Oral immunoglobulins for rotavirus gastroenteritis

Rotavirus infection causes some 900,000 deaths throughout the world each year and in the United States alone it is responsible for about one million cases of severe infantile diarrhoea and 150 deaths. Doctors in Italy have recently reported a prospective, placebo controlled, double blind trial of oral immunoglobulin in acute gastroenteritis (Alfredo Guarino and colleagues, Pediatrics 1994; 93: 12–6).

Ninety eight children aged between 2 and 36 months (mean 15 months) admitted to hospital in Naples were randomly assigned to receive either immunoglobulin (Sandoglobulin) 300 mg/kg body weight or 5% glucose by mouth. Three were excluded from the trial because they vomited back the fluid given. Of the remaining 95 children, 71 had rotavirus in their stools, 10 salmonella, and 14 no detected pathogens. In rotavirus gastroenteritis there was a highly significant reduction (p<0.0001) in both duration of diarrhoea (76 v 131 hours) and duration of excretion of virus (113 v 179 hours) in the immunoglobulin treated group. Length of hospital stay was reduced from six to four days (p<0.01). The immunoglobulin preparation used has specific neutralising activity against all four rotavirus strains tested. There was no significant benefit from immunoglobulin in salmonella enteritis or in those where no pathogens were found.

The only serious disadvantage of this treatment seems to be its cost (US$200 to treat a baby of 10 kg). Presumably this will restrict its use in those parts of the world where it might be most beneficial.