and the problems were not shown to have clinical importance. The investigators rehydrated the children using an intragastric drip.

We successfully treated a large number of children from 2 months of age upwards with the solution recommended by the WHO. We normally give the solution as a drink, when the children's thirst controls the amount they take in, and we have found no problems with salt overload. Only in the relatively few children given the solution by intragastric drip for specific reasons (most commonly stomatitis, prostration, or excessive vomiting), have we sometimes encountered periorbital oedema among the children a few months old, but this did not appear to influence recovery.

We agree with the generally accepted practice that the oral solution should normally be given as a drink. This is not only pleasanter for the child, but it is the only method suitable for mass use in developing countries, where shortages of trained staff and equipment will generally be much greater than in the conditions of the study in the Calcutta Medical College Hospitals. This method also allows for the close collaboration of the mother in her child's treatment with its potential for health education; and evidently it may be safer.

The common problem in poor conditions with inexperienced mothers and lack of staff is not overhydration but that the child will be given insufficient fluid. In these conditions the solution of higher sodium content is more practical since the volumes needed are less. Additional free water is neither necessary nor recommended. In Mozambique the national policy (Melamed and Segall, 1978) is to use the solution recommended by the WHO.

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Dr Chatterjee and co-workers comment:

We thank Dr Vinhas *et al.* for some very pertinent comments on our paper on oral rehydration in infantile diarrhoea. They treated a group of children with diarrhoea with the oral solution recommended by the WHO and did not have any significant problems of salt overload. Furthermore, they administered the fluid as a drink, except in a few cases where a nasogastric tube was used. We preferred the use of a nasogastric tube for the following reasons: (1) we studied only those children with moderate and severe dehydration; they were very sick and were not well enough to drink, and rapid rehydration was mandatory; (2) as this was a controlled clinical trial, use of a nasogastric tube was preferred to reduce the variability in fluid administration, and (3) aspiration of

stomach before administration of fluid, particularly in infants who received loads of antidiarrhoeal medicines before admission, reduces the chance of vomiting. Vomiting is also less likely if the child sleeps while receiving the fluid through a nasogastric tube and is not disturbed to take the drink. We agree that for mass use, if rehydration can be started early, fluid given as a drink is the method of choice and the use of a nasogastric tube should be limited to severely dehydrated infants in cases where quick rehydration is necessary.

The question of salt overload needs a detailed analysis. Although Dr Vinhas *et al.* did not mention the severity of the dehydration, we assume that most of the children had milder dehydration as they were well enough to drink. Even so, while attempting adequate hydration in a few of the severe cases through a nasogastric tube with the solution recommended by the WHO, periorbital oedema occurred in some of them. According to Dr Vinhas, in children receiving the oral fluids by mouth, amelioration of thirst limits the intake. In our experience, however, this is not always so and on many occasions the children continued to drink excessive amounts and developed periorbital oedema. It is pertinent to mention that the estimated episodes of diarrhoea in Asia, Africa, and Latin America in 1975 is 348.2 millions in children aged under 2 years (Rohde and Northrup, 1976). Therefore, if hypernatraemia occurs even in one in a thousand, it will lead to a problem of salt overload in an enormous number of children. We strongly feel that a recommended oral fluid for mass use in the field where supervision is inadequate, should have a higher margin of safety and that the low sodium solution being equally effective should serve this purpose.

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Prophylactic diazepam in febrile convulsions

Sir,

We read with interest the paper by Knudsen and Vestermark (*Archives*, 1978, 53, 660) shedding some new light on an old controversy about preventing febrile convulsions (FC). The authors stated that: (1) continuous treatment with phenobarbitone had no advantage over intermittent diazepam; (2) the administration of diazepam was not optimal, so that 80% of children received it too late; (3) diazepam is safe, quickly absorbed, free from undesirable side effects, and, unlike phenobarbitone, is subject to little parental resistance; (4) diazepam may be an alternative prophylaxis of FC, but further controlled investigations are needed.

We performed such an investigation in 1973-75 and checked the results in 1977 (follow-up 18-52 months).

