Guideline

Headache - Management of Acute Severe Headache

1. Reason for development

To standardise/improve patient care.

2. Scope

Patients presenting to the emergency department with acute severe headache.

3. Aim

This guideline is to help the clinician evaluating a patient with acute severe headache.

4. Introduction

Headache patients account for between 1–2% of attendances to the ED.[1] The primary objectives for the ED clinician are deceptively simple—make the diagnosis, relieve the headache, and investigate and manage appropriately. As many as a third of patients presenting to the ED with acute headache will be harbouring potentially fatal or disabling intracranial conditions such as sub-arachnoid haemorrhage (SAH), but all will be in distress, alarmed and often frightened. Headaches should be labelled as primary, only when important secondary causes have been considered and safely excluded:

Diagnoses to be excluded:

Subarachnoid Haemorrhage (See below)

Giant Cell Arteritis / Temporal Arteritis (Unlikely if age less than 50 years)

Sepsis: Bacterial Meningitis / Brain Abscess / Frontal Sphenoidal Sinusitis

Raised ICP / Acute Mass Effect

Glaucoma (AACG)

Dural Sinus Thrombosis (Often not detected by CT scanning)

Carotid dissection (Severe facial pain)

Carbon Monoxide Poisoning

Common Benign Headaches

Tension Headache

Migraine

Cluster Headaches

5. Which patients with headache require neuro-imaging in the ED?

The following patient groups presenting to the ED **with headache** should undergo **emergency** non-contrast head CT scan (during their ED initial assessment):

Abnormal findings in a neurological examination (ie, focal deficit, altered mental status, altered cognitive function)

Acute sudden-onset/thunderclap headache

Severe headache with syncope or seizure

Severe incapacitating headache, altered mental status or focal signs after head injury

The following patient groups presenting to the ED **with headache** should be considered for **urgent** non-contrast head CT scan (during their ED assessment):

Suspicion of raised ICP (Provocative factors such as coughing, bending, Valsalva)

HIV-positive / immunosuppressed patients with a new type of headache

Progressive headache (especially if associated with vomiting)

6. Ruling out sub-arachnoid haemorrhage

Patients with a thunderclap headache who have negative findings in a head CT scan, normal opening pressure (6 to 20 cm H_2O) , and negative findings in CSF analysis (minimum 12 hours post onset) can be discharged from the ED with follow-up arranged with their GP or neurologist.

No patient with sudden onset severe headache (first or worst) should be discharged without exclusion of SAH.

NB. Response to therapy should **not** be used as the sole diagnostic indicator of the underlying aetiology of an acute headache.

Patients with scans or LPs positive for blood should be referred directly to the on-call neurosurgical SpR.

Sensitivity of LP is 100% from 12 to 72 hours post onset of headache.

7. Which adult patients with a complaint of headache can a lumbar puncture be safely performed without a head CT?

Adult patients with headache exhibiting signs of increased intracranial pressure Including papilloedema, absent venous pulsations on fundoscopy, altered mental status, or focal neurological deficits **must** undergo a CT Head before having an LP.

In the absence of findings suggestive of increased intracranial pressure, an LP can be performed without obtaining a CT Head. (Note: An LP does not assess for all causes of a sudden severe headache.)

Indications for Lumbar Puncture in patients with headache:

Fever (Meningitis or Encephalitis suspected)

Suspected Subarachnoid Haemorrhage

8. Migraine – Diagnosis and Acute treatment

Simplified diagnostic criteria for migraine in adults:

Repeated attacks of headache lasting 4-72 hours which have these features:

at least 2 of:	at least 1 of:
unilateral pain throbbing pain aggravation by movement moderate or severe intensity	Nausea / vomiting photophobia phonophobia

Treatment of migraine

Simple analgesia (adequate dose)
- Paracetamol 1g
- Aspirin 900mg
- Ibuprofen 400 – 800mg

(NB Codeine can lead to Analgesic Associated Chronic Daily Headache)

Anti-emetic
- Prochlorperazine 10mg IV
- Metaclopramide 10mg IV

Rehydratation
- N. Saline IVI

Opiates
- Morphine IV for severe intractable headache

Prevention –
advise follow up with GP or neurologist
avoid triggers
consider prophylactic medication

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References

1. Ward T, Morris L, Phillips JM. Evaluation and management of headache in the emergency department. *Med Clin North Am* 2001;**85**:971–96.

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