PAEDIATRICS

HEADACHE

Headache is a common symptom in children, though most do not present to the emergency department. Of those that do, viral illness, followed by migraine, is the most common cause. Assessment should focus on identifying the small number with serious pathology.

Note that the vast majority of children with serious intracranial pathology have abnormalities on neurological examination – either focal neurology or non-focal neurological signs such as altered sensorium or personality change.

History

Onset: as in adults, sudden onset/short time to peak intensity suggests an intracranial bleed. Headache which wakes the child often indicates a space occupying lesion.

Severity: this can be difficult to assess in young children. A Wong-Baker scale may help in some cases. Ask the parents about whether the child has been engaging in normal activities – inhibition of normal activities suggests greater severity.

Pattern and Location: together this information allows the headache to be placed in one of the categories shown in the following table.

Acute Localised	Acute Generalised	Acute Recurrent	Chronic Non-Progressive	Chronic Progressive
Sinusitis	Fever	Migraine	Depression/stress	Space occupying lesion
Otitis Media	Systemic infection (influenza)	Tension-type	Post-concussive	Idiopathic intracranial hypertension
Dental abscess	CNS infection	Cluster	Medication overuse	Post-concussive
TMJ dysfunction	Hypertensive encephalopathy		Tension-type	
Post-traumatic	Intracranial haemorrhage			
First migraine	First migraine			
	Trauma			
	Toxins (CO)			

Exacerbating features: headaches that become worse with lying flat or valsalva suggest raised intracranial pressure. Headache worse with standing indicates intracranial hypotension, a rarer pathology.

Associated features:

Vomiting: caused by many benign illnesses. Early morning or progressive vomiting suggests raised intracranial pressure.

Neck stiffness: suggests meningeal irritation due to meningitis or subarachnoid bleed.

Fever: although intracranial infection must be excluded if fever is present, fever from any source can cause headache. It is thought that this is mediated by vasodilation.

Focal tenderness: temporal arteritis is not a disease of the young. Tenderness, depending on area, may indicate trauma, mastoiditis, sinusitis or dental abscess.

Visual symptoms: visual disturbance may precede migraine. Visual field defects or reduced visual acuity may indicate space occupying lesions or raised intracranial pressure.

Examination and Investigation

All children should have a full set of observations. Examination should include an ABC assessment, neurological & ENT examination and fundoscopy. Specifically examine the ears, pharynx, teeth and sinuses.

Investigation should be guided by the clinical picture. Unwell children will require blood tests – the majority will not.

Indications for CT scanning are listed in the box below.

Those with concerns for intracranial infection will require a lumbar puncture.

Indications for CT scan in children with headache

- Altered GCS
- Features of raised intracranial pressure
- Focal neurological deficit.
- Seizure.
- Personality change.
- Chronic progressive headache.
- Significant head trauma.

Features of raised intracranial pressure

- Headache worse in the morning, when lying flat, bending over or with valsalva.
- Vomiting, especially is progressive or early morning.
- Papilloedema.
- Reduced conscious level.
- Bulging anterior fontanelle.
- Bradycardia/hypertension.

Disposition

Those acutely unwell or with identified serious pathology will require admission. If there are no concerning features the patient may be discharged with worsening advice.