Cutting point and side facing orifice of an 18 gauge 'No-Kor Admix' needle (magnified x12).


Cryptosporidiosis and acute leukaemia

Sir—Drs Foot, Oakhill, and Mott describe the difficulty in managing leukaemic children who have intestinal cryptosporidiosis as a complication.1 I would like to report a case of a child suffering from a severe immunological defect, whereby intractable cryptosporidiosis appeared to respond favourably to treatment with pooled bovine colostrum and a commercially available oral immunoglobulin preparation. I believe that such treatment may prove useful in the management of children with a variety of immunological deficits complicated by intestinal cryptosporidiosis.

Case report

A white boy, aged 3-3 years, presented with a two year history of poor weight gain and persistent diarrhoea. He was passing watery stools up to 15 times daily, vomiting several times daily, and was anorectic. There was no previous history of respiratory infections, nor family history of any immunological deficit or recurrent infections. On examination his weight was 9.18 kg (2 kg below the 3rd percentile) and height 87 cm (2 kg below the 3rd percentile). There was considerable back wasting and abdominal distension, but no organomegaly. On investigation his haemoglobin concentration was 99 g/l and leucocytes 11.8 x 10⁹/l with normal differential count; serum IgG concentration was 9.6 g/l and IgM 1.3 g/l. IgA concentrations in serum and duodenal and nasopharyngeal aspirates were undetectable. B cell responses to pokeweed mitogen were normal. Severe protein energy malnutrition had diminished responses to phytohaemagglutinins, Con A and OKT 3, which were compatible with a T cell function defect. His T4/T8 ratio was normal, as were complement concentrations, HIV screen, and natural killer assay. A normal thymic shadow was present on chest radiography. A duodenal biopsy specimen showed normal villus architecture, but infiltration with extensive intracellular and intra-luminal cryptosporidia; he was also noted to have severe oesophageal candidiasis. A cervical lymph node biopsy specimen showed normal architecture with reactive hyperplasia. Numerous oocysts of cryptosporidia were recovered from stools.

He was treated with oral spiramycin and nystatin but remained unwell with severe diarrhoea. After two weeks of treatment with spiramycin and nystatin and also pooled bovine colostrum 100 ml three times a day in the form of a milk shake. The colostrum was obtained within 12 hours of calving and was pasteurised at 57°C for 10 minutes before being deep frozen in one litre aliquots. Each donation was tested for leucocyte concentration and coliform count. Within two weeks there was a noticeable improvement. The vomiting ceased and stool frequency diminished to once daily. He also started to gain weight. He remained well for seven months receiving colosrtum treatment alone. During this time cryptosporidiosis of the faeces were recovered from the stools on one occasion only, testing being performed weekly, on average. At six months logistical problems with the supply of colostrum set in, and therefore he was started on a preparation of active immunoglobulins, commercially available for use as animal feed. This preparation is promoted for the prevention of diarrhoeal diseases, including cryptosporidiosis in neonate farm animals. Unfortunately, he received this for only four months, at which time he became increasingly reluctant to drink the


Marrow aspiration from small infants

Sir,—Obtaining adequate marrow aspirates from very small infants is complicated by the lack of a suitable small aspiration needle. The most cellular marrow is obtained from the posterior iliac crest and for this the infant can be securely held in the lumbar puncture position by a single assistant. Because of the small size of the newborn ilium, the recommended aspiration site for children under 1 year old is from the tibia,1 but in inexperienced hands this site may fail to yield an adequate sample. The standard paediatric Sallo needle is too large to enter easily the marrow space of the infant posterior iliac crest; its size and weight make it cumbersome when aspirating from the tibia. Short lumbar puncture needles are an alternative for aspirating from either site, but they lack rigidity and tend to become blocked by bone fragments.

I have recently found that Becton Dickenson 'No-Kor Admix' needles provide an ideal alternative. The needle (available in 18 and 16 gauge) is designed to penetrate the rubber bung when reconstituting vials of lyophilised pharmaceuticals. It has a scalpel point slightly wider than the rigid shaft, which allows easy penetration and prevents a core of rubber (or bone) from entering the side facing orifice.

The 18 gauge, 1.5" needle pictured allows reliable and easy aspiration of cellular marrow particles from the posterior iliac crest of the smallest infants.

