Ashford and St. Peter's Hospitals
NHS Foundation Trust

CHRONIC HEADACHE

Author: Imogen Rees, FY2

Supervisor: Kate Irwin, Consultant

Contact details: k.irwin@nhs.net

Guideline History		
Date	**Comments**	**Approved By**
Jan 2014	Created	
Mar 2018	Reviewed – no changes	
July 2021	Updated and ratified	Paediatric Guideline Committee
Nov 2021	Updated to comply with NICE guidelines NG127 and QS198 - Dr Erin Dawson. *Additions include – more symptoms of concern under 'current functioning' and advice to measure head circumference up to 4 years old.*	

Patients first • Personal responsibility • Passion for excellence • Pride in our team

Contents

Page

1. Guideline
    a. Introduction
    b. History
    c. Examination
    d. Red flags
    e. Investigations
    f. Management
2. Supporting References
3. Supporting Trust Guidelines
4. Guideline Governance
    a. Scope
    b. Purpose
    c. Duties and Responsibilities
    d. Approval and Ratification
    e. Dissemination and Implementation
    f. Review and Revision Arrangements
    g. Equality Impact Assessment
    h. Document Checklist

5. Appendices

1.

Chronic Headache

INTRODUCTION

What is it?

Headache is common in children, increasing in incidence from early childhood to adolescence. Chronic daily headache is headache experienced for more than **15 days per month** for at least **3 consecutive months.**

Two types

Primary: Headache has no specific underlying cause. These are the most common causes of chronic headaches in children. E.g tension-type headache, migraine and cluster headache.

Secondary: Headache due to underlying causes such as sinusitis, raised ICP, medication overuse, hypertension, giant cell arteritis. Less commonly seen in children with the likelihood of a potential serious secondary cause for chronic headache being less than 3 per 100 children.

Headache feature	Tension type	Migraine (with or without aura)	Cluster
Age			Very rare in < 10y
Location			Unilateral, usually started around eye or temple
Pain quality			Deep, continuous explosive
Intensity			Severe
Duration			15 minutes to 3 hours
Effect on activities			Often nil effect
Associated symptoms		- Lasts 5-60 mins **Aura is rare in preschool children**	Ipsilateral autonomic symptoms; lacrimation or redness of eye, blocked nose or rhinorrhoea, horner syndrome, rarely focal neurological symptoms

HISTORY

⇒ **Headache history**
- Onset, timing, location, associated symptoms, exacerbating and relieving factors
- Patient's own management of the headache – pharmacological and non-pharmacological
- Effect on sleep, appetite, mood, activity (both school and recreation)

⇒ **Current functioning**
- New coordination problems, gait changes, posture, hand preferences, changes in handwriting, squint, abnormal movements, mood change, swallow or speech problems, vertigo, blackouts, atraumatic facial pain, cognitive changes, sensory changes

⇒ **Medical history**
- History of malignancy, exposure to radiation, rhinitis or atopy, dental issues (and last check up), previous chronic pain, history of head trauma or whiplash

⇒ **Development**
- Learning disability, visual impairment, use of aids, last opticians visit

⇒ **Systems review**
- Gastrointestinal – vomiting (esp. early morning), bowel habit, abdominal pain
- Nutrition/diet – regular meals, appetite, consumption of breakfast, recent weight loss or gain, consumption of foods high in monosodium glutamate (such as take-away food) and caffeine
- Hydration – ensure adequate fluid intake, consumption of energy drinks
- Endocrine – growth abnormalities or pubertal issues. Ask about polydipsia and polyuria. Consider pregnancy.
- Ear nose and throat – facial pain, ear ache or nasal discharge
- Psychiatric – establish an overview of the child's usual personality and coping strategies, are they describe as perfectionists or overachievers? Ask about mood and physical symptoms of anxiety (restlessness/loss of energy, stomach aches, irritability, chest pain or discomfort, difficulties concentrating, rapid heart rate)
- Dental – toothache, jaw pain, teeth grinding, last dental review
- Sleep – sufficient length, disturbance, use of screens before bed, sleep latency

⇒ **Social changes**
- Recent changes, possibility of abuse, school issues, recreational activities
- Housing – presence of gas appliances in bedrooms

⇒ **Family History**
- Headache and chronic pain issues, neurocutanous syndrome, psychiatric conditions (especially anxiety and depression), malignancy and coeliac disease.

