# ACUTE ONSET HEADACHES

**20%** patients presenting to see Neuorologist present with headache.
**1 –2 %** of headaches case load for ED.
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 subarachnoid haemorrhage (SAH).

## DIFFERENTIAL DIAGNOSIS:

### Subarachnoid haemorrhage

As many as one in four patients presenting to their GP with a sudden onset headache will have suffered an intracranial haemorrhage, less if no other symptoms (that is, excluding nausea, vomiting, neck stiffness, transient disturbances of consciousness or focal neurological symptoms). The cardinal symptom of an SAH is headache, present in 85–100% (those without a headache are usually unconscious, and therefore not able to give a history).
Approximately 85% of SAHs are secondary to a ruptured intracranial saccular aneurysm
10% are caused by the benign perimesencephalic syndrome
5%caused by arteriovenous anomalies and rarities.

The prognosis of SAH is poor
25% of patients will die within 24 hours (that is, either before they reach the ED, or very shortly thereafter)
25% will die within hospital
50% of the survivors will be disabled.
Those who survive their aneurysmal SAH but do not have the aneurysm secured (either by clipping or endovascular treatment) have a 3% per year risk of rebleeding.

**An early and accurate diagnosis is imperative**
In the UK, failed diagnosis or management of SAH represents the largest single area of neurological litigation. However, most patients presenting with headache, even in the ED, will have an entirely benign explanation..

Can present with sudden headache like a blow to the head or can develop over minutes. History important but sometimes indistinguishable from post coital headaches and other benign conditions. History difficult if vomiting and ongoing nausea therefore treat syptoms.

SAH does not always present exactly like "a bolt from the blue"
a normal clinical examination and CT (especially those reported on call by junior or non-specialist radiologists) do not exclude SAH
xanthochromia to the naked eye is an unreliable sign.

Some neurologists go with one hour rule i.e. headache ongoing for one hour.

Associated symptoms:
Nausea

Vomiting
Neck stiffness,
Transient loss of consciousness
Focal neurological symptoms
are supportive of the diagnosis of SAH, but are not sufficient to distinguish from more benign syndromes. Absence of these symptoms cannot be taken as reassurance that the patient has not had an SAH, as a proportion will present with headache as the only symptom

Intraventricular, Ischaemic stroke or primary intracerebral haemoorhage can present with headache although often have signs of focal neurology.

Dissection of the carotid or vertebrobasilar arteries may present with predominantly head, neck or facial pain.

Intracranial venous thrombosis: Increase BP, coma and death. Can present with headache indistinguishable from SAH

**Meningitis/encephalitis**

Most present with longer duration of symptoms but can present in coma after onset of headache. May not have collateral history. Can be pyrexial, septic shock , purpuric rash treat with antibiotics and do all relevant investigations.

**Temporal arteritis**

Exclude in all >55 years presenting with a headache that has lasted a few weeks. Look for tender, thickened, pulseless temporal arteries + ESR >40mm/h. Ask about jaw claudication during eating. Prompt diagnosis and steroids avoid blindness
Local symptoms (superficial temporal artery swelling, tenderness, and pulselessness)
Cranial symptoms (transient visual obscurations, diplopia, mental sluggishness and, rarely, stroke)
Systemic symptoms (fever, weight loss, anorexia, malaise, myalgias, sweating, and chills)
Systemic markers of inflammation An elevated erythrocyte sedimentation rate
Elevated levels of acute phase reactants

Post head injury:
Subdural raised ICP

**Postcoital:**
Caution is necessary when diagnosing the first sex headache because sexual activity is the precipitant of up to 12% of ruptured saccular aneurysms and up to 4% of bleeding arteriovenous malformations

Subacute onset/ acute recurring headaches:

**Migraine**

Migraine is the commonest cause. It is an unilateral, throbbing headache, aggravated by movement; and be associated with at least one of the following: nausea, vomiting, photophobia or phonophobia. Classical migraine is preceded by an aura.

**Cluster Headache**
If it is unilateral, always on the same side (±red watering eye), occurs typically nightly for ~8wks then remits for the next few months (repeated intermittently), it is likely to be a cluster headache.

**Glaucoma**
In the elderly, a red eye; seeing haloes, fixed big oval pupil, nausea, abdominal pain; and reduced acuity of course suggests glaucoma which needs urgent treatment.

**Analgesic rebound headache**
Consider analgesic rebound headache if there is a history of long-term overuse of analgesics, hypnotics and tranquilizers.

Neuralgias and other causes of facial pain
TMJ problems
Sinusitis