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1 Arch Dis Child: first published as 10.1136/adc.65.7.813-a on 1 July 1990. Downloaded from http://adc.bmj.com/ on April 21, 2022 by guest. Protected by copyright.
immunoglobulin preparation. His weight remained static, and the diarrhoea increased in frequency to twice or three times daily. A biopsy specimen once more demonstrated infiltration with cryptosporidia, but no oocysts were detected in the stools. The immunoglobulin treatment was discontinued after four months, when total parental nutrition began. No adverse effects had been noted.

Bovine colostrum is a very rich source of immunoglobulins and contains 40 g/l of IgG1, which is the principal secretory immunoglobulin in cattle and it is resistant to proteinolysis and low pH. It also contains 4-0 g/l of IgA, whereas human colostrum contains only 3-6 g/l of IgA. The commercial immunoglobulin was diluted to a strength of 35 g/l of IgG1.

Tsipori et al reported a case of a child with congenital hypogammaglobulinaemia and cryptosporidiosis who responded to treatment with colostrum obtained from a cow that had been previously immunised with cryptosporidia antigens in order to produce a hyper-immune colostrum. I suggest that pooled colostrum from non-immunised cows may provide an equally effective, but far simpler and cheaper, method of controlling symptoms due to cryptosporidiosis in immunodeficient patients (P Heaton, paper given at 6th Asian Paediatric Congress, Tokyo, 1988). Immunoglobulin concentrates may also provide an effective, more convenient, and controlled method by which such enteral immunotherapy can be administered. Further study is warranted.

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Lask of the Hospital for Sick Children, Great Ormond Street, and Abe Fossom from the University of Kentucky have joined transatlantic (and transcutal) hands to put together a paperback which is by far the best guide to this labyrinth that I have come across. Plato would be approved.

No one should underestimate the complexity of dealing with child, family, school and society, organic illness, behavioural manifestations, and emotional disorder all rolled up into one child. This volume does a neat unravelling job of this byplay of concepts for those who undertake outpatient clinics.

Mind you, like many who get involved in psychiatry it clears its throat several times before venturing an opinion. Plato might have been a little impatient not only with two forewords but also a preface and a prologue not to mention an epilogue. Once into its stride, however, it deals at an exhilarating pace with definitions of psychiatric terms and the nature of symptoms as markers of stress and distress. Chapter 3 is a brief guide to a number of specific conditions with a major psychosomatic component and later there is a description of the networks which surround the sick child—introduced, incidentally, with a child psychiatric interpretation of Humpty Dumpty's traumatic event (did he fall or was he pushed?).

The second half deals with an integrative approach to treatment and introductions to methods of behavioural, family, and individual therapy.

It's written with a deft touch, engaging humour and—leaving aside the 'Stateide' preface—a singular lack of jargon. Apart from a rather weak and over simplified last chapter, which is a ported guide to medication, it is a winner. Not just for libraries as at a mere £11-95 (paperback) it is essential reading for every general practitioner trainee and paediatrician of whatever seniority, if only to remind them that—to paraphrase the authors' words—children talk with their bodies.

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Colour atlases, like the colour supplements of some weekend newspapers, can be so lavishly illustrated that the text is overlooked. In this case the real value would be underestimated. This new volume from Linda de Vries and her colleagues is not a text of neonatal neurology but a systematic presentation of the various imaging techniques accompanied by profuse clinical photographs.

The book is notable for the illustrations of magnetic resonance imaging (MRI) of the brain. After a brief introduction which covers clinical examination, electrophysiological measurements, and ultrasound scanning, there follow chapters detailing the principles of MRI. The importance of this book lies to some extent in the comparison that is made between the appearances on MRI and those of ultrasound and computed tomography. How useful this book will be depends to some extent on the availability of MRI and further work that defines the optimal timing as well as the benefits of this new technique.

The remainder of the book consists of over 50 case reports, which detail the clinical presentation, examination, and investigation of infants and young children with common, and some not so common, disorders that are the concern of all who look after the newborn. As the authors emphasise no single investigation is sufficient after four months, when total parental nutrition began. No adverse effects had been noted.

The authors quote Plato (320BC)—"this is the greatest error of our day, that physicians separate the mind from the body'. It's a pretty universal error 2300 years later and Bryan

BOOK REVIEWS


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