

Headache Assessment

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- Introduction to headache
- Guidelines
- Diagnosis
- History key questions
- Red flags
- Differential diagnosis
- Examination
- Investigations

PREVALENCE

- Affects nearly everyone at least occasionally
- Is a problem in the lives of 40% UK population
- One of most frequent GP & Neuro consultations
- In its various forms represents socioeconomic burden

MIGRAINE

- Migraine 15% pop women > men 3:1 ratio
- 190,000 attacks every day.
- $\frac{3}{4}$ report disability
- Occurs in children (often missed diagnosis) and adults but most troublesome during late teens to 50's
- >100,000 absent from work or school daily
- Costs ? > £1.5 billion per annum

OTHER HEADACHES

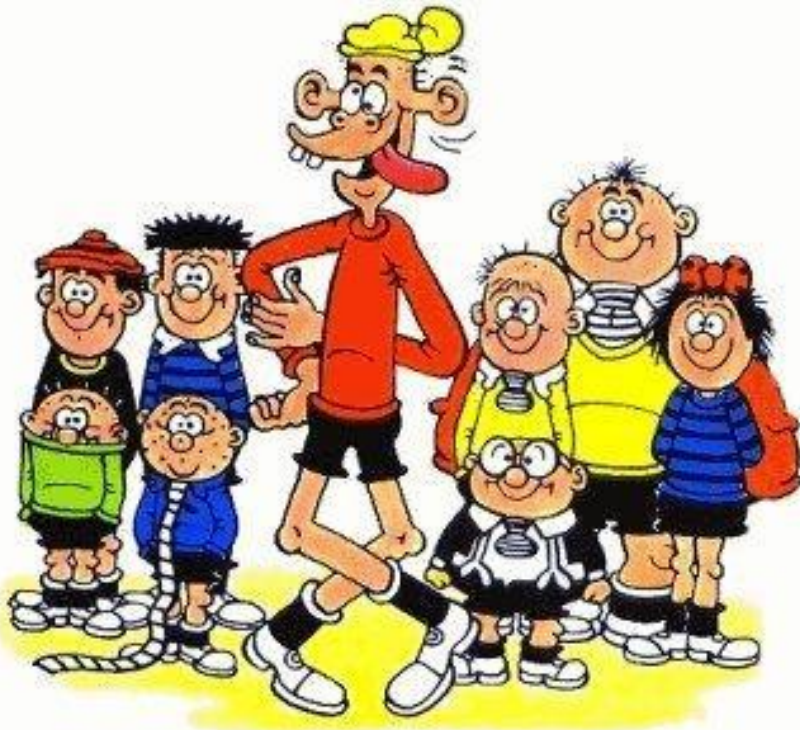
- Tension affects 80% population
- Mostly self treat with OTC medication
- Estimated similar economic loss to migraine (total £3 billion!)
- Up to 3% have chronic subtype >15 days/month
- These people have high morbidity & potential disability



- Despite the statistics headache disorders as under diagnosed and under treated in the UK, throughout Europe & USA.

GUIDELINES

- **B**ritish
- **A**ssociation for the
- **S**tudy of
- **H**eadache
- Guideline for all healthcare professionals in the diagnosis and management of migraine, tension-type, cluster & medication overuse headache.



DIAGNOSIS

- No diagnostic tests for any primary headache disorders or medication-overuse headache
- Is all in the history
- Takes time to elicit
- Not finding the time to elicit it fully is probable course of misdiagnosis

APPROACH TO HEADACHE HISTORY



- Separate Hx for each type of headache patient experiences
- Why consulting now?
- How recent in onset?
- How frequent & what temporal pattern (episodic, daily, unremitting)?
- How long lasting?