EXAMINATION

⇒ Weight and height: growth chart. In those <4 years, measure head circumference – is there evidence of any growth failure, obesity or disproportionately enlarged head size?

⇒ Check blood pressure

⇒ Local pathology: check for dental, eye and ENT pathology

⇒ Full neurological examination with fundoscopy, consider referral to ophthalmology

RED FLAGS

Headache Character	Associated symptoms/factors	Examination
Persistent (>4 weeks) and waking from sleep or present on waking	Change in behaviour especially lethargy	Abnormal head position – head tilt, wry neck, neck stiffness
Persistent and <4 years of ages	Confusion	Papilloedema
Triggered by cough sneeze or exercise	Change in motor ability (e.g. clumsiness)	Abnormal neurology
Occipital	Developmental regression	High blood pressure
Worsening and associated with fever	Persistent visual symptoms	
Sudden onset and max intensity < 5 mins	Persistent nausea or vomiting	
Orthostatic	Seizures	
Different to 'usual' headache in those with primary headaches	Recent head trauma (<3/12)	

If any of these symptoms urgent senior opinion for that day or Rapid Access Clinic review the same week and organise urgent neuroimaging

INVESTIGATIONS

⇒ Bloods and Lumbar puncture – consider acutely if suspecting intracranial infection or benign intracranial hypertension – otherwise not useful

⇒ Neuroimaging if any of the red flags stated above

⇒ EEG – not recommended until after neuroimaging

MANAGEMENT

⇒ **General measures**

- **Reassure** that a sinister cause is unlikely, if clinical assessment is normal
- **Headache diary** (for 2-3 weeks) to identify patterns and precipitants
- **Lifestyle advice:** Good fluid intake, sleep hygiene, reducing screen time, regular exercise avoiding triggers
- **Simple analgesia:** Use sparingly, with warning about risk of medication overuse headache
- **CBT and behavioural support where indicated.**

IF THESE GENERGAL MEASURES FAIL:

Tension type

⇒ Amitriptyline - Tricyclic antidepressant
- Start with low dose at night (10-25 mg) and increase the dose if no beneficial effect after 1-2 weeks
- Maximal dose should not be more than 75 mg/day
- Change to other tricyclic antidepressant only after 12 weeks
- Ask the patient to use headache diary
- Use the tricyclic antidepressant for 6-9 months
- Decrease the dose gradually

Migraine

ACUTE EPISODE
To avoid medication overuse headache, use medication on no more than two days per week

Simple analgesics

⇒ Paracetamol/Ibuprofen – **as early as possible,** both safe and effective
⇒ No evidence re benefits of opioids

Triptans

⇒ **Sumatriptan nasal spray** (5mg and 20mg strengths is the only 5HT1 agonist with proven efficacy in paediatric migraine - in practice it is disliked due to taste)

- **Nasal triptan** is shown to be effective in children rather than oral due to better absorption
- Nasal triptans can be used with Paracetamol or Ibupofen

⇒ **Zolmitriptan** is an acceptable formula with some success in 8 yrs up and used widely in adolescents

- Oral - 2.5mg, followed by 2.5mg after at least 2 hours if required, if dose unsatisfactory after 3 attacks consider increasing dose to 5mg or switching to alternative treatment, maximum 10mg per day
- Intranasal – 5mg, dose to be administered as soon as possible after onset into one nostril only, followed by 5mg at least 5mg after at least 2 hours if required.

! Do not prescribe triptans in children with cardiac disease. Adverse effects may include tingling, tightness, flushing, dizziness and nasty taste (nasal spray)

Antiemetics

⇒ Often needed early. Nausea and vomiting occur in up to 90% of children with migraines and is an important symptom to address.

