

Headaches

'It's his head, doctor'. How often do we hear that? However this time I was not in my clean and well equipped NHS surgery. The child looked 7 or 8. He had walked to the clinic, escaping from war torn Rwanda a few miles down the road. He had a wound on the back of his head covered with a rather grubby rag and was eyeing me suspiciously. I removed the rag and inspected the wound. The machete had gone deep, but that was not unusual. To my utter horror however, what I saw at the bottom of the wound was not scalp or bone, but brain. I hastily replaced the skin and rag. Amazingly the child survived with skin suturing and antibiotics. He was adopted by a local family and now thrives! But the phrase 'It's my head, doctor' still makes my heart race and my stomach queasy!

SIGN guidelines on headaches

SIGN 107, 2008

This Scottish Intercollegiate Guidelines Network helpfully reviews the diagnosis and management of headache in primary and secondary care. I'll focus on those parts relevant to us in general practice.

Definitions

The SIGN guidelines define headaches as follows:

- **Primary headache disorders: not associated with underlying pathology**
eg. migraine, tension headaches, cluster headaches
- **Secondary headache disorders: headache attributed to underlying pathology**
eg. Head pain from infection, neoplasms, drug induced
- **Chronic headache: >15d/month for more than 3 months**

Red flags

In patients with a headache, the following should prompt further investigation:

- New onset or change in headache in patients >50y.
- Thunderclap headaches (high intensity headache of abrupt onset: seconds-5mins).
- Focal neurological symptoms (eg. limb weakness, aura <5mins or >1hr).
- Non-focal neurological symptoms (eg. cognitive disturbance).
- Change in headache frequency, characteristics or associated symptoms.
- Abnormal findings on neurological examination.
- Headache that changes with posture.
- Headache waking the patient (although migraine is the most common reason for a headache on waking).
- Precipitated by physical exertion or valsalva manoeuvre (coughing, laughing, straining).
- Patients with risk factors for cerebral venous sinus thrombosis (eg. hypercoagulable states, pregnancy).
- Jaw claudication/visual disturbance.
- Neck stiffness.
- Fever.
- New onset headache in a patient with cancer/HIV.

History

- The SIGN guidelines warn us that **an inadequate history is probably the most common cause for mis-diagnosis of headache!**
- **Because of this warning I have outlined the characteristics of the common sorts of primary headaches in a table at the very end of this document.** *Apologies if this seems like teaching grandmothers to suck eggs!*
- **Headache diaries are recommended** (see the example at the end of this document).

Key features to cover in the history are:

How many different sorts of headaches do you get? Take a detailed history for each sort.

Time

- How recent onset?
- Duration, frequency, temporal pattern (episodic, daily or unremitting)?
- Why consulting now?

Character of pain

- Intensity, nature and quality of pain, site and spread of pain, associated symptoms?
- Causes?
- Predisposing and/or triggering factors? Aggravating/relieving factors?
- Family history of similar sorts of headache?

Responses

- What does the patient do during an attack?
- How much is activity/function limited or prevented?
- What medication has been used?

State of health between attacks

- Completely well or residual/persisting symptoms?
- Concerns/anxieties/fears about headaches and their causes?

Examination

- **The SIGN guidelines recommend a neurological examination, fundoscopy and BP** (and obviously other clinical examination as indicated).
- **Assess neck movements in all patients** to exclude neck pain as a cause/contributory factors. Assess posture, range of movements, muscle tone and tenderness.

Management

I'll discuss the management of the different sorts of headaches one by one.

Migraines

- **SIGN guidelines say neuroimaging not recommended if:**
Clear history of migraine (see table at the end of this document)
No red flags for potential secondary headache
Normal neurological examination.

Acute treatment

- **Treatment (especially triptans) needs to be taken as soon as possible to maximise efficacy** ('Carry one with you in your wallet/purse...')

- **Aspirin (900mg) or ibuprofen (400mg) for all severities of migraine.**

- **Add in paracetamol (1g) for mild-moderate headaches.**

- **If previous attacks not controlled with oral analgesia add in oral triptans.**

Recommended triptans are:

Almotriptan (12.5mg)
Eletriptan (40-80mg)
Rizatriptan (10mg)

These are recommended because they are as good/better than sumatriptan 100mg in terms of initial pain relief and are well tolerated. **Almotriptan is the cheapest.**

- If no response from one triptan, it is worth trying a different triptan.
- For prolonged attacks which recede and then return try sumatriptan 50-100mg (with naproxen 500mg).
- **If nausea/vomiting a problem use oral/rectal antiemetics** (eg. metoclopramide).
- Do not routinely use opioids (because of risk of medication overuse headaches).
- Discuss medication overuse with patients when initiating therapy for migraines.