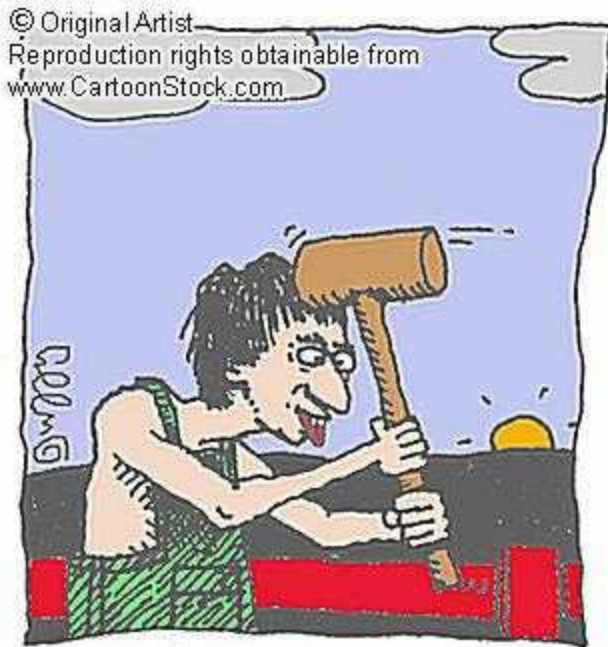
CHARACTER



- Intensity of pain
- Nature & quality of pain
- Site & spread of pain
- Associated symptoms

CAUSE

- Predisposing and/or trigger factors
- Aggravating and/or relieving factors
- Family Hx of similar headache



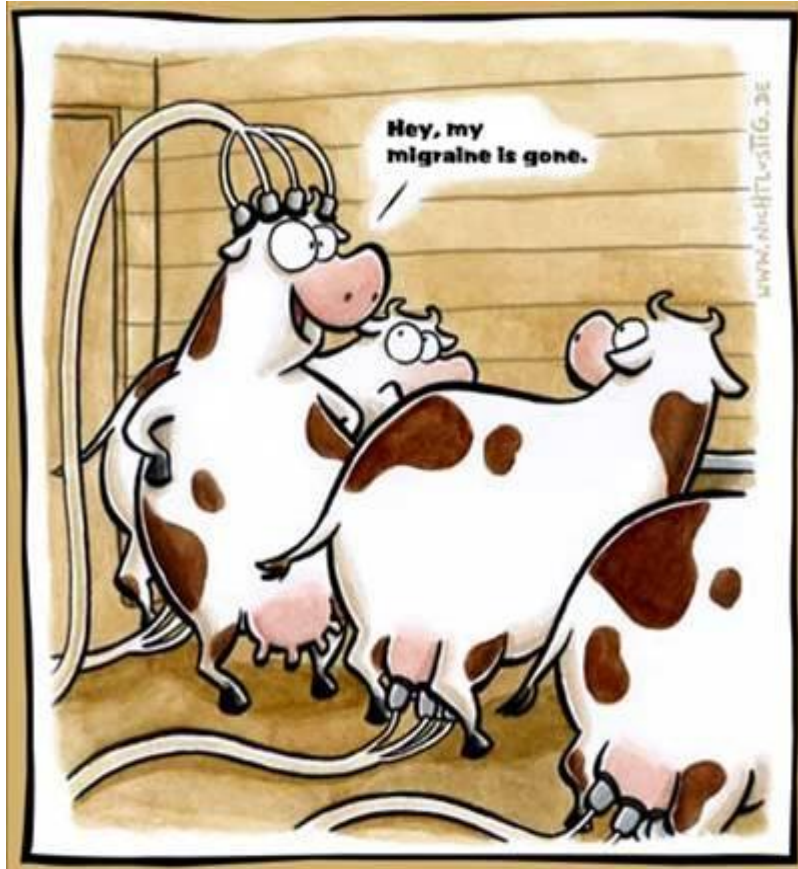
JED'S CRIES FOR HELP WERE ANYTHING BUT SUBTLE, YET NO ONE SEEMED TO NOTICE.

OTHER QUESTIONS

- RESPONSE
- What does the patient do during the headache?
- How much is activity (function) limited or prevented?
- What medication has been and is used, and in what manner?
- STATE OF HEALTH BETWEEN ATTACKS
- Completely well or residual persisting symptoms?
- Concerns, anxieties, fears about recurrent attacks and/or their cause

DIFFERENTIAL DIAGNOSIS

MIGRAINE



- Typically episodic
- Moderate or severe
- May be unilateral and/or pulsating
- Lasting part of a day up to 3 days
- Associated with gastrointestinal symptoms
- Limit activity
- Prefer dark & quiet
- Free from symptoms between attacks

HIS Diagnostic Criteria Migraine without aura

A At least 5 attacks fulfilling criteria B-D

B Headache attacks lasting 4-72 hours (untreated or unsuccessfully treated)

C Headache has at least 2 of following characteristics

1. Unilateral location
2. Pulsating quality (varying with heartbeat)
3. Moderate or severe pain intensity
4. Aggravation by or causing avoidance of routine physical activity (walking, climbing stairs)