- 2-18 years - Cyclizine, Domperidone
- >5years - Prochlorperazine

! Metoclopramide is associated with acute dystonic reactions so is not recommended

PROPHYLAXIS

When to treat

⇒ Frequent attacks (>2 per month) that, in spite of acute therapy, cause significant disability.
⇒ Failure, contraindications, or unacceptable side effects of acute treatment
⇒ Medication overuse
⇒ Hemiplegic migraine or attacks with a risk for permanent damage
⇒ Very high attack frequency

FIRST LINE

⇒ **Propranolol (licenced)**

- **Child 2-11 years** - Initially 200-500 micrograms/kg twice daily; usual dose 10-20mg twice daily (max. per dose 2mg/kg twice daily)
- **Child 12-17 years** – Initially 20-40mg twice daily; usual dose 40-80mg twice daily (max. per dose 120mg); maximum 4mg/kg per day

! Counsel patients about: Avoiding abrupt withdrawal, sleep problems, avoid in asthma

⇒ **Pizotifen (no good quality evidence re efficacy but has been used for this purpose for twenty years and in practice many have found it helpful)**

- Child 5-17 years
  - Initially 500 micrograms once daily, dose to be taken at night, then increased if necessary to 1.5mg daily in divided doses, dose to be increased gradually.

! Counsel patients about: drowsiness, increased appetite, weight gain, nausea, dizziness, anxiety, aggression

SECOND LINE

⇒ **Topiramate (unlicensed but recommended by NICE)**

- Child 16-17 years
  - Initially 25mg once daily for one week, dose to be taken at night then increased in steps of 25mg every month
  - Usual dose 50-100mg daily in 2 divided doses
  - Maximum dose 200mg per day

! Counsel patients about: Weight loss, paraesthesia, fatigue, drowsiness, impaired memory. (Smaller risk of teratogenicity than sodium valproate which is not recommended in this guideline)

Cluster headache

MANAGEMENT OF ACUTE ATTACK

⇒ Oxygen:7 litres/min 100% oxygen for 15 minutes – Effective in 75% of patients within 10 minutes
⇒ Sumatriptan s.c
⇒ Lithium, Melatonin, Verapamil

If cluster headache suspected then discuss with consultant and consider referral to paediatric neurology services at St George's.

RESOURCES

- **Red flags**
  https://www.headsmart.org.uk/advocate/download-materials/

- **Psychological**
  Free app – 'MindShift'
  Young minds – mental health charity with online support and resources for children, young people and families, relating to range of mental health issues – www.youngminds.org.uk

- **Headache diary**
  https://headaches.org/resources/headache-diary-keeping-a-diary-can-help-your-doctor-help-you/

References

1. HeadSmart http://headsmart.org.uk

2. Migraine Trust https://migrainetrust.org/

3. Aspinall N, D'Urso A, Ambegoankar G, Fifteen minute consultation: an approach to the child with chronic headaches, Archives of Disease in Childhood: Education & Practice, Ed2018; 103: 177-183

4. Whitehouse WP, Agrawal S, Management of children and young people with headache Archives of Disease in Childhood: Education & Practice Ed 2017; 102: 58-65

5. **Suspected neurological conditions: recognition and referral**

NICE guideline [NG127]Published: 01 May 2019 Last updated: 04 July 2019

2. Guideline Governance

a. Scope

This guideline is relevant to all staff caring for all children from 0-18 years old across the emergency department, inpatient ward and outpatient department.

b. Purpose

i. This guidelines aims to facilitate a common approach to the management of children. At times deviation from the guideline may be necessary, this should be documented and is the responsibility of the attending consultant.

ii. This guideline is subject to regular review to ensure ongoing evidence based practice.

c. Duties and Responsibilities

All healthcare professionals responsible for the care of all children 0-18years should be aware of practice according to this guideline.

d. Approval and Ratification

This guideline will be approved and ratified by the Paediatric Guidelines Group.