Prophylaxis of migraine

- Trial data suggests prophylaxis reduces severity & frequency of attacks by half.
- SIGN do not indicate at what stage prophylaxis should start, although most would be guided by frequency and severity and functional impairment.
- **Beta-blockers should be used first line as prophylaxis** (propranolol 80-240mg/day).
- **Alternatives are:**
 - **Antidepressants**
Amitriptyline is used in doses of 25-150mg od and venlafaxine at 75-150mg.
 - **Antiepileptics**
Topiramate 50-200mg/day (reduces frequency & severity).
Valproate 0.8-1.5g/day (reduces frequency & severity).
Gabapentin 1.2-2.4g/day (reduces frequency but not severity).
- **Non-pharmacological prophylaxis**
Stress management may reduce frequency and severity of migraines.
Acupuncture can work as prophylaxis.

Tension Headaches

- **No investigations needed if classic history, absence of red flags and normal neurological examination.**
- **Aspirin and paracetamol recommended for acute treatment.**
- **Treat chronic tension headaches with tricyclics** (preferably amitriptyline 25-150mg).

Cluster Headache

Cluster headaches are the commonest form of **trigeminal autonomic cephalgias** (TACs).

What are TACs?

- Unilateral pain in the distribution of the trigeminal nerve.
- Cluster headaches are the commonest type, but still rare (1 in a 1 000). Next commonest form is paroxysmal hemicrania (1 in 50 000!) and are shorter (2-45mins) but more frequent (up to 40/day).

Diagnosis of cluster headaches/TACs

- Pain is **strictly unilateral** in cluster headaches.
- **Ipsilateral** autonomic features should be present, for example:
 - Conjunctival injection and/or lacrimation
 - Nasal congestion and/or rhinorrhoea
 - Eye lid oedema
 - Forehead/facial sweating
 - Miosis/ and or ptosis
- Often restless/agitated.

Treatment of cluster headaches/TACs

- **If you suspect cluster headaches or TACs, refer.**
- Subcutaneous sumatriptan (6mg) is first line for acute treatment.
- Nasal sumatriptan or zolmitriptan if subcut sumatriptan not effective/tolerated.
- For prophylaxis verapamil 240-960mg is recommended.
- Oxygen is recommended but note the recommendation is based on a trial of 19 men done 20 yrs ago! There is more on this on the OUCH! website (see useful websites).

Secondary headaches

- Patients with headaches and red flags should be referred for further assessment.
- SIGN guidance reminds specialists to be aware that incidental findings are common on CT/MRI and raise ethical dilemmas and patient anxiety.

Medication overuse headache

- **Headache present 15 or more days/month which has developed or worsened while taking regular symptomatic medication.**
- **Overuse of opioids and triptans most likely cause but ALL analgesia can do this.**
- Consider whether patient has developed dependence on medication.
- **Withdrawal is the means to a cure, but warn the patient that the headaches will get worse before they get better.**
 - Abrupt withdrawal of analgesia recommended for triptans & non-opioid analgesia
 - Gradual withdrawal for opioids.
- If after withdrawing analgesia headache persists, use prophylactics.

Thunderclap headaches

- **High intensity headache of abrupt onset** (seconds-5mins).
- **Refer immediately** for further investigation (CT, lumbar puncture if CT normal).
- **Commonest cause sub arachnoid haemorrhage** but other forms of intracerebral bleeding, cerebral venous sinus thrombosis, arterial dissection and pituitary apoplexy can all present in this way.

Other causes of secondary headache (and this is no way exhaustive!)

- Acute close angle glaucoma
- Pain from the neck
- Temporal arteritis
- Carbon monoxide poisoning
- Raised intracranial pressure

Headaches in pregnancy/menstruation/menopause and with contraception

In pregnancy

- Try to avoid medication for headache, especially in the first trimester.
- Paracetamol is safe and should be used for migraines and tension type headaches.
- If paracetamol insufficient use aspirin (300mg) or ibuprofen (400mg) in first and second trimester.
- Aspirin is contraindicated in the third trimester.
- Regular/high dose ibuprofen in later pregnancy associated with increased risk of foetal complications.

Menstruation

- Around menstruation migraines can be more frequent and more severe.
- Acute treatment for migraine related to menstruation: mefenamic acid or aspirin, paracetamol and caffeine.
- Triptans can be used if analgesia insufficient.
- Prophylaxis can be used: frovatriptan (2.5mg/day) or naratriptan (1mg bd) for 2d before onset of menstruation and for a further 4-5d.

Menopause

SIGN recommend that migraine is not a contraindication to HRT use, but that HRT may make migraines worse.

Contraception

- In migraine with aura the COCP increases risk of stroke: relative risk 9 (CI 5-15).
- The COCP in those >35y with migraine without aura also increases stroke risk.

SIGN recommend therefore that:

- **Women with migraine with aura of any age should not use the COCP.**
- **Women over 35 with migraine without aura should not use the COCP.**

Now for a few other papers summarising recent research around headaches.

Migraine in pregnancy

BMJ 2008;336:1502-4

This review in the BMJ was useful because it offered advice on what happens to migraine in pregnancy. This is something my patients often ask about.

- **Pregnancy usually reduces the frequency and severity of attacks, especially if women get migraines without aura.**
- **Having said that migraines may be worse in the first trimester and reduce significantly thereafter – many women have no migraines at all in the third trimester.**
- **Nausea associated with migraines may get worse during pregnancy.**
- **Headache is common in all women post partum** (1/3rd get a headache on day 3-6, even in the absence of a history of migraines).

