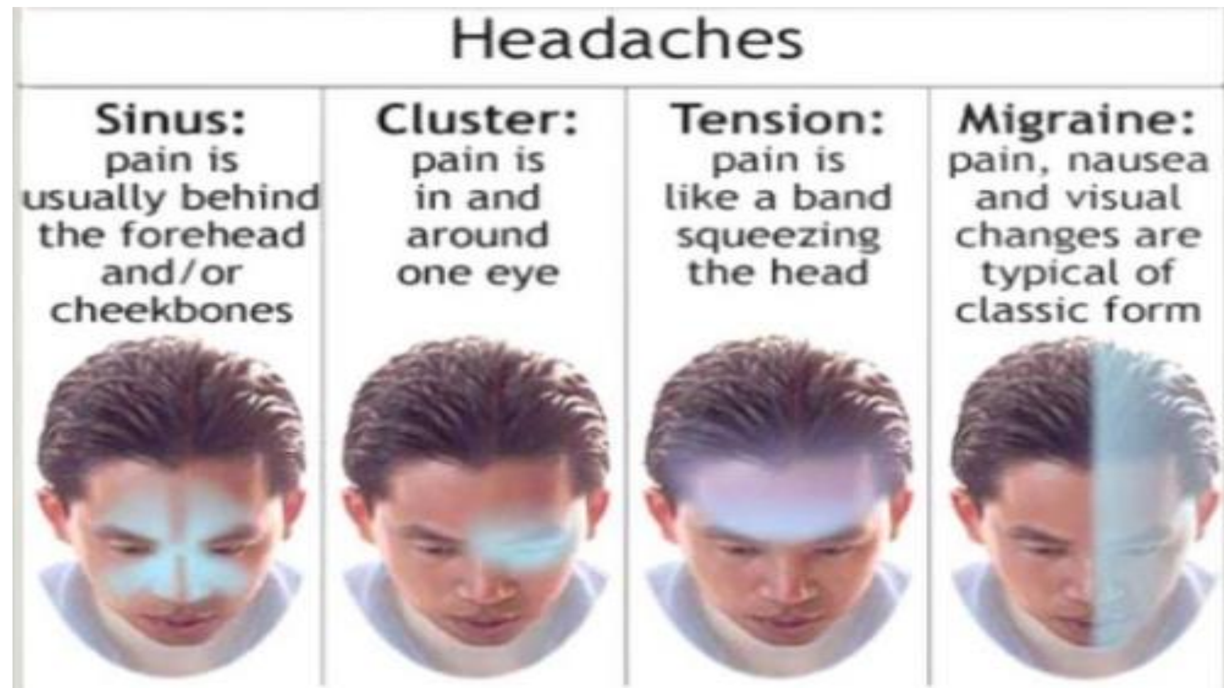
Important elements in history : headache for the first time or those with a change in headache pattern

Explore the following important elements :

- Headache onset (thunderclap, head or neck trauma)
  - previous attacks (progression of symptoms)
  - duration of attacks (4 hours, continuous)
  - days per month with headache
- Pain location
- Headache-associated symptoms
- Relationship to precipitating factors (stress, posture etc)
- Effect on work and family activities
- Response to acute and preventive medications
- Presence of coexistent conditions (depression, asthma, etc)

Approach to the physical examination

- Screening neurologic examination
- Neck examination
- Blood pressure measurement
- If indicated, a focused neurologic examination
- If indicated by associated jaw complaints, an examination for temporo-mandibular disorders



Red flags Emergent (address immediately)

- Thunderclap onset
- Fever and meningismus
- Papilledema with focal signs or reduced LOC
- Acute glaucoma

Urgent (address within hours to days)

- Temporal arteritis • Papilledema (WITHOUT focal signs or reduced LOC)
- Relevant systemic illness
- Elderly patient: new headache with cognitive change

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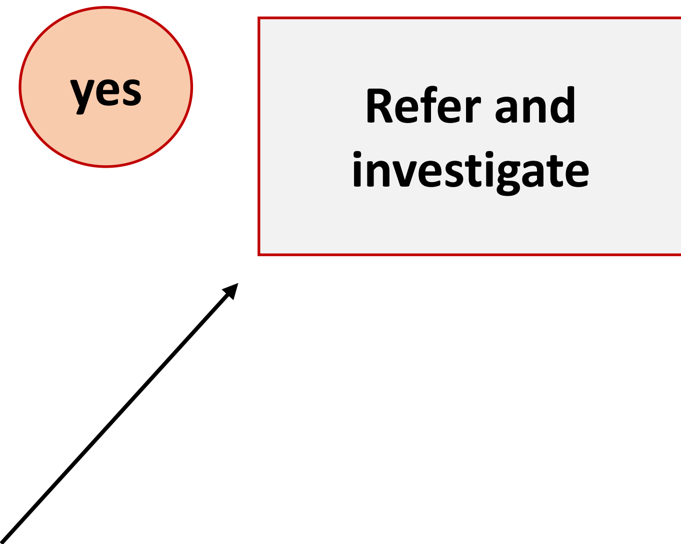

