MASTERCLASS FOR GPs Headaches

Geraint Fuller,¹ Claire Kaye²

¹Department of Neurology,
Gloucester Royal Hospital,
Gloucester

²London
Correspondence to: C Kaye
clairekaye2003@yahoo.co.uk

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Headaches are one of the commonest reasons for attending a general practice or a neurology clinic. Some 15% of the UK adult population have migraine, and 80% have episodic tension-type headache from time to time. The lifetime prevalence of headache is 96%, being higher in women than in men. Every day more than 100 000 people are absent from school or work because of migraine, with a cost to the economy that may exceed £1.5bn (€2.3bn; \$2.9bn) a year.¹

What should I already know about this condition?

Most headaches are benign, with tension-type headaches and migraines being the main sorts.

Tension-type headaches are the most common type of headache, with the lifetime prevalence ranging between 30% and 78% according to different studies.

Migraine can occur with or without an aura. A typical aura lasts from five to 60 minutes before the headache starts. It consists of transient visual, sensory, and speech disturbances. Visual symptoms are the most common manifestation of an aura and consist of flickering lights, spots or lines, or blind spots.

Cluster headaches are unilateral severe headaches that occur in clusters over six to 12 weeks. They are more common in men, people who smoke, and adults older than 20 years. They tend to occur daily and wake the patient if they occur within a few hours of falling asleep. The pain of cluster headaches is severe, sometimes compared to the pain from renal colic. They are associated with ipsilateral watering of the eye, conjunctival redness, rhinorrhoea, nasal blockage, and ptosis. Their prevalence in the UK adult population is 69/100 000, so they are much less common than migraine.

Dangerous headaches—A small proportion of patients have headaches that are dangerous (such as subarachnoid haemorrhage, meningitis, temporal arteritis, and raised intracranial pressure for whatever reason). Fewer than 1% of patients referred to outpatient clinics with headaches have an intracranial lesion. Dangerous headaches tend to be “first and worst,” single and of sudden onset, progressive, and with onset later in life. Consider temporal arteritis in any patient older than 50 who has a headache of new onset.¹ Only a minority of patients with temporal arteritis have temporal pain, but jaw claudication (pain in the jaw during talking or chewing) is virtually diagnostic. Arrange for a patient to have a temporal artery biopsy to confirm the diagnosis.

PRACTICAL TIPS

- Headaches are a major cause of morbidity, but specific management can help
- Make a diagnosis by taking a clear history and conducting a good examination as recommended by the British Association for the Study of Headache
- Patients may have more than one type of headache
- Be alert for medication overuse headache (patients using analgesics or triptans for >17 days a month are at risk)
- For migraine, try to identify triggers and advise the patient to avoid them, make an acute treatment plan (analgesics with or without antiemetics or triptans), and consider prophylaxis (initially β blockers or amitriptyline)

What new evidence do I need to know about?

Features of medication overuse headache

This study² found that

- Patients who overused 5 HT₁ agonists (“triptans”) experienced medication overuse headaches faster and with lower doses than did those who overused ergotamine and analgesics
- Clinical features of medication overuse headaches depended on the type of drug overused
- Patients who overused ergotamine and analgesics typically had a daily tension-type headache
- Patients who overused triptans typically had a daily migraine-type headache or an increase in frequency of their migraines.

Bottom line—Medication overuse headache is an important cause of headaches.

Topiramate in migraine prevention

Topiramate has recently been licensed for migraine prophylaxis.³ This study reviewed key randomised controlled trials of the drug. It confirmed that a dose of 100 mg a day was effective and well tolerated.

Bottom line—Topiramate is an effective and well tolerated drug for the prevention of migraine.

What new guidelines have been produced over the past three years?

British Association for the Study of Headache (BASH) management guidelines (2004)

These guidelines¹ provide essential information about different types of headache, how to take a history and examination, and treatment. The important points are:

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Box 1 | Taking a headache history (from BASH management guidelines¹)**How many different headache types does the patient experience?**

- Separate histories are necessary for each. It is reasonable to concentrate on the most bothersome to the patient, but always inquire about the others in case they are clinically important

Time questions

- Why consulting now?
- How recent in onset?
- How frequent, and what temporal pattern (especially distinguishing between episodic and daily or unremitting)?
- How long lasting?

