Headache in Children

Between 20-30 per cent of children report headaches at least weekly, and 6 per cent have headaches several times a week or daily. Migraine is the most common type of headache with a peak incidence at the age of 15 years in girls and 10 years of age in boys. Less than 10% will see their GP.

Children suffering from headache are also more sensitive to other types of pain in general. There is a link with other periodic syndromes including cyclical vomiting, abdominal pain and benign paroxysmal vertigo of childhood.

What causes headache in children?

The causes of headache in children are complex and the current view sees pain as emanating from a complex interaction among biological, psychological and social variables. Children with headache have higher levels of anxiety and depression. However, the direction of causality between headache and these factors is complex. The family context is important. There is a positive family history of migraine in 77 per cent of children with migraine and parents may translate patterns of pain response and coping.

Diagnosis

Migraine differs in children when compared with adults. The box shows the main differences between migraine in children and adults, and tension-type headache, which is broadly comparable in both groups.

Migraine in adults	**Migraine in children**	**Tension type headache**
Usually unilateral	Usually bilateral	Usually bilateral
Moderate-to-severe headache	Mild-to-severe headache. May be inferred from behaviour in younger children.	Mild-to-moderate headache
Throbbing/stabbing nature of pain	Can take any form	Pressure or band-like pain
4-72 hours	Usually less than four hours	Variable
Associated symptoms include nausea, vomiting, photophobia or phonophobia	Not always present	No associated symptoms
Can be associated with a	Aura less common	No aura

aura in 30%		
Frequently prevents normal activity	Frequently prevents normal activity	Sufferer usually able to continue with normal activities

Main features of migraine in adults and children and tension type headache

In many cases there is an overlap between migraine and tension-type headache and it has been suggested that both types sit on the same headache spectrum.

A realistic practical approach is to adopt the same approach to management for all children with paroxysmal headaches who are well between attacks, with migraine the default diagnosis where an impact on performance is described and particularly against a background of a positive family history.

Management

Trigger factors can be subtle and children have a low threshold to stress, missing meals, irregular sleep patterns. Dietary irregularities, especially missed meals and lack of hydration, are also important. A high fibre cereal snack taken at regular intervals is helpful, as is a regular intake of fluid and avoidance of caffeinated drinks.

Although a number of drugs are used to treat headache, the evidence base is weak. There is also a tendency for parents and practitioners to administer small doses of analgesia and delay treatment until the headache is established and severe enough to warrant treatment.

The acute attack.

Paracetamol 10-20mg/kg every 6-8 hours (maximum 60mg/kg/day)

Ibuprofen 10-15mg/kg every 6-8 hours.

In some children, nausea and vomiting are troublesome symptoms and early treatment with anti-emetics such as Metoclopramide or Domperidone may help and improve the response to pain killers.

Oral Triptans are safe but due to the high placebo response in childhood trials, licence has not been obtained. Nasal Sumatriptan in a dose of 10mg is licensed in those above twelve years.

Prevention.

Pizotifen is the drug of choice and works well in children. Weight gain can be a problem. Propranolol can be useful and other drugs include Amitriptyline, Topiramate and Valproate, although the antiepileptics are best left to specialist practice. (However, these drugs may not be better than placebo). These drugs are not licensed for use in children. Preventative treatment should be used for at least two months in optimum dose before it can be judged as effective or unhelpful.

[Box] Preventative drugs used in children's migraine

Drug	Dose	
	Under 12 years	**12-18 years**
Pizotifen	0.5-1.0mg/day Single dose – night	1.5-3.0mg/day Single dose – night
Propranolol	0.2-0.5mg/kg TDS Max 4.0mg/kg/day	20-40mg tds Max 160mg/day
Amitriptyline		Up to 50mg/night
Topiramate		2-3mg/kg/day Gradual increase to target dose

Where the emphasis is on tension type headache Amitriptyline is the drug of choice but close attention must be pain to underlying problems at home or school.

Alarm symptoms

With headache there is always a concern that there may be an underlying pathology, and in particular a tumour. Although brain tumours are rarer in children than adults, their impact is potentially more devastating. The principles of investigation are the same as for adults. Some relevant presentations are:

Papilloedema or other abnormal findings on neurological examination

Alterations in consciousness, memory, confusion or co-ordination

New seizure

Headache aggravated by exertion or Valsalva manoeuvre

Headaches that have been present for some time but have changed significantly, particularly a rapid increase in frequency

Unexplained deterioration in school work