Possible indicators of secondary headache

- Unexplained focal signs
- Atypical headaches
- Unusual aura symptoms
- Onset after age 50 y

Aggravation by neck movement

- Abnormal neck examination findings (cervicogenic headache)
- Jaw symptoms (consider temporomandibular joint disorder)

Headache with ≥2 of

- Nausea
- Light sensitivity
- Interference with activities

migraine

NO

Headache with no nausea but ≥2 of

- **Bilateral headache**
- **Non pulsating pain**
- **Mild to moderate pain**
- **Not worsened by activity**

Tension type headache

Medication overuse

Assess

- Ergots, triptans, combination analgesics, or codeine **≥10 d/mo**

OR

- Acetaminophen or NSAIDs **≥15 d/mo**

Manage

- Educate patient
- Consider prophylactic medication
- Provide an effective acute medication for severe attacks
- Gradual withdrawal of opioids if used
- Abrupt (or gradual) withdrawal of acetaminophen, NSAIDs, or triptans

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Acute Migraine Medication

First line	Ibuprofen 400 mg ASA 1000 mg naproxen sodium 500-550 mg acetaminophen 1000 mg
Second line	• Triptans: oral sumatriptan 100 mg • Subcutaneous sumatriptan 6 mg if the patient is vomiting early in the attack. • Nasal spray: sumatriptan 20 mg if patient is nauseated Antiemetics: domperidone 10 mg or metoclopramide 10 mg for nausea
Third line	Naproxen sodium 500-550 mg in combination with a triptan
Fourth line	Fixed-dose combination analgesics (with codeine if necessary; not recommended for routine use

Prophylactic Medications

Prophylactic MEdications	Starting dose	Titration,* daily Dose increase	Target dose or therapeutic range
First line propranolol	20 mg twice daily	40 mg/wk	40-120 mg twice daily
metoprolol	50 mg twice daily	50 mg/wk	50-100 mg twice daily
amitriptyline	10 mg at bedtime	10 mg/wk	10-100 mg at bedtime
Second line Topiramate	25 mg/d	25 mg/wk	50 mg twice daily
candesartan	8 mg/d	8 mg/wk	Few side effects; limited experience in prophylaxis
gabapentin	300mg/d	300 mg every 3-7 d	Few drug interactions

Medications for tension-type headache

Medication	Dose
Acute Ibuprofen ASA Naproxen sodium Acetaminophen	 400 mg 1000 mg 500-550 mg 1000 mg
Prophylactic	
First line amitriptyline nortriptyline	 10-100 mg/d 10-100 mg/d
Second line • mirtazapine • venlafaxine	 30 mg/d 150 mg/d

What are the effects of drug treatments for chronic tension-type headache?		
Beneficial	↑↑	• Amitriptyline
Likely to be beneficial	↑?	• Noradrenergic and specific serotonergic antidepressants
Unknown effectiveness	??	• Anticonvulsant drugs • Opioid analgesics • Paracetamol • Serotonin re-uptake inhibitors • Tricyclic antidepressants (other than amitriptyline)
Likely to be ineffective or harmful	↓↓	• Benzodiazepines • Botulinum toxin • Non-steroidal anti-inflammatory drugs (NSAIDs)

What are the effects of non-drug treatments for chronic tension-type headache?		
Unknown effectiveness	??	• Acupuncture • Cognitive behavioural therapy

Medication overuse headache (MOH)

- Also called analgesic rebound headache
- Consider a diagnosis in patients with
- headache on ≥15 d/mo
- possible medication overuse
  - use of triptans, ergots, combination analgesics, or opioid-containing medications on ≥10 d/mo,

    or
  - use of acetaminophen or NSAIDs on ≥15 d/mo
- MOH appears to be highest with opioids containing combination analgesics, and aspirin/acetaminophen/caffeine combinations.
- The risk with triptans is considered intermediate
- The risk is lowest with NSAIDs

Diagnosis of medication-overuse headache

- When medication-overuse headache is suspected, the patient should also be evaluated for the presence of the following:
- -psychiatric comorbidities
- -psychological and physical drug dependence
- -use of inappropriate coping strategies.