Character questions

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

Cause questions

- Predisposing or trigger factors
- Aggravating or relieving factors
- Family history of similar headache

Response questions

- 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 or persisting symptoms?
- Concerns, anxieties, fears about recurrent attacks or their cause

Diagnosis

Take a full history (see box 1).

Treatment of migraine

First, discuss non-drug treatment measures such as relaxation, acupuncture, and massage. All these non-drug measures have been shown to have a mild to moderate impact on symptoms.

Ask the patient to identify triggers using a diary. These can be factors related to food, stress, and lack of sleep. Patients should try to avoid them as far as possible.

Take a stepwise approach to increasing patients' medication (see box 2).

Prophylaxis of migraine

Patients should continue taking drugs that they find effective for at least four to six months. They should then withdraw these over two to three weeks to see whether the drugs are still necessary.

For first line prophylaxis, use β blockers such as atenolol and bisoprolol if your patient has no contraindications, such as asthma, depression, heart failure, or peripheral vascular disease. Second line choices are sodium valproate and topiramate. Try agents such as gabapentin for third line prophylaxis.

European Federation of Neurological Societies guideline on the drug treatment of migraine

NSAIDs and triptans are recommended for the acute treatment of migraine attacks.⁴ Prescribe an antiemetic such as oral metoclopramide or domperidone to be taken before the NSAID or triptan. For severe attacks, intravenous aspirin or subcutaneous sumatriptan is the

Box 2 | Treatment ladder for migraine**Step 1: NSAIDs**

- Start with non-steroidal anti-inflammatory drugs (NSAIDs), such as aspirin or ibuprofen
- Give these with an antiemetic drug such as prochlorperazine as a buccal tablet for nausea
- Advise patients to take treatment as soon as possible after an attack starts

Step 2: Parenteral analgesics

- Consider parenteral analgesics, such as diclofenac given intramuscularly, with or without an antiemetic such as domperidone as a rectal suppository

Step 3: Triptans

- Do not prescribe triptans with other migraine drugs such as ergotamine. People with headaches respond differently to different triptans. Recommend that your patient takes them when the headache starts rather than at the time of the aura
- All triptans are associated with relapse of symptoms in 20–50% of patients after 48 hours
- Sumatriptan is the most commonly used triptan and has the most evidence about its effects

Recommend that the patient starts with a 50 mg tablet (also available as a rapidly dispersing preparation)

If necessary increase the dose to 100 mg or suggest the 20 mg nasal spray

The nasal spray is not useful if vomiting prevents oral treatment as the drug's bioavailability depends partly on ingestion

If a rapid response is needed, subcutaneous sumatriptan relieves migraine in 80% of patients within one hour of injection

- If sumatriptan is ineffective recommend another triptan
- Triptans are contraindicated in children younger than 12 years old and in patients with ischaemic heart disease, uncontrolled hypertension, or risk factors for coronary heart disease and cerebrovascular disease
- If treatment fails, review the diagnosis and then consider steps 4 and 5

Step 4: Combination treatment

- There is no formal evidence for combination treatment, but you could try combining steps 1 and 3 followed by steps 2 and 3

Step 5: Emergency treatment of patients at home

- Try diclofenac with chlorpromazine, both given intramuscularly

COMMONLY ASKED QUESTION—ANSWERED

Will my patient benefit from having a scan, even if I do not think he or she has intracranial pathology (a primary headache syndrome)?

Possibly. One study found that patients who were offered a scan were less anxious at three months, although not at one year.³ Management costs for patients with anxiety at their initial presentation were significantly less if they were offered a scan at the onset.

FURTHER EDUCATIONAL RESOURCES

- British Association for the Study of Headache (BASH): www.bash.org.uk
- Clinical Evidence: www.clinicalevidence.com
- Goadsby PJ. Advances in the understanding of headache. *Br Med Bull* 2005;73-74:83-92. An overview of recent advances in headache including a discussion of a new classification of headache: chronic (transformed) migraine
- BMJ Learning: www.bmjlearning.com
- Common migraine: how to treat an attack
- Migraine: diagnosis and prevention

drug of first choice. Prescribe corticosteroids if your patient has status migrainosus. For prophylaxis of migraine, β blockers such as propranolol and metoprolol, flunarizine (not licensed in the UK), valproate, and topiramate are drugs of first choice. Second line choices are amitriptyline, naproxen, bisoprolol, and *Petasites* (butterbur, available over the counter).

