

Results and conclusion

A total of 5368 donors were screened. Fourteen of these (one in 383) had >10 IU/cm³, the minimum level required by the Scottish Blood Transfusion Service, and 11 (one in 488) had >15 IU/cm³, the level currently required by the Blood Products Laboratory for production of immunoglobulin. Our results were independently confirmed by the Blood Products Laboratory.

The method provides an easy, rapid, and economic way of screening large numbers of donors to find those with antibodies to HBsAg. These donors could then be further considered for possible plasmapheresis, with or without boosting of the antibody by hepatitis B vaccine. The method also provides a ready means, both of screening medical and other staff who may have been exposed to

hepatitis B virus before vaccination and of monitoring the progress of any vaccination undertaken.

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Letters to the Editor

Clostridium difficile and *Clostridium perfringens* in upper gut of infants with protracted diarrhoea

Although the role of *Clostridium difficile* in the pathogenesis of colitis is well established,¹ a possible role for *C difficile* in the pathogenesis of chronic diarrhoea in children without colonic disease has been suggested.² On the other hand, the presence of *C difficile* in the small bowel has only once been reported in an elderly person with chronic diarrhoea.³ We report here the presence of *C difficile* in the upper gut of infants with chronic diarrhoea, which suggests that the organism has a potential pathogenic role in this part of the gastrointestinal tract.

We examined two groups of children to try to identify a role, if any, for clostridia in the upper gut of children: group 1 comprised 19 patients (mean age 19 months, range two to 48 months) presenting with protracted diarrhoea—that is, longer than two weeks—with no obvious cause at time of sampling; and group 2 comprised 10 control children (patients with coeliac disease in full clinical remission while taking a gluten free diet, mean age 39 months, range 18 to 59 months).

In all cases duodenal juice was collected under sterile conditions between the second and fourth part of the duodenum. Serial 10 fold dilutions of samples of duodenal juice were performed in an anaerobic cabinet and bacteriological cultures seeded on to both selective and non-selective media.

No clostridia were detected in any of the 10 controls, but they were found in six of the 19 patients with chronic diarrhoea: in four cases *Clostridium difficile*, in one case *Clostridium perfringens*, and in one case both, with a bacterial count ranging between 10² and 10⁶ colony forming units/ml. Only one of the six patients had received treatment with antibiotics in the preceding two months.

Four patients had an eventual diagnosis of a definite gastrointestinal disease; interestingly, the remaining two were the only ones of the 19 patients who merely presented with the so called "postgastroenteritis diarrhoea."

To conclude, our findings, although needing further experimental evidence, suggest a potential pathogenic role for *C difficile* and *C perfringens* in the small bowel in children.

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Expression of interleukin 2 receptor on Hodgkin's and non-Hodgkin's lymphomas and macrophages

Interleukin 2, formerly termed T cell growth factor, is an important regulator in T cell activation. Until recently it was assumed that Interleukin 2 was produced by T lymphocytes and acted exclusively on cells of the same lineage. There are now numerous reports, however, describing the expression of the interleukin 2 receptor (Tac antigen) on leukaemic (hairy cell leukaemia)¹ and activated B lymphocytes.² Applying a sensitive immunoenzymatic staining procedure (alkaline phosphatase. antialkaline phosphatase staining) on frozen tissues and cytopreparations, our data fully support the relation of the Tac antigen to the B cell lineage. Moreover, almost all non-Hodgkin's lymphomas of low grade malignancy, including lymphocytic leukaemia of the B cell type, expressed the interleukin 2 receptor, whereas those of high grade malignancy did not.