D During headache at least 1 of following

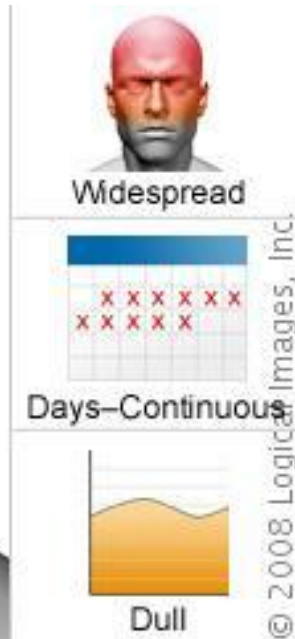
1. Nausea and/ or vomiting
2. Photophobia and phonophobia

E Not attributes to another disorder

HIS Diagnostic Criteria Migraine with aura

- Affects 1/3 of sufferers
- Diagnosed relatively easily
- Occurrence of typical aura clinches it
- Visual blurring or spots are not diagnostic!
- Typical aura progressive 5 -60 mins prior to headache
- Visual: hemianopic disturbance or spreading scintillating scotoma (jagged crescent) alone or with
- Reversible focal neurological disturbances: unilateral parasthesia hand, arm, face rarely leg and/or dysphasia.
- All manifestations of functional cortical disturbance of one cerebral hemisphere
- Diagnosis by treatment not unreasonable but may mislead as only effective in $\frac{3}{4}$ attacks
- Differential diagnosis particularly older patients is TIA
- Management: BASH guidelines work through Rx options in rational order

TENSION



- Episodic or attack-like episodes
- Variable, often low frequency
- Short lasting, no more than several hours
- Can be unilateral more often generalised
- Described pressure or tightness, “like a vice” or tight band.
- Commonly spreads to or from neck
- Lacks specific features and associated symptoms of migraine
- Stress related, functional or structural cervical or cranial musculoskeletal abnormality
- Chronic no longer respond to analgesia, occurs ≥ 15 days month. Disabling!
- Usually self limiting, non disabling
- Management : reassurance & symptomatic Rx, Physio if musculoskeletal etc
- Caution: Medication overuse

CLUSTER



- **Trigeminal autonomic cephalalgias**
- Daily occurrence (often several a day)
- Most common is cluster
- Mostly men M to F ratio 6:1
- 20's or older (very rarely children)
- Smokers
- Bouts of 6-12 weeks once a year or two years
- Often at same time every year

CLUSTER

- Intense (renal colic)
- Strictly unilateral
- Often focused in eye
- Can spread over larger area of head (lead to misdiagnosis)
- Maybe continuous background headache
- **Features that leave no diagnostic doubt**
- Daily
- Similar time each day
- Usually but not always night
- 1-2 hours after falling asleep
- Agitated pacing
- May even beat head on wall
- Pain diminish after 30-60 minutes

- **Differential: Partial Horers syndrome: ipsilateral conjunctival injection, lacrimation, rhinorrhoea, nasal blockage, ptosis**
- **Management: Prophylactic as symptomatic Rx rarely enough to control**

MEDICATION OVERUSE



- 1 in 50 adults
- More women 5:1 some children
- Became more apparent with ergotamine (migraine)
- Mistaken for ongoing migraine but infact withdrawal
- More common from chronic overuse paracetamol, aspirin, NSAID's, codeine, Dihydrocodeine.
- Unclear mechanism probable changes in neural pathway
- May take weeks to months to resolve after withdrawal

MEDICATION OVERUSE

- Highly variable
- Oppressive
- Present and often worse on waking
- Increases after physical exertion
- Associated nausea & vomiting rarely pronounced
- Typical Hx episodic headaches up to 2 years earlier Rx with analgesic or other acute medicines.
- Over time increasing frequency
- Increase medications used
- Until become daily headache and medication
- Seek something “stronger”
- Prophylactic medication likely to add to problem
- Management: Achieve withdrawal, recovery, review & assess primary headache disorder, prevent relapse(40% in 5 years)

OVERVIEW

Common Locations of Headache Pain



Differential diagnosis

- **Cervicogenic headache:** functional/structural derangement of neck : Precipitated by particular neck movement/positions. Associated with altered neck posture, movement, muscle tone, contour +/- muscle tenderness
- **Sinus/ears/TMJ disease:**
Not valid diagnosis unless acute exacerbation or other symptoms are indicative