Practical management tips

Make a diagnosis by taking a clear history and conducting a good examination as recommended by the BASH guidelines.¹ Recognise that patients may have more than one type of headache.

Be alert for medication overuse headache. Patients are at risk if they use analgesics or triptans for more than 17 days a month. Codeine based drugs are common culprits.

Be aware that your patient may have a rare primary headache disorder (most commonly cluster headache), and that these respond to specific drug regimens.

Managing migraine

Try to identify triggers and suggest the patient avoids these.

Make an acute treatment plan—analgesics with or without antiemetics or triptans. Patients with migraine

often vomit. If a patient vomits their tablets, consider subcutaneous injections or rectal administration.

Consider prophylaxis. The order that you prescribe drugs should depend on side effects and any comorbidities. For all drugs, start at low doses and slowly titrate up until they are effective, the patient experiences side effects, or you reach the maximum dose. Recommended treatments are as follows:

- First line— β blockers or amitriptyline
- Second line—valproate, topiramate, or pizotifen
- Other agents—feverfew.

When should I refer my patient?

Refer patients immediately if they have a single sudden severe headache. Also refer patients with progressive headaches, if they have physical signs, if you are uncertain of the diagnosis, or if standard treatments do not work.

Common pitfalls

Beware of:

- Causing medication overuse headache by treating chronic headache with regular analgesia rather than suggesting prophylaxis
- Undertreating migraine
- Missing unusual primary headache variants
- Blaming headaches on stress.

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- 3 Bussone G, Diener HC, Pfeil J, Schwaben S. Topiramate 100 mg/day in migraine prevention: a pooled analysis of double-blind randomised controlled trials. *Int J Clin Pract* 2005;59:961-8.
- 4 Evers S, Afra J, Frese A, Goadsby PJ, Linde M, May A, et al. European Federation of Neurological Societies guideline on the drug treatment of migraine—report of an European Federation of Neurological Societies' task force. *Eur J Neurol* 2006;13:560-72.
- 5 Howard L, Wessely S, Leese M, Page L, McCrone P, Husain K, et al. Are investigations anxiolytic or anxiogenic? A randomised controlled trial of neuroimaging to provide reassurance in chronic daily headache. *J Neurol Neurosurg Psychiatry* 2005;76:1558-64.

The God incarnate

A middle aged man was admitted with type 2 diabetes and coronary artery disease. He was a Hindu religious teacher, well versed in the ancient Hindu religious texts and epics, and an ardent devotee of Hanuman, the Monkey God.

To explain world events and happenings, he quoted extensively from Hindu mythology. Within no time he had established a good rapport with the treating team, and many of the ward staff and patients became his disciples.

He was to undergo coronary angioplasty for coronary artery disease. Unfortunately the angioplasty was complicated by coronary dissection and was converted to coronary artery bypass graft. Postoperatively he had sternotomy infection and sternal wound dehiscence. He recovered after a stormy postoperative course.

During the ward round one day, he smiled and said in a matter of

fact manner that he had been told before the operation that coronary angioplasty was a routine, safe, and quick procedure; he had not expected to be turned by doctors from a mere disciple and devotee of Hanuman into the God himself.

According to *Ramayana*, Hanuman is an ardent devotee of Lord Rama and Goddess Sita. To display and confirm his devotion to them, Hanuman split open his chest in the midline with his bare hands, and his heart showed images of Lord Rama and Goddess Sita.

Ajit Singh Kashyap head, Department of Endocrinology, Command Hospital (Central Command), Lucknow, India kashyapajits@yahoo.com

Kuldip Parkash Anand professor, Department of Medicine, Command Hospital (Eastern Command), Kolkata, India

Surekha Kashyap Command Headquarters (Central Command), Medical Branch, Lucknow, India