University Hospital Galway

EMERGENCY DEPARTMENT

GalwayEM.ie

Acute Headache (https://galwayem.ie/guidelines/medical-emergencies/acute-headache)

Category
Medical Emergencies (https://galwayem.ie/guidelines/medical-emergencies)
Tags
meningitis (https://galwayem.ie/taxonomy/term/8)

The two most important diagnoses to outrule in the Emergency Department are subarachnoid haemorrhage (SAH) and meningitis.
Other important differentials include:

- acute closed angle glaucoma
- giant cell arteritis
- stroke
- mass lesions

The history and examination are the most important tools that will enable you to diagnose these important conditions.
Symptoms that should alert you to the possibility of SAH include:

- Thunderclap headache (sudden onset, severe, maximal intensity within a few seconds)
- First and/or worst headache ever (a patient not prone to headache with incapacitating symptoms or worst or different character headache in migraine sufferers)
- Collapse with headache
- Headache with neck stiffness or other signs of meningism
- Headache with altered mental state
- Headache in a patient with abnormal physical signs or neurological deficit
- Headache in a patient who looks ill

SAH can occur in patients of all ages
Meningitis should be suspected in a patient with headache and fever. Other signs may include meningism, rash and neurological deficit (including reduced conscious level).
As always, documentation is important. In all patients presenting with headache the following must be documented:

- General appearance – does the patient look sick?
- conscious level including GCS
- vitals signs including temperature
- detailed neurological examination including fundoscopy

- presence or absence of signs of meningism
- requirement for analgesia and response to same

If the patient has had previous identical headache, is alert, does not have neck stiffness, does not have a fever and has a normal neurological examination, no further investigation is usually required.
If in doubt seek senior advice.

There is no single clinical feature which will distinguish reliably between the sudden severe headache caused by SAH from that caused by less serious conditions.

The response to analgesia is not a safe discriminator.
Risk factors for SAH include age, hypertension, smoking or a family history of subarachnoid haemorrhage, polycystic renal disease and Ehler Danlos syndrome.
Investigations in suspected SAH should include

- CT Brain
- Remember, a normal CT head **does not** exclude SAH.
- Lumbar puncture at least 12 hours after onset of headache if scan is normal to detect xanthochromia. Patients should be admitted under the Medical Team for a LP

If in doubt discuss the case with a senior ED Doctor.
If meningitis is suspected click here (https://galwayem.ie/guidelines/medical-emergencies/meningitis-and-meningococcal-septicaemia).

References

Morgenstern LB, Luna-Gonzales H, Huber JC Jr et al. Worst headache and subarachnoid hemorrhage: prospective, modern computed tomography and spinal fluid analysis. *Ann Emerg Med* 1998; 32(3 Pt 1):297-304
Carley S, Wallmann P. Does a normal CT scan rule out a subarachnoid haemorrhage? *Emerg Med J* 2001; 18:271-3
Heyderman RS, Lambert HP, O'Sullivan I et al. Early management of suspected bacterial meningitis and meningococcal septicaemia in adults. *Journal of Infection* 2003; 46:75-7
Edlow JA. Managing patients with non-traumatic, severe, rapid-onset headache. *Ann Emerg Med*. 2018;71(3):400–8.
Dubosh NM, Bellolio F, Rabinstein AA, et al. Sensitivity of early brain computed tomography to exclude aneurysmal subarachnoid hemorrhage: a systemic review and meta-analysis. *Stroke*. 2016;47(3):750–5.

- Meningitis and Meningococcal Septicaemia (https://galwayem.ie/guidelines/medical-emergencies/meningitis-and-meningococcal-septicaemia)