Headaches and neurologists

BJGP 2007;57:388-95

Is there a difference between those with headaches referred to neurologists and those managed in primary care? No!

- **The researchers showed that patients referred to neurologists:
Had clinical symptoms very similar to those not referred
BUT had consulted the GP more often
OR reported higher anxiety levels.**

Referring those who attend frequently or are more anxious isn't necessarily right or wrong, but we need to recognise this when we refer them, and perhaps make this explicit to the patient – "I can see you are very worried about this, and although, as I have said, I do not think there is a sinister cause for your headaches, I am willing to refer you. However I think it is important that you understand that it is highly likely that the neurologist may not be able to find a cause for your headaches either". Holding out the hope of 'referral=cure' is unhelpful.

How explicit am I when I refer a frequent attender as to what I think will be achieved?

Migraine

BJGP 2008;58:98-101

Guidelines usually recommend that people experiencing 2 or more migraines a month should consider prophylactic treatment. This cross sectional study surveyed patients with migraine to look at their attitudes to prophylactic medication. 166 people took part.

- Most patients with 5 migraines a month or more would consider prophylaxis.
- Only half of patients with two or more attacks/month would want prophylaxis.
- One in five of those with <2 migraines a month would like to consider prophylaxis.
- The main reasons for not taking prophylaxis were
Fear of side effects 38%
Insufficient migraines 44%
Feeling that if they took a medicine daily it was like having a chronic disease 23%.

What does this mean in practice?

- **Taking prophylaxis is an individual thing and many patients will not want it despite what the guidelines recommend!**
- **Do we address people's fears about side effects? Do we understand people's reluctance to take prophylaxis?**

Useful Websites	<p>For professionals: www.mipca.org.uk is the Migraine In Primary Care Advisers site and has some useful algorithms and guidelines.</p> <p>For patients: For migraine there are two main sites for patients the Migraine Action Association (www.migraine.org.uk) and the Migraine Trust (www.migrainetrust.org).</p> <p>For cluster headaches there is a charity appropriately called OUCH! (www.ouch.org.uk).</p>	Useful Websites
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Take home messages: Headaches

- Look out for red flags – investigate/refer promptly if identified.
- An inadequate history is probably the most common cause for mis-diagnosis: take a really good history, and recognise the key features for each sort of headache (see table overleaf).
- A headache diary is given overleaf.
- Do a neurological examination, fundoscopy, blood pressure and exclude neck pathology in all patients.
- In migraine, early treatment is crucial to successfully abort an attack. Almotriptan is the cheapest effective triptan. Do not routinely use opioids.
- Beta blockers should be used first line for prophylaxis. Antidepressants and antiepileptic are alternatives.
- For tension headaches aspirin and paracetamol are recommended for acute management, with tricyclics for prophylaxis if needed.
- Cluster headaches are rare and require referral.
- Medication overuse headaches can occur with any analgesia, although they are more common with opioids and triptans.
- A thunderclap headache may indicate serious pathology: refer immediately.
- Because of the increased risk of stroke the SIGN guidelines recommend that the COCP should not be used by women of any age with migraine with aura and women over 35 with migraine without aura.
- Migraines often get better in pregnancy although they may get worse in the first trimester.
- Migraine prophylaxis is often considered in those with ≥ 2 migraines/month, but patients often do not want to take prophylaxis unless migraines are more frequent than this.
- Overleaf: headache diary, characteristic features of primary headaches.

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Weekly headache diary

Recommended by SIGN.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Headache pain score (score 0 if none, 10 for worst)							
Feeling sick? (Yes/No)							
Other symptoms? (Yes/No)							
Duration of attack? (in hours)							
Had to lie down? (Yes/No)							
Time away from normal activities (in hours)?							
Medication (list them here, then say how many used each day):							
Prescribed							
Over the counter:							

Characteristic features of... (from the SIGN guidelines 107, 2008)

Features in BOLD are the most helpful for distinguishing migraine from other headaches.

Migraine	Tension headaches	Cluster headaches
Common: prevalence 10% in men, 22% in women	Very common: lifetime prevalence 40-50%	Rare: prevalence 1 in 1 000
Episodic (median 1-2/month)		Frequent (1 every other day to 8/day)
Causes disability		Restless during attacks
Unilateral	Bilateral	Unilateral
Pulsating	Pressing/tightening	
Builds over minutes-hours		Rapid onset (faster than migraines). Last 15-180mins
Moderate to severe intensity	Mild to moderate intensity	Severe
Associated with nausea +/- vomiting	No nausea	
Associated with sensitivity to light and/or sound	May be sensitivity to light/sound	
Aggravated by normal everyday activities & exercise	Not aggravated by activity	
Typical aura (in 15-33%)		
Sensitivity to light between attacks		
Family history of migraine		
Ipsilateral autonomic features occur only occasionally	May be peri-cranial tenderness	Ipsilateral autonomic features very common (see section on cluster headaches)