

Clinical Guideline for the Management of Headache

이 태 규

가톨릭대학교 의과대학 신경외과학교실

- There are more than 100 different kinds of headache that are clearly classified and defined in the International Classification of Headache Disorders.
- A proper headache diagnosis is essential for patient management.
- Distinction is made between primary headaches, which are independent diseases, and secondary headaches, which are caused by another disease.

1. The International Classification of Headache Disorders, 2nd Edition

Primary headaches

1. Migraine, including:
 - 1.1 Migraine without aura
 - 1.2 Migraine with aura
2. Tension-type headache, including:
 - 2.1 Infrequent episodic tension-type headache
 - 2.2 Frequent episodic tension-type headache
 - 2.3 Chronic tension-type headache
3. Cluster headache and other trigeminal autonomic cephalalgias, including:
 - 3.1 Cluster headache
4. Other primary headaches

Secondary headaches

5. Headache attributed to head and/or neck trauma, including:
 - 5.2 Chronic post-traumatic headache
6. Headache attributed to cranial or cervical vascular disorder, including:
 - 6.2.2 Headache attributed to subarachnoid haemorrhage
 - 6.4.1 Headache attributed to giant cell arteritis
7. Headache attributed to non-vascular intracranial disorder, including:



- 7.1.1 Headache attributed to idiopathic intracranial hypertension
- 7.4 Headache attributed to intracranial neoplasm
- 8. Headache attributed to a substance or its withdrawal, including:
 - 8.1.3 Carbon monoxide-induced headache
 - 8.1.4 Alcohol-induced headache
 - 8.2 Medication-overuse headache
 - 8.2.1 Ergotamine-overuse headache
 - 8.2.2 Triptan-overuse headache
 - 8.2.3 Analgesic-overuse headach
- 9. Headache attributed to infection, including:
 - 9.1 Headache attributed to intracranial infection
- 10. Headache attributed to disorder of homoeostasis
- 11. Headache or facial pain, attributed to disorder of cranium, neck, eyes, ears, nose, sinuses, teeth, mouth or other facial or cranial structures including:
 - 11.2.1 Cervicogenic headache
 - 11.3.1 Headache attributed to acute glaucoma
- 12. Headache attributed to psychiatric disorder

Neuralgias and other headaches

- 13. Cranial neuralgias, central and primary facial pain and other headaches including:
 - 13.1 Trigeminal neuralgia
- 14. Other headache, cranial neuralgia, central or primary facial pain

2. An approach to the headache history

- 1. How many different headaches types does the patient experience?
- 2. Time questions
 - a) Why consulting now?
 - b) How recent in onset?
 - c) How frequent, and what temporal pattern
(especially distinguishing between episodic and daily or unremitting)?
 - d) How long lasting?
- 3. Character questions
 - a) Intensity of pain
 - b) Nature and quality of pain
 - c) Site and spread of pain
 - d) Associated symptoms



4. Cause questions

- a) Predisposing and/or trigger factors
- b) Aggravating and/or relieving factors
- c) Family history of similar headache

5. Response questions

- a) What does the patient do during the headache?
- b) How much is activity (function) limited or prevented?
- c) What medication has been and is used, and in what manner?

6. State of health between attacks

- a) Completely well, or residual or persisting symptoms?
- b) Concerns, anxieties, fears about recurrent attacks, and/or their cause

3. Neuroimaging

Investigation should be avoided in principle if it does not lead to a change in management or it is unlikely to reveal a relevant abnormality. Occasionally, neuroimaging may be required on an individual basis if a patient is disabled by fear of serious pathology. The vast majority of primary headaches do not require neuroimaging. In a prospective study where patients with headache for more than four weeks underwent neuroimaging (CT, MRI or both), significant intracranial abnormalities were found in 0.4% of patients with migraine, 0.8% of patients with tension-type headache, and in 5% (one out of 20 patients) of those with cluster headache. In a subgroup of 188 patients without clearly defined headache type, significant intracranial abnormality was found in 3.7%.

Incidental abnormalities

Both MRI and CT can identify neurological abnormalities incidental to the patient's presenting complaint and which may result in heightened patient anxiety and clinician uncertainty. Cranial MRI in 2,536 healthy young males revealed incidental abnormalities in 6.55%. A prospective cohort study of 2,000 volunteers (mean age, 63.3 years; age range 45-96 years) who received brain MRI revealed incidental abnormalities in 13.5%.

