Clinical Guideline
HEADACHES IN CHILDHOOD: MANAGEMENT & REFERRAL

SETTING Primary care and hospitals
FOR STAFF GPs, emergency department & hospital doctors
PATIENTS Children

ENTRY ALGORITHM FOR HEADACHE DIAGNOSIS

Child presents with headache

CHECK LIST

Is the headache new onset?
OR
Is the headache acute (less than 48 hrs onset)?

Are any of the following symptoms present?
Vomiting
Fluctuating Glasgow Coma Scale [GCS]
Confusion
Fever – Malaise – Lethargy
Sleep related headache

Does the patient have abnormal signs?
Bradycardia
Hypertension
Papilloedema
Purpuric Rash
Neck Stiffness
Photophobia
Signs of sepsis

GO TO ACUTE GUIDELINES

GO TO CHRONIC HEADACHE OVERVIEW
CHRONIC HEADACHE OVERVIEW

CHRONIC HEADACHE

Age < 5 years

Age > 5 years

GP Advice and Review
Paracetamol  Ibuprofen  Headache diary
Address stress factors and parental concerns

Visual problems
Eye strain  Visual acuity  Double vision  Visual field defects

Cognitive decline / school performance
Difficulties at school / poor performance

Fatigue?
CFS/ME

Psycho-social
Dysfunctional family  Bad behaviour  Change in environment or family structure

Headaches better?

NO

Is it migraine?

NO

Chronic headache <5

Chronic headache >5
Non-migraine

YES

Migraine

Discharge

Chronic headache >5

Chronic headache >5
Non-migraine

Discharge
**IMPROVEMENT**

**First line management**
- Give simple analgesia early
  - Paracetamol 15 mg/kg 4 hourly
  - Ibuprofen 10 mg/kg tds

**Monitor headaches & analgesic usage**
- Headache diary
- Lifestyle management

**NO IMPROVEMENT**

- Consider prophylaxis Propranolol/Pizotifen
- Consider Triptan in >12 yrs
  - Sumitriptan or Zolmitriptan
  - (Doseage See BNF)

**DISCHARGE**

**CHRONIC HEADACHE IN > 5 yr (Migraine)**

- Consider referral to General Paediatrics for the following diagnoses

---

**Classification of Migraine**

- Throbbing (50-60%)
- Unilateral (25-66%)
- Relieved by sleep
- May be associated with an aura
- Nausea and vomiting
- Photophobia
- Family history in 80%
- More common in females 2:1
- Associated with recurrent abdominal pain and with motion sickness

---

**Complicated migraine:**

- 5-10% of cases
- Neurological signs persisting hours or days beyond the headache
- Visual
- Hemiplegic
- Aphasic
- Ophthalmoplegic (affecting nerves III, IV or VI)
- Confusional
- Basilar artery
  - (Visual dimming, reduced consciousness and ataxia)

**Investigations:**

- Brain scan (CT or MRI)
- Blood count – platelets
- Clotting screen
- Thrombophilia screen
- Antinuclear antibodies

---

**Migraine with aura:**

- Aura usually sensory, particularly visual
- Headache, nausea, photophobia
- Location of headache contra-lateral to sensory symptoms

**Investigations:** none

**Migraine without aura:**

- No or infrequent aura
- Same throbbing headache

**Investigations:** none

**Periodic syndrome:**

- In very young children migraine may manifest as recurrent abdominal pain, cyclic vomiting or other periodic disturbances
ACUTE HEADACHE
(Less than 48 hrs duration, sudden onset of headache in a previously well child)

ALARM FEATURES? *

NO

Exclude minor head injury

Head & neck or upper respiratory tract infection?

Give adequate analgesia

Head injury information card

NICE Guidelines for Head Injury

GIVE PARENTERAL ANTIBIOTICS

Initial Management

VIRAL
Supportive therapy, simple analgesia

BACTERIAL INFECTIONS
Treat with oral antibiotics

DENTAL
Refer to community dentist

Review patient
Review within 48-72 hours

No improvement or progression of symptoms

Consider referral to General Paediatrics or Paediatric A&E

DISCHARGE

SYMPTOMS RESOLVING

Refer immediately to Paediatric A&E

*ALARM FEATURES

MENINGITIS
Fever
Malaise
Lethargy
Purpuric rash
Neck stiffness
Photophobia
Associated signs of sepsis

HISTORY
Rapidly progressive headache
Explosive pain becoming excruciating within minutes
Wake up from sleep

FEATURES OF RAISED ICP
Confusion
Blurred vision
Vomiting
Bradycardia
Hypertension
Fluctuating GCS
Papilloedema
Flame Haemorrhage

FOCAL SIGNS
Ataxia
Hemiparesis

REFER IMMEDIATELY TO PAEDIATRIC A&E

ALARM FEATURES?

YES

GIVE PARENTERAL ANTIBIOTICS

Head & neck or upper respiratory tract infection?