e. Dissemination and Implementation

i. This guideline will be uploaded to the trust intranet 'Paediatric Guidelines' page and thus available for common use.
ii. This guideline will be shared as part of ongoing education within the Paediatric Department for both medical and nursing staff.
iii. All members of staff are invited to attend and give comments on the guideline as part of the ratification process.

f. Review and Revision Arrangements

a. This policy will be reviewed on a 3 yearly basis by the appropriate persons.
b. If new information comes to light prior to the review date, an earlier review will be prompted.
c. Amendments to the document shall be clearly marked on the document control sheet and the updated version uploaded to the intranet. Minor amendments will be ratified through the Paediatric Guidelines Group. A minor amendment would consist of no major change in process, and includes but is not limited to, amendments to documents within the appendices.

g. Equality Impact Assessment

Background • Who was involved in the Equality Impact Assessment
Author and the supervising consultants.
Methodology • A brief account of how the likely effects of the policy was assessed (to include race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age) • The data sources and any other information used • The consultation that was carried out (who, why and how?)
All groups of staff and patients were taken into consideration and there is no bias towards or against any particular group.
Key Findings • Describe the results of the assessment • Identify if there is adverse or a potentially adverse impacts for any equalities groups
There is no evidence of discrimination.
Conclusion • Provide a summary of the overall conclusions
There is no evidence of discrimination.
Recommendations • State recommended changes to the proposed policy as a result of the impact assessment • Where it has not been possible to amend the policy, provide the detail of any actions that have been identified • Describe the plans for reviewing the assessment
This guideline is appropriate for use.

h. Document Checklist

To be completed (electronically) and attached to any document which guides practice when submitted to the appropriate committee for approval or ratification.

Title of the document: Chronic Headache

Policy (document) Author: Dr Kate Irwin

Executive Director: N/A

		Yes/No/ Unsure/NA	Comments
1.	**Title**		
	Is the title clear and unambiguous?	**Y**	
	Is it clear whether the document is a guideline, policy, protocol or standard?	**Y**	
2.	**Scope/Purpose**		
	Is the target population clear and unambiguous?	**Y**	
	Is the purpose of the document clear?	**Y**	
	Are the intended outcomes described?	**Y**	
	Are the statements clear and unambiguous?	**Y**	
3.	**Development Process**		
	Is there evidence of engagement with stakeholders and users?	**Y**	
	Who was engaged in a review of the document (list committees/ individuals)?		**Paediatric Guideline Committee**
	Has the policy template been followed (i.e. is the format correct)?	**Y**	
4.	**Evidence Base**		
	Is the type of evidence to support the document identified explicitly?	**Y**	

		Yes/No/ Unsure/NA	Comments
	Are local/organisational supporting documents referenced?	**N/A**	
5.	**Approval**		
	Does the document identify which committee/group will approve/ratify it?	**Y**	
	If appropriate, have the joint human resources/staff side committee (or equivalent) approved the document?	**N/A**	
6.	**Dissemination and Implementation**		
	Is there an outline/plan to identify how this will be done?	**Y**	
	Does the plan include the necessary training/support to ensure compliance?	**N/A**	
7.	**Process for Monitoring Compliance**		
	Are there measurable standards or KPIs to support monitoring compliance of the document?	**N/A**	
8.	**Review Date**		
	Is the review date identified and is this acceptable?	**Y**	
9.	**Overall Responsibility for the Document**		
	Is it clear who will be responsible for coordinating the dissemination, implementation and review of the documentation?	**Y**	
10.	**Equality Impact Assessment (EIA)**		
	Has a suitable EIA been completed?	Y	

Committee Approval (Paediatric Guidelines Group)			
If the committee is happy to approve this document, please complete the section below, date it and return it to the Policy (document) Owner			
Name of Chair	**Dr Claire Mitchell**	**Date**	**01/10/2021**
Ratification by Management Executive (if appropriate)			
If the Management Executive is happy to ratify this document, please complete the date of ratification below and advise the Policy (document) Owner			
Date: n/a			