Coping strategies for headache

- Rather than relying on medication as a main coping strategy, patients with suspected medication overuse might benefit from training in and development of more adaptive self-management strategies (eg, identification and management of controllable headache triggers, relaxation exercises, effective stress management skills, and activity pacing)
- Headache diaries that record acute medication intake are important in the prevention and treatment of medication-overuse headache

Headache on ≥15 d/mo for >3 mo and with normal neurologic examination findings

- Diagnose chronic migraine if headaches meet migraine diagnostic criteria or are quickly aborted by migraine-specific medications (triptans or ergots) on ≥8 d/mo.
  - chronic" indicates a headache frequency of 15 or more days a month for longer than three months in the absence of organic pathology.
  - Chronic migraine with medication overuse if the patient uses ergots, triptans, opioids, or combination analgesics on ≥10 d/mo or uses plain acetaminophen or NSAIDs on ≥15 d/mo

-Chronic migraine without medication overuse if patients do not have medication overuse as defined above

- **Diagnose episodic tension-type headache if:**

  - headache attacks are not associated with nausea
  - have at least 2 of the following:
  - -bilateral headache
  - -non pulsating pain
  - -mild to moderate intensity
  - -headache is not worsened by activity

- **Diagnose chronic tension-type headache if :**
- headaches meet episodic tension-type headache diagnostic criteria (above), except mild nausea might be present

Patients with continuous daily headache for >3 mo with normal neurologic examination findings

- Diagnose "hemicrania continua" if the headache
  - -is strictly unilateral
  - -is always on the same side of the head (ptosis or miosis might be present on examination)
  - -responds dramatically to indomethacin.
- These attacks usually happen three to five times a day.
- Some people will have these headaches steadily for months or years. For others, the pain will go away for weeks or months, then come back.
- Like migraines, they can cause:
- Vomiting/nausea
- Sensitivity to noise or light
- Throbbing pain

Diagnose new daily persistent headache

- If the headache is unremitting since its onset.
- It is important to consider secondary headaches in these patients.
- Neurologist referral recommended

Prophylactic medication

- Educate patients on the need to take the medication daily and according to the prescribed frequency and dosage
- Ensure that patients have realistic expectations, Explain that…

  -Headache attacks will likely not be abolished completely

  -A reduction in headache frequency of 50% is usually considered worthwhile and successful

  -It might take 4-8 weeks for substantial benefit to occur

-If the prophylactic drug provides substantial benefit in the first 2 mo of therapy, this benefit might increase further over several additional months of therapy

- Evaluate the effectiveness of therapy using patient diaries

Prescribing prophylactic medication cont

- For most prophylactic drugs, initiate therapy with a low dose and increase the dosage gradually to minimize side effects
- Increase the dose until the drug proves effective, until dose limiting side effects occur, or until a target dose is reached
- Continue the prophylactic drug for at least 6-8 wk after dose titration is completed
- Because migraine attack tendency fluctuates over time, consider gradual discontinuation of the drug for many patients after 6 to 12 mo of successful prophylactic therapy

Management of MOH- Patient education.

- Acute medication overuse can increase headache frequency
- When medication overuse is stopped, headache might worsen temporarily and other withdrawal symptoms might occur
- Many patients will experience a long-term reduction in headache frequency after medication overuse is stopped
- Prophylactic medications might become more effective

Strategy for cessation of medication overuse

- Abrupt withdrawal should be advised for patients with suspected medication overuse headache (MOH) caused by simple analgesics (acetaminophen, NSAIDs) or triptans.

- Gradual withdrawal should be advised for patients with suspected medication-overuse headache caused by opioids and opioid-containing analgesics.
- Patient follow-up and support

MCQs

- **<u>Which on of the following is not a primary Headache ?</u>**

1. **Migraine.**
2. **Tension-Type.**
3. **Cluster.**
4. **Infectious .**

- **<u>Which of the following is a common feature of both migraine and tension-type Headache ?</u>**

1. **Same diagnostic criteria .**
2. **Same first line treatment.**
3. **Same pathogenesis.**
4. **Nothing in common.**

- **<u>Which one of the following is considered a red flag sign ?</u>**

1. **Meningitis like**
2. **Old patient**
3. **reduced Level of consious**
4. **Papilledema**

4/2/1

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