the experimentally based hypothesis that salmonella-induced secretory diarrhoea is mediated by prostaglandins. Oral aspirin has recently been reported to reduce fluid losses in childhood gastroenteritis by mechanisms not specified. In the light of the findings in our patient this effect, in part, be attributed to the prostaglandin synthetase-inhibiting property of aspirin.

References

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Transpyloric feeding in infants undergoing intensive care

Sir,

Experience with nasojejunal (NJ) feeding using the Vygon preweighted silicone rubber tube at the Jessop Hospital for Women, Sheffield, has been similar to that described by Dryburgh. Between January 1977 and December 1979 60 infants (mean birthweight 1.37 kg, range 0.5-5.2 kg) were fed by this route for a mean duration of 29-4 days (range 5-69) and have been described in detail elsewhere. Thirty-nine required ventilatory assistance. The following observations may be of help to clinicians who wish to use NJ feeding for infants of low birthweights.

In our infant nursing staff were taught to pass NJ tubes using a similar method to that of Dryburgh except that gastric air insufflation was used to help passage through the pylorus. Eighty-five per cent of initial tube placements were successful at the first attempt (confirmed radiographically) in infants of birthweights of at least 1 kg. In smaller infants greater difficulty was encountered due to poor peristalsis; and in infants weighing 0.70 kg or less, the stainless steel weight did not readily negotiate the tight curve of the duodenal loop, apparently owing to its length (1 cm), and this led to a delay in starting enteral feedings. A NJ tube with a shorter weight (say 0.5 cm) might pass more quickly. In 70% of our infants the NJ tube became dislodged between 1 and 7 times either by the infant or the nursing staff despite great care being taken to fix the tube and to restrain the arms of the infant; 'spontaneous' return of the tube tip to the stomach was generally due to dislodgement during suctioning of the pharynx. Two infants (1.12 kg, 27 weeks' gestation; 0.84 kg, 26 weeks' gestation) who were mask-ventilated for apnoeic attacks had repeated NJ tube dislodgements.

Both these infants died and at necropsy there was evidence of pulmonary milk aspiration. The combination of mask ventilation and NJ feeding was therefore stopped in our nursery. We did not routinely change NJ tubes, and tubes which were left in situ for at least 60 days showed no sign of stiffening, unlike the polyvinylchloride tubes which stiffen within 3 or 4 days. There was no case of bowel perforation or necrotising enterocolitis, but one infant (0.85 kg, 30 weeks' gestation) had a torrrential gastrointestinal haemorrhage after 15 days of NJ feeding and subsequently developed an oesophageal stenosis requiring a prolonged time in hospital.

In infants of 30 weeks' gestation or less, the sodium content of currently available standard infant formulae (for example, Cow and Gate Premium; 1 mmol/100 ml) was inadequate because of renal losses owing to tubular immaturity. Supplements of sodium (3-5 and sometimes as much as 9 mmol/kg per 24 hours) were required to prevent hyponatraemia until the infant was about 34 weeks' corrected age.

Continuous NJ feeding did offer an advantage over intermittent nasogastric feeding in the mean time (± SD) spent by nursing staff in feeding-related activities (NJ 19-7 ± 5-8; nasogastric 95-7 ± 25 minutes a baby per 24 hours; P<0.001). It was a fairly safe technique using the commercially available preweighted silicone rubber tube, and made small demands on financial resources and nursing time.

References

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Dr Dryburgh comments:

It was interesting to learn about the experiences with transpyloric feeding in Sheffield. I agree that the Vygon silicone rubber tube (weighted at the tip with 1 cm of stainless steel) is not suitable for babies below 750 g...
Intractable diarrhoea of infancy and latent otomastoiditis

Sir,

Dr Dodge’s commentary has encouraged me to report my own experience in the same field as Salazar de Sousa et al. The connection between intractable diarrhoea and latent otitis media is well known here also. In the 1930s several articles were published about it in Hungary.

After treatment using fluid and electrolytes had been introduced, we found that an infant failed to recover after rehydration therapy latent otitis media should be considered. However, an immediate operation resulted in rapid improvement in the patients.

After the second world war latent otomastoiditis with diarrhoea was common. At that time our patients were dystrophic and their general condition was poor as a result of lack of appropriate infant food, unsatisfactory factory hygiene, and the experience of parents. This also accounted for the fact that the late mortality rate in infants was 10 times higher than it is now. Salazar de Sousa et al. mentioned that their patients also suffered from malnutrition.

For 15–20 years, no such patient has presented and thus latent otitis media has almost disappeared. However, it should not be forgotten, and we are grateful that our attention has been drawn to this problem.

References


Sir,

It is well known that latent otomastoiditis is one cause of failure to thrive, and so too, although less often, is it a cause of diarrhoea. Its disappearance from paediatric literature was only temporary. Referring to the paper by Salazar de Sousa et al. we wish to draw attention to the following aspect of otitis and diarrhoea.

In Peru malnutrition is common in infants and children and all necropsies on children who had suffered from severe malnutrition showed latent otomastoiditis. A number of infants in hospital with severe malnutrition was carefully examined; about two-thirds also had diarrhoea, partly meeting the criteria of intractable diarrhoea. No normal antrostomy x-ray film was found in the entire group, and all leucocyte counts were normal. Antrotomy was performed on a few patients and the remainder were treated for malnutrition only, firstly by parenteral and, later, by oral refeeding. This resulted in recovery from both otitis and diarrhoea, and consequently we feel that diarrhoea and otomastoiditis can be two unrelated sequelae of a single cause—malnutrition. As Salazar de Sousa et al. gave no precise details of the nutritional status in his patients, malnutrition before the onset of severe diarrhoea seems possible. However, leucocytosis in these cases could suggest a different pathogenesis.

Reference


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Professor Salazar de Sousa comments:

I agree that failure to thrive (without diarrhoea) may be associated with latent otomastoiditis. Recently we had a patient in whom antrotomy showed an ear infection and was followed by rapid weight gain.

The necropsy findings in severely malnourished Peruvian infants are not surprising, since they are similar to the findings of Parrot. The possibility of spontaneous healing of latent otomastoiditis was shown by Lévesque et al. by means of diagnostic and sequential needle aspirations of the antrum in infants who recovered without need of antrotomy. It must be admitted that an unknown, but high proportion of infants suffering from malnutrition, diarrhoea, and latent otomastoiditis may recover only with medical treatment. However, other patients did not tolerate ear infection so well and they present a remarkable resistance to treatment; their recovery is dependent on antrum surgery. Our present experience with such infants is confined to 16 cases, 13 of whom were submitted to antrotomy. In each of the 11 survivors the response to surgery was the same: clearing of diarrhoea within 4 days, disappearance of fever (when present) the following day, and rapid weight gain. In these cases clinical improvement is unlikely to have been