

Aspirin and Reye's syndrome — do parents know?

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SUMMARY. Amid growing concern over the association between aspirin and Reye's syndrome, the Aspirin Foundation has recently mounted a publicity campaign advising against the use of aspirin in children. Of 50 parents questioned at a children's ward of a district general hospital, 46 (92%) had heard of the publicity, 38 via the television. The number of parents who would give aspirin to their child had dropped significantly from 45 before the campaign to five after it ($P<0.001$); only one parent chose to ignore the advice. The media, particularly television, is again shown to be a potent means of publicity. Despite the very high response to the advice about aspirin none of the parents mentioned Reye's syndrome as the reason.

Introduction

INTEREST has grown over the postulated association between aspirin use and Reye's syndrome.^{1,2} Described first in 1963, this is a rare but severe acute encephalopathy complicated by fatty degeneration of the liver and other viscera,³ predominantly affecting children. The British Reye's Syndrome Surveillance Scheme, which was established in 1981, reported 200 cases in the first three years and an annual incidence for 1983/4 of 0.7 per 100 000 children under 16 years.⁴ The median age was 14 months, with an excess of cases in girls and rural populations and a mortality of 54%. It has been associated with preceding viral infections, such as chickenpox, influenza and hepatitis, and with ingestion of chemicals such as pesticides and salicylates. The aetiology is unclear.

The association with aspirin was raised by four case control studies from the USA between 1978 and 1984.⁵⁻⁸ These led the Surgeon General to advise against the use of aspirin in 1982, advice which was reversed later that year amid growing criticism over the conduct of these studies. A further study was begun in 1984 and the pilot phase of this⁶ was sufficiently convincing for the US food and Drug Administration and our own Committee on the Safety of Medicines to recommend that 'aspirin should not be given to children under the age of 12 years except on medical advice'.⁹ It has been reported that the incidence of Reye's syndrome has fallen along with decreased use of aspirin since this advice.^{10,11}

A critical review of the evidence has been presented by Hall,¹ who concluded that the evidence for an association was not convincing, but when taken together with the severity of Reye's syndrome and the availability of a suitable alternative in paracetamol, it was only sensible to avoid aspirin. In the UK in June 1986 the Aspirin Foundation mounted a publicity campaign to advise parents against using aspirin.

This study aimed to determine how successful the campaign had been in reaching parents and influencing their use of aspirin.

Method

Six months after the publicity campaign mentioned above the parents of 50 consecutive admissions to the children's ward of

a district general hospital were questioned about their use of simple analgesics and antipyretics for themselves and their children. They were asked if they had any preferences and any reasons for this and if they kept the drug at home. Those not mentioning the publicity spontaneously were asked directly if they knew of any problems with aspirin use and how they knew this. Finally, they were asked if they were aware of the publicity and by what means, and any change in drug use was noted. The results were analysed using the chi-square test with Yate's modification.

Results

The 50 children, who had been admitted for a wide variety of conditions, were 37 girls and 13 boys; the uneven distribution is not important as the study was concerned with their parents. The age range was two months to 15 years, parents of patients over 12 years only being entered if they also had children under 12 years. When both parents were present a consensus of opinion was taken.

Of the 50 parents questioned, three said they had never taken any analgesics themselves and another four that they had never given any to their children. Forty-five of the parents said they would prefer to give paracetamol to their children, none would prefer aspirin and five had no preference (Table 1).

When asked if aspirin can harm children and if they had come across any publicity about this, 46 parents (92%) had heard of the publicity: 38 via the television, four from newspapers, three from the general practitioner and one from a friend. None of the parents could name Reye's syndrome as the reason why aspirin should not be used, two parents cited 'brain damage', one that it 'rots your guts' and one that paracetamol elixirs taste better.

When asked how the publicity had altered their use of these drugs 40 out of 45 parents who might have used aspirin would not now use it (Table 1), so the proportion of children who could have been given aspirin fell from 90% to 10% ($P<0.001$). One parent who had heard the publicity would still use aspirin.

Most parents currently kept analgesics in the house, most commonly paracetamol (44 parents); one parent kept aspirin, five kept neither and none had both. Seven parents had given compound preparations, such as Lemsip or Beecham's Powders, but all said they would now check for aspirin content.

Table 1. The drugs preferred by the 50 parents for their own and their children's use.

	Number of parents				
	Preferring aspirin	Preferring paracetamol	No preference	Never taken either	Total who might use aspirin
Parent's own use	2	5	40	3	45
Use in children before the publicity	2	5	39	4	45
Use in children after the publicity	0	45	5	—	5

Discussion

The study showed the publicity campaign to advise parents against the use of aspirin in children reached 46 out of 50 parents (92%) and all of these, save one, responded appropriately. Before the campaign some avoided aspirin because of gastrointestinal side effects but afterwards there had been a significant decrease in the numbers of children likely to receive aspirin. Parents who used compound preparations all said they would check the contents and only one parent kept aspirin in the house at all.

These figures compare favourably with reports from the USA after the publicity there in 1982.^{10,11} Rates of use fell from 56% to 25%, 71% to 39% and 69% to 32% in three studies each involving over 300 children. Remarkably, one study found that 21% continued to use aspirin and it was claimed that all those questioned had heard of Reye's syndrome by name and that 82% could name two symptoms.¹⁰ In our study, Reye's syndrome had never been heard of but, more importantly, the majority of parents knew to avoid aspirin. Health care professionals did not contribute much to the publicity; information was far more likely to be received from the television or newspapers than from health care professionals or friends. Of course even children only see their general practitioner two or three times a year but nevertheless these visits could represent missed opportunities.

Despite only a small budget the campaign has been shown to be very effective. There was no television advertising, only newspaper advertisements and posters and leaflets. The campaign was launched with a major press conference at the DHSS and it was the press coverage on television, radio and newspapers which provided the majority of publicity.

References

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