Headache and facial pain

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Abstract

Headache and facial pain are very common. Headache accounts for 4.4% of all consultations in general practice, approximately 5% of all medical admissions to hospital and over 25% of neurology outpatient consultations. Tension-type headache is a near-universal part of the human condition, more than 95% of us experiencing it at some point in our lives; at the more severe end of the spectrum, migraine affects 10–20% of the population worldwide, and 1–2% of the population in developed countries have chronic daily headache. Headache is so common that, even though for many people it is no more than an inconvenience, the cumulative burden of migraine alone causes it to rank high in the World Health Organization's league tables of disease-related disability, above all other neurological disorders other than stroke and dementia. As all doctors will encounter patients with headaches and facial pain, they must have a basic working knowledge of the common primary headaches and the important secondary causes, as well as a rational manner of approaching the patient with these conditions that allows a diagnosis to be made quickly and safely. This article provides those resources.

Keywords Cluster headache; facial pain; headache; migraine; paroxysmal hemicrania; SUNCT syndrome; tension-type headache; trigeminal neuralgia; triptans

Key points

- Headache diagnosis rests primarily on accurate history-taking
- Most serious secondary headache disorders present with daily persistent headaches
- Neuroimaging is not indicated if a confident primary headache diagnosis can be made
- Opiates are not appropriate acute treatments for headache disorders
- Effective acute and preventive treatment options exist for migraine and cluster headache

History and examination

In no part of neurology is accurate history-taking more important than in the diagnosis of headache. It is important not only to give patients time to tell their story fully (it will often be the first time that anyone has listened to them talking about their pain), but also to clarify the history with specific questions aimed at filling in the gaps in what patients disclose spontaneously.

It is important to ask questions about the pattern of the pain, its character and severity, other symptoms that accompany the pain, and treatments, both current and previous. It is also important to ask questions about the patient's previous medical history, current non-headache medications, allergies, family history and social history (including caffeine consumption). It is helpful to ask about markers of migraine, such as recurrent abdominal pain, motion sickness and a tendency to hangovers. Finally, it is useful to know if the patient has seen other practitioners about their headaches, what conclusions were reached and what investigations (if any) were done.

This may sound ambitious, but patients volunteer much of this information without being specifically asked, and it does not take too much time to fill out the gaps. Time can be saved in most cases by limiting clinical examination to a few relevant specifics: blood pressure and pulse rate; fundoscopy in all cases; inspection and palpation of the head and neck structures in most cases; and a brief screening cardiovascular and neurological examination in all cases except those where, on the basis of the history, serious intracranial or systemic pathology is suspected.

Investigation

How far to investigate patients with headache and facial pain is controversial; the decision is made more complicated by the prevalent cultural myth that headaches are commonly caused by brain tumours. On the contrary, where an uncomplicated primary headache diagnosis can be made, the chances of the patient having a brain tumour are 0.045%;[1] no investigation is indicated, not least because there is a 1–2% chance of picking up an incidental intracranial abnormality that can cause anxiety or even have an adverse influence on life insurance applications.

Imaging should be reserved for situations where clinical assessment suggests the possibility or probability of an underlying tumour; examples include the finding of papilloedema on fundoscopy, fixed abnormal neurological signs, headaches associated with new-onset seizures or significant alterations in consciousness, memory or coordination, and headaches in patients with a history of cancer elsewhere in the body. In such cases, magnetic resonance imaging is the modality of choice; computed tomography, with its associated radiation exposure, should be reserved for the detection of acute intracranial bleeding. Where an underlying systemic cause is suspected, blood tests may be indicated; these should be done in patients over 60 years with new-onset headache (including full blood count, erythrocyte sedimentation rate, C-reactive protein concentration). Where patients have daily headaches, lumbar puncture can be required to ensure that the pressure and constituents of the cerebrospinal fluid (CSF) are normal.

