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Diagnosis and management of headaches in young people and adults:

NICE guideline

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INTRODUCTION

NICE has developed guidelines on management of primary headache disorders in young people and adults.[1] The guideline is intended for non-specialist use, particularly for use in primary care where the majority of headaches can be safely diagnosed and managed. Four per cent of adults have a primary care consultation for headache per year[2] but GPs lack confidence in the diagnosis and management of primary headache disorders, and can be anxious about missing serious secondary causes.[3] Improved recognition of the common headache disorders and better targeting of available treatments should reduce the burden of headache without requiring substantial additional resources. If specialist advice is required the guideline recommends that this can be via a neurologist or GP with a special interest in headache.

THE GUIDANCE

The guideline lists signs, symptoms, and possible conditions that should be considered before proceeding to a diagnosis of a primary headache disorder (Box 1).

Caution should be exercised if patients have a history of malignancy, particularly if they are aged <20 years, or have had cancer that may metastasise to the brain. The possibility of central nervous system infection in immunocompromised patients or of HIV-associated neurological disease should be considered where appropriate.

The guideline includes recommendations on medication-overuse headache. This is headache that has developed or worsened after taking acute treatments for headache regularly for ≥3 months. It is thought that using triptans, opioids, ergots, or combination analgesics more than 10 days per month, or aspirin, paracetamol, or NSAIDs more than 15 days per month can lead to this. It is more common in migraine sufferers.

Box 1. Signs and symptoms to suggest possibility of secondary headache

- Worsening headache with fever
- Thunderclap headache
- New-onset neurological deficit
- New-onset cognitive dysfunction
- Change in personality
- Impaired level of consciousness
- Head trauma in previous 3 months
- Headache triggered by cough, vasalva, or sneeze
- Headache triggered by exercise
- Headache that changes with posture
- Clinical features of giant cell arteritis
- Clinical features of glaucoma
- Significant change in characteristics of headache
- Atypical aura

DIAGNOSIS OF PRIMARY HEADACHE DISORDERS

Table 1 outlines the clinical features to diagnose migraine, tension headache, and cluster headache.

Migraine with aura can be diagnosed even if the patient does not get headache but has aura. Typical aura involves visual symptoms, sensory symptoms, or speech disturbance that develop gradually over at least 5 minutes, last up to 60 minutes, and are fully reversible. No investigation is required. If the aura lasts longer, or is atypical in other ways such as involving motor weakness, or brain stem symptoms, such as dysarthria or ataxia, further investigation should be considered.

Menstrual-related migraine is migraine that occurs predominantly between 2 days before and 3 days after the onset of menstruation in two out of three consecutive menstrual cycles.

The diagnosis of primary headache disorders and in particular the diagnosis of menstrual migraine requires observation over 2–3 months and a headache diary can be useful for diagnosis, as a basis for discussion between practitioner and patient, and to monitor the effectiveness of interventions.

In cluster headache, a headache attack can occur from once a day to eight times a

Table 1. Diagnosis of tension-type headache, migraine, and cluster headache

Headache feature	Tension-type headache		Migraine (with or without aura)		Cluster headache	
Pain location[a]	Bilateral		Unilateral or bilateral		Unilateral (around the eye, above the eye, and along the side of the head/face)	
Pain quality	Pressing/tightening (non-pulsating)		Pulsating (throbbing or banging in young people aged 12–17 years)		Variable (can be sharp, boring, burning, throbbing, or tightening)	
Pain intensity	Mild or moderate		Moderate or severe		Severe or very severe	
Effect on activities	Not aggravated by routine activities of daily living		Aggravated by, or causes avoidance of, routine activities of daily living		Restlessness or agitation	
Other symptoms	None		Unusual sensitivity to light and/or sound or nausea and/or vomiting *Aura* Aura symptoms can occur with or without headache: • are fully reversible • develop over at least 5 minutes • last 5–60 minutes. Typical aura symptoms include visual symptoms such as flickering lights, spots or lines and/or partial loss of vision; sensory symptoms such as numbness and/or pins and needles; and/or speech disturbance.		On the same side as the headache: • red and/or watery eye • nasal congestion and/or runny nose • swollen eyelid • forehead and facial sweating • constricted pupil and/or drooping eyelid	
Duration of headache	30 minutes–continuous		4–72 hours in adults 1–72 hours in young people aged 12–17 years		15–180 minutes	
Frequency of headache	<15 days per month	≥15 days per month for >3 months	<15 days per month	≥15 days per month for >3 months	1 every other day to 8 per day,[c] with remission[d] >1 month	1 every other day to 8 per day,[c] with a continuous remission[d] <1 month in a 12-month period
Diagnosis	Episodic tension-type headache	Chronic tension-type headache[b]	Episodic migraine (with or without aura)	Chronic migraine (with or without aura)	Episodic cluster headache	Chronic cluster headache

[a]Headache pain can be felt in the head, face, or neck. [b]Chronic migraine and chronic tension-type headache commonly overlap. If there are any features of migraine, diagnose chronic migraine. [c]The frequency of recurrent headaches during a cluster headache bout. [d]The pain-free period between cluster headache bouts.

day. Headaches occur in cycles that last from days to weeks and these are called bouts.