PHYSICAL EXAM

- All headaches so far diagnosed on Hx
- Optic fundi
- BP (^BP rarely cause)
- Head & neck muscle tenderness or nodules, stiffness, ROM, crepitation (Tension)
- Jaw and bite (TMJ)
- Children head circumference plot on centile chart
- Neuro exam (Only 0.9% of consecutive headache patients without neurological signs had significant pathology)

INVESTIGATIONS

- Investigations including neuroimaging do not contribute to diagnosis of migraine or tension
- Only indicated when Hx or exam suggest headache secondary to other condition
- Cervical spine x-rays unhelpful
- Eye tests unlikely to contribute to diagnosis

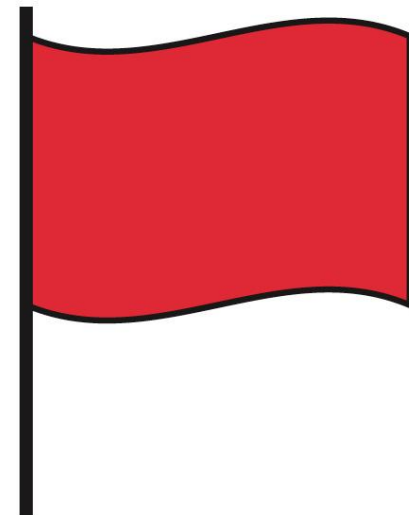
Warning features in Hx

BASH

- New or unexpected in an individual patient
- Thunderclap (intense abrupt explosive onset)
- Atypical aura (>1 hour, including motor weakness)
- Aura for 1st time during oral contraceptive use
- New onset < 10 yrs >50 yrs
- Progressive, worsening over weeks or longer
- Associated with postural change
- New onset with Hx Ca /HIV

Other

- Neck stiffness
- LOC (however transient)
- Fit / collapse
- Visual disturbance
- Focal neurological deficit
- Changes in personality, memory or reasoning
- Worse on waking
- Worst ever
- First severe >35



Intracranial tumours

- Headache always the same side, Dull, aching, Worse on lying or straining, Headache is usually a late feature apart from pituitary
- Raised IC pressure apparent in Hx
- Epilepsy cardinal symptom of SOL
- Loss of consciousness serious
- Focal neurological signs usually present
- Subtle personality change (depression)
- Non-response to Rx triggers investigation
- Fundoscopic examination mandatory at 1st presentation
- High suspicion: New headache with existing Ca or suppressed immune system

Meningitis

- Fever
- Neck stiffness
- Obviously ill
- Progressive over hours or longer
- Generalised
- Frontal
- Radiating to neck
- Nausea
- Altered consciousness

SAH

- Needs a low threshold of suspicion particularly in elderly as classical signs & symptoms may be absent
- Think SAH with all headache
- 50% have warning bleed
- 50% have no physical signs
- 50% consult a doctor
- 50% die with missed initial bleeds
- **History is crucial:** Not always sudden onset
- Sudden onset occipital headache +/- neurological features.
- Sudden collapse with altered LOC
- +/- convulsions
- +/- vomiting
- Recent “warning” episode with headache settled at the time of ED consultation, worst ever, explosive: thunderclap
- Focal signs usually absent
- Meningism
- Some hours for neck stiffness to develop

Giant Cell (temporal) arteritis

- New headache >50
- Variable
- Persistent when present
- Worse at night
- Severe
- Only minority localised to temple
- Jaw claudication is indicative
- Systemically unwell
- Scalp tenderness
- ESR >50

Primary angle-closure glaucoma

- Non specific
- Rare before middle age then 1:1,000
- Family Hx
- Female
- Hypermetropia
- Acute ocular hypertension
- Unilateral painful red eye
- Pupil mid-dilated and fixed
- Nausea & vomiting
- Impaired vision

Idiopathic intracranial hypertension

- Rare but leads to visual loss
- Young women
- Obesity
- Papilloedema
- Raised intracranial pressure

Carbon monoxide

- Uncommon
- Headache
- Nausea & vomiting
- Giddiness
- Muscular weakness
- Dimness of vision
- Double vision

Head Injury

- Post head injury
- NICE guidance (2007)

Conclusion

- High frequency of consultations with low incidence of serious cause
- Difficult to maintain appropriate level of suspicion
- Approach with a standard operating procedure (Hx, fundoscopy, neuro exam)
- Awareness of serious red flags
- Avoids errors