Give adequate analgesia

Head injury information card

NICE Guidelines for Head Injury

GIVE PARENTERAL ANTIBIOTICS

Initial Management

VIRAL
Supportive therapy, simple analgesia

BACTERIAL INFECTIONS
Treat with oral antibiotics

DENTAL
Refer to community dentist

Review patient
Review within 48-72 hours

No improvement or progression of symptoms

Consider referral to General Paediatrics or Paediatric A&E

DISCHARGE

SYMPTOMS RESOLVING

Refer immediately to Paediatric A&E

*ALARM FEATURES

MENINGITIS
Fever
Malaise
Lethargy
Purpuric rash
Neck stiffness
Photophobia
Associated signs of sepsis

HISTORY
Rapidly progressive headache
Explosive pain becoming excruciating within minutes
Wake up from sleep

FEATURES OF RAISED ICP
Confusion
Blurred vision
Vomiting
Bradycardia
Hypertension
Fluctuating GCS
Papilloedema
Flame Haemorrhage

FOCAL SIGNS
Ataxia
Hemiparesis

REFER IMMEDIATELY TO PAEDIATRIC A&E

ALARM FEATURES?

YES

GIVE PARENTERAL ANTIBIOTICS

Head & neck or upper respiratory tract infection?

Give adequate analgesia

Head injury information card

NICE Guidelines for Head Injury

GIVE PARENTERAL ANTIBIOTICS

Initial Management

VIRAL
Supportive therapy, simple analgesia

BACTERIAL INFECTIONS
Treat with oral antibiotics

DENTAL
Refer to community dentist

Review patient
Review within 48-72 hours

No improvement or progression of symptoms

Consider referral to General Paediatrics or Paediatric A&E

DISCHARGE

SYMPTOMS RESOLVING

Refer immediately to Paediatric A&E

*ALARM FEATURES

MENINGITIS
Fever
Malaise
Lethargy
Purpuric rash
Neck stiffness
Photophobia
Associated signs of sepsis

HISTORY
Rapidly progressive headache
Explosive pain becoming excruciating within minutes
Wake up from sleep

FEATURES OF RAISED ICP
Confusion
Blurred vision
Vomiting
Bradycardia
Hypertension
Fluctuating GCS
Papilloedema
Flame Haemorrhage

FOCAL SIGNS
Ataxia
Hemiparesis

REFER IMMEDIATELY TO PAEDIATRIC A&E

ALARM FEATURES?
### NOTES: SINUSITIS

Sinusitis is defined as:
- **Acute**: less than or equal to 4 weeks
- **Recurrent**: more than or equal to 4 episodes/year each lasting more than or equal to 10 days, absence of symptoms between episodes
- **Chronic**: more than or equal to 12 weeks with or without treatment

- Most cases are self-limiting and definitive investigation and specific treatment is usually not required
- Consider antibiotics for acute sinusitis if symptoms are severe, or persist for at least 10 days
- Consider antihistamines for chronic sinusitis if allergies are suspected
**HEADACHE <5 yr olds**

**ALARM symptoms or signs present**
- Headache worsened by sneezing or coughing
- Headaches that wake the child from a deep sleep
- Present on waking
- Exacerbation or marked improvement with change in position
- Projectile and persistent vomiting,
  Vomiting without nausea

**Are signs of raised ICP present?**

**Signs of raised intracranial pressure (ICP):**
- Focal cranial nerve abnormalities
- Papilloedema
- Sixth nerve palsy
- Sluggish or unequal pupils
- Localising signs
- Visual field defects
- Nystagmus
- Retinal abnormalities
- Ataxia
- Spasticity
- Visual, movement or language dysfunction

**Alarm signs ABSENT**
- Simple analgesia and review

**NO IMPROVEMENT**
- Consider referral to GPSI (if available) / Paediatrician

**URGENT REFERRAL TO A&E OR NEUROSURGERY**

**Look for the following features in the history**
- Family history of early cerebrovascular disease or intracranial haemorrhage
- Syndrome with known risk of intracranial disease, e.g:
  - Head circumference > 99th centile
  - Height > 99th centile
  - Personality changes
  - Focal seizures
<table>
<thead>
<tr>
<th>RELATED DOCUMENTS</th>
<th>NICE guideline: Diagnosis and Management of headaches in young people and adults, Sept 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><a href="http://www.nice.org.uk/guidance/cg150/evidence/cg150-headaches-full-guideline3">http://www.nice.org.uk/guidance/cg150/evidence/cg150-headaches-full-guideline3</a></td>
</tr>
<tr>
<td>AUTHORISING BODY</td>
<td>ED Governance</td>
</tr>
<tr>
<td>SAFETY</td>
<td>NA</td>
</tr>
<tr>
<td>QUERIES</td>
<td>Dr A Majumdar</td>
</tr>
</tbody>
</table>