USE OF BRAIN IMAGING

Patients with a diagnosis of primary headache should not be referred for neuroimaging solely for reassurance. The evidence showed no significant reduction in anxiety and depression, or measures of quality of life, and fear of illness in patients who underwent scanning, and no evidence of clinical benefit. The guideline comments also that anxiety caused by incidental abnormalities should not be overlooked. There is a lack of evidence regarding the need for brain imaging in people with cluster headache and the guideline recommends discussion with a specialist when people present with a first bout. Patients who provide a history typical of recurrent cluster headache bouts do not require a scan.

MANAGEMENT OF PRIMARY HEADACHE DISORDERS

Tension-type headache

The guideline recommends aspirin, paracetamol, or NSAIDs for acute treatment of tension-type headache. No pharmacological prophylaxis is recommended, but acupuncture may be considered.

Chronic tension-type headache can overlap with chronic migraine and if the clinician suspects any features of migraine then treatments for migraine prophylaxis can be used.

Migraine

The guideline recommends combination treatment with a triptan and paracetamol or a triptan and NSAID for migraine ahead of monotherapy on the basis of clinical and cost-effectiveness evidence. Combination treatment was superior to monotherapy with either aspirin, paracetamol, NSAIDS, or triptans. If people with migraine prefer to take one drug only, aspirin, paracetamol, NSAID, or triptan are recommended. If one triptan is ineffective others may work as lack of effectiveness is not a class effect. The only licensed triptan in those age <18 years is sumatriptan nasal spray. Anti-emetics can be added to monotherapy or combination therapy. Ergots should not be used.

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If oral therapy is not effective or not tolerated then non-oral metoclopramide or prochlorperazine can be used. The evidence reviewed indicated that these drugs improved migraine regardless of whether the patient has nausea or vomiting possibly due to their dopaminergic action. Non-oral NSAIDs or triptans can be added if not already taken.

The decision as to when to commence prophylaxis depends on patient choice. The frequency and severity of the migraine, patient's comorbid conditions, attitude to taking daily medication, and risk of medication overuse should be considered. Some patients need long-term prophylaxis, but prophylactic medication can often be withdrawn after 6 months and the guideline recommends review at 6 months.

The most cost-effective prophylactic treatment is topiramate, although its side-effect profile and teratogenic potential may preclude its use in some patients. Propranolol is the other recommended first-line option. The only other medicine found to show benefit in robust trials was gabapentin. There was inadequate evidence for commonly used medications such as amitriptyline, sodium valproate, and pizotifen. The guideline suggests that people well controlled on these agents should remain on them.

A course of acupuncture is also recommended as an option for prophylaxis.

Special considerations in female migraine sufferers of childbearing age

Combined hormonal contraception should not be used if a woman has migraine with aura because of a possible increased risk of ischaemic stroke.

Women who experience migraine that is refractory to their usual treatment around the time of menstruation can try perimenstrual prophylaxis with frovatriptan or zolmitriptan on the days migraine is expected. This is only possible in those with predictable menstrual migraine and this should be demonstrated in the headache diary.

Migraine without aura often improves during pregnancy. Paracetamol is suggested as first choice in pregnancy. Triptan or an NSAID can be considered after discussing the woman's need for treatment and the risks associated with the use of each medication during pregnancy. While use of drugs in pregnancy cannot be declared safe, the evidence for the use of triptans in pregnancy is reassuring. If prophylaxis is necessary during pregnancy, discussion with or referral to a specialist is recommended.

Cluster headache

Oxygen and/or subcutaneous or nasal triptan, are recommended for the treatment of cluster headache. Oral triptans should not be used.

If prophylaxis is required, verapamil is the first-line medication but the doses are much higher than those used routinely for cardiovascular indications. Specialist advice should be sought by those not familiar with using verapamil for this indication, particularly about the ECG monitoring that is required. If verapamil is ineffective, or if a patient is suffering with cluster headache in pregnancy, specialist referral is required.

No evidence was found for use of opioids for any primary headache disorder. Opioids may cause medication overuse headache and should not be used.

Medication-overuse headache

Overused medication must be withdrawn completely and is best stopped abruptly for at least 1 month. Patients may find this difficult, and need explanation, advice, and support as their headache often gets worse for several weeks before improving. It is rare for inpatient withdrawal to be necessary. Prophylactic medication can be used as an adjuvant to medication withdrawal if the patient has a known primary headache disorder, though the effectiveness of this requires further research.

COMMENT

These guidelines should support GPs with the diagnosis of primary headache disorders. Changes to current practice include the consideration of combination therapy earlier in acute treatment of migraine, and the use of topiramate. Research recommendations are included to evaluate the use of drugs such as amitriptyline and to examine the roles of manual therapies, cognitive behavioural therapy, exercise, education, and self-management programmes in headache management. NICE have developed a poster containing the information in Table 1 that may be downloaded from the NICE website and used as an aide memoire in consultations. The full guideline containing the evidence reviewed and record of discussions of the guideline development group is available from the NICE website.[1]

Provenance

Freely submitted; externally peer reviewed.

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