

## Headache and school absence

C COLLIN, J M HOCKADAY, AND W E WATERS

*Departments of Paediatrics and Medicine, John Radcliffe Hospital, Oxford and Department of Community Medicine, Southampton University Medical School*

**SUMMARY** The amount of time missed from school in two small town school populations was estimated by measuring absence from school and attendance at sickbay, and stated causes were analysed. School absence related to headache (expressed as percentage of pupil days missed out of possible pupil days, during two 12 week periods) in children aged 5 to 14 years, was 0.05%. This represented approximately 1% of all school absence, and was recorded (usually only once) in 3.7% of children. The duration of absence was one day or less on 85% of occasions. This low absence rate was in contrast with the high prevalence of headache reported by children aged 9 to 14 of between 76 and 94% according to age and sex.

Attendance at school sick bay because of headache was recorded in 3.6% of children aged 5 to 19 (only 0.5% then left school early because of headache) in one 12 week period. It is concluded that although headache prevalence is high in the age groups studied, it is not a prominent cause of time missed from school.

Headache is common in children. Bille<sup>1</sup> found that half of 4592 7 to 10 year old boys and girls and two thirds of 4401 11 to 15 year olds had headaches, but only 3 to 6% were thought to have migraine. Other studies<sup>2-4</sup> in different countries, including the United Kingdom, have found headache prevalence between 40 and 90%, with migraine prevalence between 2.5 and 22%.<sup>2-6</sup>

The immediate effect of headache on concentration and learning ability has not been studied, but there are many accounts of psychosensory and psychomotor disorder during attacks of migraine.<sup>7</sup> Further, it is common experience that some children with headache are frequently absent from school, and so at risk from under achieving. The possibility that migraine may contribute to school failure, either directly by interfering with learning or indirectly by causing frequent school absence, is sometimes considered an indication for long term preventive treatment with specific 'antimigraine' remedies. One retrospective study in this country<sup>6</sup> found that over 50% of children with migraine in independent schools had missed school because of headache in the previous year, suggesting a sizeable population open to medication (no estimate of sickness absence was made for pupils with headache that they did not consider to be migraine). Concern about this led to the present prospective study of

headache and migraine prevalence and school absence caused by headache.

### Method

**Faringdon study.** The incidence of headache as a cause of school absence was studied in a school population of 686 children aged 5 to 14 years in a defined geographical area centred on the market town of Faringdon (population 3609) in Oxfordshire. Children from the survey area all attended one infant (5 to 7 years), one junior (7 to 11 years), and one comprehensive (11 to 14 years) school. Children who came into the comprehensive school from outside the defined school area were not included. The upper age limit of 14 years was chosen because over this age complex time tabling made monitoring of absence unreliable. Ethical committee approval was obtained for all procedures.

Class registers were inspected at three weekly intervals for two 12 week periods in two consecutive terms (summer and autumn 1982). A postal questionnaire 'A' was sent to the parents of every child registered absent, enquiring the reason and offering a choice of several causes including, *inter alia*, headache and absence due to social reasons. If the questionnaire was not returned within three weeks a reminder and an additional copy of the question-

naire were sent by post. Classification of type of headache experienced was not attempted because it was found in a preliminary pilot study that some parents were unwilling to be visited at home for further questioning; it was not considered justifiable to question the children themselves.

In the term after the two study terms (spring 1983), all children aged 9 years or more attending the same schools were asked by questionnaire 'B', self administered in class, whether they had experienced headache in the previous year.

**Abingdon study.** In a separate study children attending school sick bay for any reason during the school day were counted for one term (summer, 1983) in a school population (1451 children aged five to 19 years) attending an infant (116 children), junior (232 children), and comprehensive (1103 children) school in the nearby market town of Abingdon in Oxfordshire, by means of records kept for the purpose of the study by the school's secretary or nurse. The numbers complaining of headache and either sent home or treated and sent back into class were recorded.

## Results

**Faringdon.** The response rate to questionnaire 'A' varied widely according to age and sex. The response rate overall for children aged 5 to 12 years was 79%. The results for each study term were similar, and they are therefore combined.

Absence is expressed as the percentage of pupil days lost out of total possible pupil days. For example, in a class of 20 children for a 12 week period, the total number of pupil days is  $20 \times 12 \times 5 = 1200$ . Total absence varied from 3.9% to 5.4% of pupil days, by age and sex, average 4.7%. Absence due to headache varied from 0.01% to 0.2% of pupil days, by age and sex, average 0.05%. It was slightly greater for boys overall (0.07%) than for girls (0.03%). Headache related absence accounted for approximately 1% of all school absence. Minor illness accounted for a further 39.3%, social reasons for 30.4%, and other reasons for 3%; the remaining 26.3% was unexplained (unreturned questionnaires).

The numbers of children who missed school because of headache varied from 1% to 6% by age and sex. Overall, 12 girls and 14 boys (3.8% of the school population studied) missed school because of headaches during the two term observation period. Only three of them were absent more than once (one boy twice, one boy thrice, and one girl on six occasions). Of the total of 34 absences for headache

recorded, 15 (44%) were for one half day, 14 (41%) were for one whole day, and only five (15%), all boys, were for longer periods (three for two days, one for four days, one for five days).

The prevalence of headache in the children aged 9 years or more who completed questionnaire 'B' varied from 76% to 94%. The response rate to questionnaire 'B' was good (90%) in the 9 and 10 year old group but fell in older groups because children were either out of class or did not wish to take part.

**Abingdon.** In one 12 week period a total of 334 children (116 boys, 218 girls) reported to sick bay (23% of the population). Two hundred and sixty five of these children were treated and sent back into class, and of these 53 had complained of headache (17 boys, 36 girls, all aged 11 years or more). The remaining 69 children were sent home from school early for specified medical reasons, headache being recorded as the reason in only seven of them (four boys, three girls, all age 12 years or more).

## Conclusions

We conclude that headache, although of frequent occurrence, is not a major cause of school absence in the age groups studied. It accounted for approximately 1% of all pupil days missed, and only 3.7% of the population studied was absent because of headache at any time during the two term observation period. Absence due to headache was almost always brief (one day or less). Prevalence of headache was high in the population studied and comparable with other studies. The number of children recorded as sent home from school early because of headache was very small (0.5%). A larger proportion (3.6%) attended school sick bay because of a complaint of headache, but were treated and sent back into class. The importance of easy availability of such simple management within school is thus emphasised. Of all the children recorded as absent from school or as sent home from school because of headache, in only three did this happen on more than one occasion. On the grounds of time missed from school, therefore, there seems little indication for frequent recourse to prophylactic medication. Most importantly, when headache is frequent or causes handicap from school absence it should then be regarded as different from the ordinary recurrent headache of childhood, and a more serious cause (organic or psychiatric) should be looked for.<sup>8</sup>

Finally, it is possible that headache during school, whether reported or not, may have an adverse effect

on learning. This has not yet been studied. Such an effect, if shown in children with frequent migraine, might be considered an indication for preventive treatment.

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Correspondence to Dr J M Hockaday, Department of Paediatrics, John Radcliffe Hospital, Oxford.

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