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Correspondence to Dr M E I Morgan, Liverpool Maternity Hospital, Oxford Street, Liverpool L7 7BN.

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## Prevalence of infant colic

DAVID W HIDE AND BARRY M GUYER

*St Mary's Hospital, Newport, Isle of Wight, and Mead Johnson Nutritionals, Langley, Slough, Berks*

**SUMMARY** Colic affected 16% of 843 infants. It was not related to breast or cows' milk feeding. Increased prevalence was noted if cereals or solids had been introduced during the first 3 months of life and in infants from professional or skilled social groupings.

Colic is a common problem in infancy. Although it is not generally associated with serious disease it may be profoundly disturbing to the child and his family. The mother's distress is exacerbated by lack of an adequate explanation. Her inability to help her infant is made worse by the implication that the colic may result from some failure in the relationship between mother and baby. Certainly a young infant with severe colic tests the affection of any member of the family exposed to it. Many hypotheses have been made about the cause of colic, sometimes called 3-month or evening colic, but few have been substantiated. Cows' milk allergy has been reported as a cause of infantile colic<sup>1</sup> although others have suggested that colic is more common in breast-fed infants.<sup>2,3</sup> This study reports the prevalence of colic in infants and relates it to mode of feeding.

### Patients and method

The Isle of Wight infant feeding survey was instituted in 1977 to study the pattern of feeding in an entire population born during a 12-month period. The structure of the study has been reported.<sup>4</sup> As part of the survey, data on colic were recorded by health visitors 6, 12, 26, and 52 weeks after birth. Further information was obtained from the mothers 2 years after the infant's birth. Data have been collected on 843 infants.

### Results

Colic affected 135 (16%) of the infants and was present in most (120) by age 6 weeks. Only 11 of the affected infants developed colic for the first time between ages 6 weeks and 3 months, the remaining 4 showing initial symptoms after this age.

Almost half (47%) of the infants who first had colic before age 6 weeks had lost their symptoms by the time they were 3 months old. A further 41% remitted before age 6 months, leaving only 12% with symptoms persisting into the second half year of life (Figure).

Attempts to demonstrate relationships between colic and the time of day of occurrence of symptoms

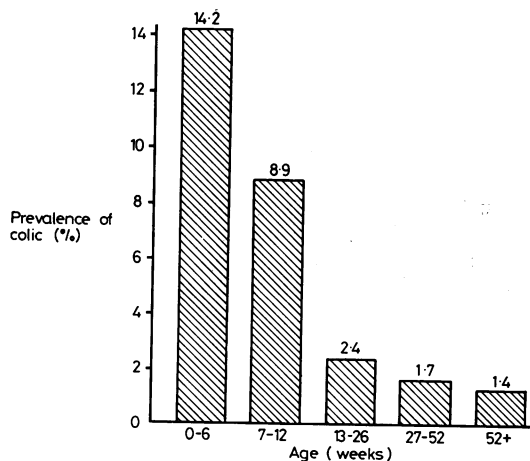


Figure Prevalence of colic in infancy.

proved disappointing. Only 20% of the mothers felt colic was more common in the evening or night. Similarly, no significant difference could be found in the prevalence of colic between totally breast-fed and totally formula-fed infants, although colic was recorded more often in infants introduced to mixed feeding before age 3 months.

The interrelationships between parental allergy, social class, feeding methods, and the development of colic were studied by log linear modelling. This showed a striking effect of parents' social class on the reported prevalence of colic, but no influence for the other factors. Infants with a background of parental allergy are more likely to be initially breast fed (76 compared with 67%,  $P = 0.01$ ) and parents in the upper social groupings are significantly more likely to breast feed their babies (initial breast feeding rates: professional 85%, skilled 70%, unskilled 62%,  $P < 0.0005$ ). Allowing for these effects, the reporting of infantile colic is significantly related to parental social class, being found in 23% of the professional group, 16% of the skilled group, and in only 7% of the unskilled ( $P < 0.0005$ ).

## Discussion

Colic is confirmed as being a common and usually self-limiting problem of infancy. It rarely starts after the third month so that '3-month colic' would appear a reasonable descriptive term. Colic was reported at various times in the day and rarely only in the evening. Interestingly, no parent identified the morning as the worst time for colic.

Infants do not complain of colic—they cry. The interpretation of the crying as being colic or not is a decision made in the first instance by the parents and, especially if episodic, may be taken at face value if professional advice is sought. A possible explanation for the differences in prevalence rates for colic between social groupings is that what is considered as colic by one social group may be interpreted differently by another.

Illingworth<sup>3</sup> has stated that he has long thought that colic was more common in breast-fed babies although he has no statistical proof. Our study shows that the prevalence of colic in initially breast-fed infants was 15.4%, and in initially bottle-fed infants was 13.8%, but the statistical

model we have used clearly demonstrates that the real difference lies in the fact that the upper social group infant is more likely to be breast fed and it is the social class and not the feeding method that is related to these differences.

The failure to demonstrate a significant difference in prevalence of colic between breast- and cows' milk-fed infants does not deny a relationship between cows' milk and colic. Indeed 2 infants with colic persisting after 6 months and 4 children with colic in the second year of life proved to have cows' milk intolerance. It has been shown that cows' milk protein molecules may pass unchanged into the breast milk and we have been impressed at the alleviation of colic in some infants by withdrawing milk and dairy products from the diet of the lactating mother. Similar results have been documented by Jakobsson and Lindberg.<sup>5</sup>

Thus a trial of removing cows' milk from the diet of a formula-fed infant with severe colic, or from the diet of the lactating mother may be effective. It is important that the diagnosis of cows' milk-induced colic should be confirmed by challenge procedures as such a challenge will sometimes prove negative. This will prevent the prolonged use of other costly and inappropriate diets, although a recent report from New Zealand<sup>6</sup> failed to show any reduction in rate of infantile colic when cows' milk was avoided by 20 breast feeding mothers.

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Correspondence to Dr D W Hide, Department of Paediatrics, St Mary's Hospital, Newport, Isle of Wight PO30 5TG.

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