We suggested that parents, after the first FC, should give diazepam (0.6–0.8 mg/kg per 24 hours orally, in 3 doses) at the first sign of illness continuing to the 2nd day after complete recovery. In 1977 we interviewed the parents of 101 children recalled for control and checked all records of readmissions for a new FC or other illness. Of these, 90 had had febrile episodes after the first FC and met the criteria for intermittent prophylaxis: 48 received diazepam by the method and in the doses suggested, 42 did not. The FC recurrence rate in the 'bad compliance' group was 48%, in the 'good compliance' group it was 4% (Dianese and Faccioli, 1979).

The conditions for an effective intermittent prophylaxis of FC with diazepam must be to give the drug in sufficient dosage and to give it in time. Is this feasible? We asked each mother of 100 children (aged between 6 months and 6 years; 45 boys and 55 girls) if she was able to realise that her child was unwell at least 6 hours before the actual fever occurred. In 86% of cases the mother said she was. The symptoms are often trivial, personal, and not 'scientific' in nature, but they are useful in giving to the mother the signal for starting the administration of diazepam. After this preliminary study our policy is now (1) immediate administration of diazepam in clearly stated doses (0.6–0.8 mg/kg per 24 hours in 3 doses) at the first sign of impending illness, continuing for 2–3 days after complete recovery (this regimen is maintained until age 5 years); (2) instruction of all who are concerned with the child, and ensuring the constant availability of the drug. Is this too heavy a commitment for the parents? We do not think so. We are now finding that parents are increasingly willing to comply, provided that the doctors spend sufficient time explaining the aim and benefits of this policy and reassuring them about the safety of the drug, as even unnecessary administration of it for a few days is better than a new FC. Further and more controlled studies are needed. The continuous and adequate treatment of epilepsy precipitated by fever is, of course, mandatory.

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Orojejunal feeding in low birthweight infants

Sir,

In transpyloric feeding of neonates the use of a silastic catheter by the technique first described by Rhea *et al.* (1973), and recently improved by Della Pietra *et al.* (1978), avoids the risks due to stiffness of the tube but it has the disadvantage that it often takes a long time to pass the catheter into position. We describe a modification to this technique which allows the tube to be positioned in the jejunum more quickly. We insert the catheter

through the mouth, but the nasal route may be used equally well.

Materials. (1) A silicone rubber tube 0.63 mm inner diameter, 1.19 mm outer diameter (Silastic Dow Corning), is cut at 55 cm and its end inserted in to (2) a stainless steel plug 7 mm in length, 3 mm outer diameter, with a central canal 0.8 mm in diameter. (3) A small silastic collar is inserted around the neck of the plug to prevent the silastic tube being disconnected from the plug. (4) A PVC tube (K31 Pharmaseal) and (5) a 0.5 mm rigid nylon thread are cut to lengths of 28 cm. Their diameters are such that the silastic tube can be inserted loosely into the PVC tube and also entered easily by the nylon thread. Tubes (1) and (4) are lubricated with vaseline.

Procedure. The silicone tube (with its nylon thread) and the PVC tube are passed through the mouth and oesophagus into the stomach. With the patient now in a horizontal position and on his right side, the tube is pushed some centimeters deeper and passes easily into the duodenum, as shown by the greenish colour and alkaline pH of the aspirated juice. Once the plug is placed in the duodenum, the PVC external tube is withdrawn gently 2–3 cm at a time while the silicone tube is left in place or lightly advanced. This manoeuvre is helped by the stiffness of the silicone tube with the rigid thread inside. Withdrawal of the PVC tube is continued until its distal end reaches the lower portion of the oesophagus. To avoid pushing the silastic tube too far into the jejunum, it should not be inserted more than two-thirds of the glabella-heel distance. After fixing the PVC tube to the side of the mouth the nylon thread is withdrawn and the silastic tube connected to the infusion apparatus. Radiological localisation of the plug is seldom needed.

We have used this technique to feed 48 premature infants with birthweights between 700 and 1500 g (mean 1083) and gestational ages between 25 and 34 weeks (mean 28), in conjunction with nasal CPAP. In each case the duodenum was easily entered, the procedure requiring 10 to 20 min. No perforation or intussusception occurred (Boros and Reynolds, 1974; Chen and Wong, 1974).

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