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Diagnosis

It is important to try to make a diagnosis. Sometimes this is not possible at the first attempt — very rarely, it remains impossible, and even the International Classification of Headache Disorders (ICHD) recognizes this by including a category of 'unclassifiable' headaches.[2] However, a diagnosis — or diagnoses — can usually be made, and the importance of explaining this to the patient cannot be overestimated. In most cases, this can be accompanied by reassurance that there is no serious underlying cause. The pattern of headaches and facial pain is the best guide to diagnosis, remembering that primary headache disorders (migraine, tension-type headache, cluster headache, etc.) present more commonly to doctors than do secondary headaches, and that it is unusual for patients to seek medical opinions about mild headaches, such as tension-type headache.

Episodic headaches

Most primary headache disorders are episodic. Asking about the duration of attacks and the symptoms associated with them allows episodic headaches to be subdivided along useful diagnostic lines (Table 1). It is important to remember, however, that not everybody's headaches have all the features that can potentially be seen in any given disorder.

Chronic headaches

Chronic headaches develop in two ways. In one set of cases, patients with a pre-existing primary headache disorder (usually, but not exclusively, migraine) have ever-increasing attacks until they reach a stage where they do not recover headache freedom in between, a pattern originally called 'transformed migraine'. In many cases, overuse of acute headache medications contributes to this process, patients fulfilling the ICHD criteria for medication-overuse headache. Many patients revert to having episodic headaches simply by stopping painkillers; those who do not, and those in whom medication overuse was not an issue in the first place, have chronic migraine. There are chronic varieties of other, rarer primary headaches, such as cluster headache, paroxysmal hemicrania and SUNCT syndrome (Short-lasting Unilateral Neuralgiform headache attacks with Conjunctival injection and Tearing) as well as a rare but underdiagnosed primary headache disorder called hemicrania continua.

In the other set of cases, patients start to have a headache one day and it simply never goes away. This is the 'new daily persistent headache' syndrome. This is important to recognize, because many of the serious causes lie within this set of headaches (Table 2); an example is the 'thunderclap headache' typical of subarachnoid haemorrhage, which is a medical emergency. After investigation, however, many cases of new daily persistent headache do not have an underlying cause and are simply chronic versions of the familiar episodic headache disorders.

Facial pain

Facial pain can arise from the skull, neck, ears, eyes, nose, sinuses, teeth or mouth. In most cases, the presence of pathology affecting one or other of these structures is fairly obvious, but in some cases a proper assessment requires specialist input. Ophthalmological review is mandatory in all cases where facial pain is accompanied by disturbances of vision, to rule out important and treatable conditions such as scleritis, optic neuritis and intermittent angle-closure glaucoma. Diseases of the cranial bones, such as osteomyelitis, Paget's disease and myeloma, are very rare. Sinus disease is common, and acute sinusitis excruciatingly painful, but the relevance of sinus thickening or opacification on imaging in patients with chronic facial pain is unclear. Disorders of the teeth and the temporomandibular joints can require detailed imaging and a specialist dental or maxillofacial opinion. Temporal arteritis should always be considered as a potential diagnosis in elderly patients with facial pain.

Neuralgic pain affecting the face can arise from a number of the cranial nerves and their branches. Trigeminal neuralgia is the archetype — consisting of lancinating neuralgic pains most commonly affecting the V2 and V3 branches, and triggered by touch or motion of the affected area. It occurs almost exclusively in elderly patients and is amenable to medical or surgical

Episodic primary headache disorders

Duration	Severity	Other features	Likely diagnosis	Prevalence
Hours to days	Mild—moderate	None	Tension-type headache	Near universal
Hours to days	Moderate—severe	Nausea, sensitivity to lights, noises, smells, touch, movement	Migraine without aura	Very common
		As above, but preceded by visual ± sensory disturbance lasting 5—60 minutes	Migraine with aura	Common
30—180 minutes (1—4/day, often in bouts lasting weeks)	Severe	Strictly unilateral, eye-watering, conjunctival injection, nasal congestion, ptosis, eyelid oedema, agitation	Cluster headache	Unusual
2—45 minutes (1—10/day, often in bouts lasting weeks)	Severe	Strictly unilateral, eye-watering, conjunctival injection, nasal congestion, ptosis, eyelid oedema, agitation, absolute response to indometacin	Paroxysmal hemicrania	Rare
Seconds (1—300/day)	Severe	Strictly unilateral, eye watering, conjunctival injection	SUNCT syndrome	Extremely rare

Table 1