Management of gastroenteritis

SIR,—Professor Walker-Smith's recommendations on the dietary management of infantile gastroenteritis are commendably clear.[1] Unfortunately they do not correspond to the advice in the accompanying article by Jenkins and Ansari, which takes general practitioners to task for 'inappropriately' continuing milk feeds (this category contributed half of the inappropriate management total).[2] Before we chide primary care doctors for their deficiencies we should examine the consistency of our own advice. Official WHO guidance on diarrhoea management is to continue feeding in a breast fed baby, and for bottle fed infants to continue the usual formula every three hours (except during the three to six hour rehydration period),[3] yet paediatricians and major textbooks commonly advise the withdrawal of milk feeds and food for a temporary period.

It is, therefore, hardly surprising that general practitioners do not show a uniform approach. In addition, none of the three papers about gastroenteritis management in the same issue give clear guidance as to whether solid foods should be stopped. Jenkins and Ansari indicate that normal diet should be ceased for 24 hours, but say that this regimen is under debate. WHO advice is that 'food intake should *never* be restricted during or following diarrhoea'.[3]

It is time that our own guidance is brought in line with that adopted in developing countries, and we recommend continued milk and solid feeding in the outpatient management of gastroenteritis.

TONY WATERSTON
Newcastle Health Authority, Community Health Service, Newcastle General Hospital, Westgate Road, Newcastle upon Tyne NE4 6BE

1 Walker-Smith JA. Management of infantile gastroenteritis. *Arch Dis Child* 1990;65:917–8.
2 Jenkins HR, Ansari BM. Management of gastroenteritis. *Arch Dis Child* 1990;65:939–41.
3 World Health Organisation. *Programme for the control of diarrhoeal diseases. A manual for the treatment of diarrhoea.* Geneva: WHO, 1990.

Professor Walker-Smith comments:
It is certainly difficult for general practitioners to have a uniform approach when there is at present no general agreement among paediatricians concerning dietary management of gastroenteritis in infancy. Dr Waterston cites WHO advice that has been aimed at developing communities. In such communities nutritional status is often already seriously compromised whereas in developed communities it is usually not. Furthermore gastroenteritis is usually less severe in the latter. While there is general agreement that breast feeding should continue in infants who develop gastroenteritis with additional oral rehydration therapy as appropriate, there is no such general agreement about bottle feeding. There is, for example, no satisfactory published study from the UK comparing the regimen of 24 hours oral rehydration solution alone and no feeding to a regimen where bottle feeding is continued unrestricted. Whereas there are studies to show that after such a 24 hour period there is no advantage for regrading rather than returning to full strength feeds. Until such a study is published most paediatricians would agree with Jenkins and Ansari, that in this country the normal diet should cease for 24 hours. They are correct to say that this regimen is under debate.

Drs Jenkins and Ansari comment:
We thank Dr Waterston for highlighting an important area that needs clarification. We would wish to remind him that, at the time we carried out our study, the recommendations regarding the dietary management of gastroenteritis in the UK were clear and unequivocal and were published by Professor Walker-Smith and his colleagues.[1] However, as we clearly stated in our paper, the guidelines may well require updating in the light of further experience. We fully endorse the WHO guidelines (1990) for the developing world where cessation of feeding may mean the difference between life and death, although these guidelines are not necessarily appropriate for the developed world where the disease is relatively mild. Until clear evidence is available from controlled studies that similar guidelines are to be recommended for the UK we will continue our present practice of providing oral rehydration solution and stopping milk feeds and solids for a period of time (6–24 hours) after which full strength feeds and solids may be restarted.

1 Wharton BA, Pugh RE, Taitz LS, Walker-Smith JA, Booth IW. Dietary management of gastroenteritis in Britain. *BMJ* 1988;296:450–2.

Drs Mandal and Dunbar comment:
Dr Waterston has taken us to task for our failure to give clear guidance to general practitioners on whether solid foods should be stopped temporarily during the initial phase of gastroenteritis management. However, our paper was not about the general aspect of management of gastroenteritis. We were looking at a very specific issue—that is, whether the currently widely given advice on graded reintroduction of an infant's usual feeds are necessary for children below the age of 6 months. Thus our study was specifically designed to establish whether there is any advantage in such regrading, with particular reference to recurrence of diarrhoea, effect on weight, and duration of hospital stay. We did not find any advantage in the traditional approach of regrading patients below the age of 6 months with gastroenteritis. We also found that children with lactose intolerance can be satisfactorily managed with a lactose free soy based preparation. Professor Walker-Smith has expressed reservation about this approach because of the risk of soy protein allergy but the incidence of soy intolerance has been no more than 1% or so in our unit despite its use over many years.

We do not accept that there has been any confusion over the advice given to British doctors over the general management of gastroenteritis. The recommendations on the dietary management of gastroenteritis have always included withdrawal of the infant's usual formula feeds and solids and their replacement with an oral rehydration solution for 24 hours after which the feeds should be reintroduced. In developing countries where multiple attacks of gastroenteritis are common, often leading to malnutrition, continued milk and solid feeding has been practised with no apparent ill effects, but as in the case of what is the most appropriate sodium concentration and carbohydrate content for the use in developed countries, this also needs to be examined in properly designed studies before there is uncritical adoption of continued milk and solid feeding approach in the management of gastoenteritis in Great Britain.

Helicobacter pylori

SIR,—The regular review on *Helicobacter pylori* makes interesting reading.[1] However the treatment recommended for duodenal ulcer disease is confusing. Colloidal bismuth subcitrate is no longer recommended in either the *British National Formulary* (September 1990) or the manufacturer's data sheet for use in children.

A N CAMPBELL
Royal Preston Hospital, PO Box 66, Sharoe Green Lane, Preston PR2 4HT

1 Drumm B. Helicobacter pylori. *Arch Dis Child* 1990;65:1278–82.

Professor Drumm comments:
Dr Campbell's letter highlights a major area of confusion in relation to the treatment of gastritis and duodenal ulcer disease using bismuth containing compounds. It is true that the *British National Formulary* and the manufacturer's data sheet do not recommend colloidal bismuth subcitrate for use in children. The formulary requires that pharmacokinetic data for children must be available if the drug is to be recommended for use in this age group. This information is not available.

There is, however, no evidence that bismuth subcitrate has adverse effects in children other than those already described in adults. These include encephalopathy, which is reversible after withdrawal of the drug, and acute renal impairment after ingestion of an overdose of this drug.[1 2]

Colloidal bismuth subcitrate is certainly not contraindicated in children. A more significant risk during the treatment of *Helicobacter pylori* gastritis may be the development of pseudomembranous colitis as a result of the use of an antibiotic in the treatment regime. We, and others, as noted in the review, have used bismuth preparations in children. Adverse reactions to bismuth used in the treatment of *H pylori* associated gastritis have not been reported in the studies published to date.

1 Hudson M, Ashley N, Mowat G. Reversible toxicity in poisoning with colloidal bismuth subcitrate. *BMJ* 1989;299:159.
2 Taylor EG, Klenerman P. Acute renal failure after colloidal bismuth subcitrate overdose. *Lancet* 1990;335:670–1.

A clinical trial of two parenteral nutrition solutions in neonates

SIR,—Professor McIntosh and Dr Mitchell, while hypothesising that the use of Vamin 9 for parenterally fed preterm infants may have contributed to death through high plasma concentrations of aromatic amino acids,[1] have