4. Differential diagnosis

Headache in almost any site, but often posterior, may arise from functional or structural derangement of the neck (cervicogenic headache), precipitated or aggravated by particular neck movements or positioning and associated with altered neck posture, movement, muscle tone, contour and/or muscle tenderness. Headache, whether episodic or chronic, should not be attributed to sinus disease in the absence of other symptoms suggestive of it. A number of serious secondary headache disorders should always be kept in mind during diagnostic enquiry



	Headache type			
	SUNCT	PH	CH	Migraine
Duration	2-250 secs	2-45 mins	15 mins–3 hrs	4-72 hrs
Onset	rapid	rapid	rapid	gradual
Frequency	1/day-30/hr	1-40/day	1 every other day-8 /day	< 1/year-1/day (median 1-2/ month)
Restlessness during an attack	50%	50%	100%	0%
Ipsilateral autonomic features	prominent	prominent	prominent	occasional

Fig. 1. Features distinguishing TACs from migraine.

Warning features in the history

- Headache that is new or unexpected in an individual patient
- Thunderclap headache (intense headache with abrupt or “explosive” onset)
- Headache with atypical aura (duration >1 hour, or including motor weakness)
- Aura occurring for the first time in a patient during use of combined oral contraceptives
- New onset headache in a patient older than 50 years
- New onset headache in a patient younger than 10 years
- Progressive headache, worsening over weeks or longer
- Headache associated with postural change
- New onset headache in a patient with a history of cancer
- New onset headache in a patient with a history of HIV infection

Serious causes of headache

- Intracranial tumours
- Meningitis
- Subarachnoid haemorrhage (SAH)
- Giant cell (temporal) arteritis (GCA)
- Primary angle-closure glaucoma (PACG)
- Idiopathic (benign) intracranial hypertension
- Carbon monoxide poisoning

6. Management

> Migrain



NSAID and PARACETAMOL

- A) Aspirin 900 mg is recommended for acute treatment in patients with all severities of migraine.
- A) Ibuprofen 400 mg is recommended for acute treatment in patients with migraine.
- B) Paracetamol 1,000 mg is recommended as acute treatment for mild to moderate migraine.

TRIPTAN

- A) Oral triptans are recommended for acute treatment in patients with all severities of migraine
If previous attacks have not been controlled using simple analgesics.
- A) Almotriptan 12.5 mg, eletriptan 40-80 mg or rizatriptan 10 mg, are the preferred oral triptans for acute migraine.
- B) If a patient does not respond to one triptan an alternative triptan should be offered.

ANTI-EMETICS

- B) A combination of aspirin and metoclopramide can be used for the treatment of patients with acute migraine attacks.
- B) Fixed analgesic/anti-emetic combinations can be used for the treatment of patients with acute migraine attacks.
- B) IV metoclopramide can be used in the acute management of patients with migraine.

ERGOTAMINE

- A) Ergotamine is not recommended for patients with acute migraine.

BETA BLOCKERS

- A) Propranolol 80-240 mg per day is recommended as first line therapy for prophylaxis in patients with migraine.

ANTIEPILEPTICS

- A) In patients with episodic migraine and chronic migraine topiramate 50-200 mg per day is recommended to reduce headache frequency and severity.
- A) In patients with episodic migraine sodium valproate 800-1,500 mg per day is recommended to reduce headache frequency and severity.

ANTIDEPRESSANTS

- B) SSRIs are not recommended in the prophylaxis of migraine.
- B) Amitriptyline 25-150 mg per day is recommended for patients requiring prophylaxis of migraine.
- B) Venlafaxine 75-150 mg per day is an effective alternative to tricyclic antidepressants for prophylaxis of migraine.



Botulinum toxin A

A) Botulinum toxin A is not recommended for the prophylactic treatment of migraine.

> Tension-type headache

Acute Treatment

A) Aspirin and paracetamol are recommended for acute treatment in patients with tension type headache.

ANTIDEPRESSANTS

A) Tricyclic antidepressants, particularly amitriptyline, 25-150 mg per day, are recommended as the agents of choice where prophylactic treatment is being considered in a patient with chronic tension-type headache.

OTHER THERAPIES

B) Botulinum toxin A is not recommended for the preventive treatment of chronic tensiontype headache.

> Trigeminal autonomic cephalalgias

TRIPTANS

A) Subcutaneous injection of 6 mg sumatriptan is recommended as the first choice treatment for the relief of acute attacks of cluster headache.

A) Nasal sumatriptan or zolmitriptan is recommended for treatment of acute attacks of cluster headache in patients who cannot tolerate subcutaneous sumatriptan.

CALCIUM CHANNEL BLOCKERS

B) Verapamil 240-960 mg is recommended for the prophylaxis of cluster headache.

Note: The grade of recommendation relates to the strength of the evidence on which the recommendation is based. It does not reflect the clinical importance of the recommendation.

A) At least one meta-analysis, systematic review, or RCT and directly applicable to the targetpopulation directly applicable to the target population, and demonstrating overall consistency of results

B) A body of evidence including directly applicable to the target population, and demonstrating overall consistency of results