of a powdered-milk-based formula will abolish symptoms in lactulose-induced diarrhoea.

The manufacturers' data sheets on Baby Milk Plus and Premium do not mention the presence of lactulose in these feeds. Our experience indicates the need to make good this omission and mention the possible effects of lactulose in infants recovering from gastroenteritis.

¹ Bircher, J, *et al*, *Lancet*, 1966, **1**, 890.

² *Martindale's Extra Pharmacopoeia*, 26th ed, p 1629. London, Pharmaceutical Press, 1972.

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Successful treatment of apparent eosinophilic leukaemia

Apparent eosinophilic leukaemia is a life-threatening manifestation of the hyper-eosinophilic syndrome,¹ characterised by extreme debility, fever, bone pain, blood eosinophilia of leukaemic proportions, splenomegaly, and cardiac disease. Complete recovery with sustained remission after treatment has been described briefly once before.¹ We report another such case.

Case report

A 45-year-old Scottish lorry driver who had never travelled abroad was admitted to hospital with one month's general malaise, night sweats, and increasingly severe skeletal pain. He dated his illness to receipt of tetanus toxoid and intramuscular penicillin after soft-tissue injury to his left hand. He was ill, had a fever of 38°C, and unguis splinter haemorrhages. A small left supraclavicular node, slight splenic enlargement, and percussable tenderness over the upper arms, thighs, thoracic spine, and ribs were evident. Jugular venous pressure was raised; a precordial pansystolic murmur was heard.

The results of investigations included: haemoglobin 10.8 g/dl; white cell count $198 \times 10^9/l$ ($198\,000/mm^3$); differential count: 72% mature eosinophils, 10% eosinophil metamyelocytes, 4% eosinophil myelocytes, 3% basophils, 5% neutrophils, 2% monocytes, 4% lymphocytes; platelets $132 \times 10^9/l$ ($132\,000/mm^3$). Marrow examination showed normoblastic haematopoiesis with greatly increased myeloid:erythroid ratio, reflecting a preponderance of eosinophils at all stages of development although promyelocytes and blasts were not unduly prominent, accounting for 2.7% and 1.3% respectively of 300 consecutive myeloid cells counted. Chest x-ray picture and concentrations of serum electrolytes, proteins, urate, aspartate aminotransferase, alkaline and acid phosphatases were normal. The electrocardiogram (ECG) showed S-T depression in lateral chest leads with widespread T wave inversion. The Wassermann reaction was negative, blood cultures sterile, and no faecal ova, cysts, or parasites were found.

A diagnosis of eosinophilic leukaemia was entertained and treatment with prednisolone and busulphan begun. The haematological response to treatment and its discontinuation is depicted in the figure. At first progress was slow, with cardiological deterioration—jugular venous pressure increased, a diastolic murmur developed, and ECG T-wave inversion deepened. Within six weeks considerable improvement was evident; by three months he had returned to work. The diastolic murmur disappeared and the ECG returned to normal, but the spleen remained palpable for over a year and the eosinophil count did not revert to normal until 28 months after the beginning of the illness—a year after discontinuing prednisolone. He has remained off treatment, symptom- and sign-free for four years, with normal

Successful treatment of patient with apparent eosinophilic leukaemia with prednisolone and busulphan. Conversion: SI to traditional units—Leucocytes $1.0 \times 10^9/l = 1000/mm^3$.

haematological values for three years. At recent review peripheral blood and marrow aspirate were morphologically and cytogenetically normal with chest x-ray pictures, electrocardiograms, and echocardiograms unremarkable.

Discussion

Ever since Stillman's description² of eosinophilic leukaemia in 1912 the existence of such a diagnosis has been disputed because of difficulty in distinguishing between a truly neoplastic process and the malignant consequences of tissue infiltration and damage associated with eosinophilic leukaemoid reactions.³ In the light of such controversy two aspects of our case merit attention—the patient's dating his illness to administration of tetanus toxoid and penicillin and the haematological response on and off treatment. Treatment presumably arrested and reversed the leukaemoid reaction and prevented heart failure, the usual mode of death in this syndrome. Treatment was discontinued, however, while eosinophilia persisted, but over the next year the eosinophil count fell spontaneously and remained normal three years later. Such findings would seem to favour the concept that the syndrome of apparent eosinophilic leukaemia is an unusual manifestation of hypersensitivity, which may, if promptly treated, as in this instance, be arrested and cured. We suggest that use of the dismal and emotive word leukaemia for this syndrome is misplaced and should be reserved for those rare instances of demonstrable blast-cell transformation.

We thank Dr David Short for referring this patient to us and for his continuing interest.

¹ Chusid, M J, *et al*, *Medicine (Baltimore)*, 1975, **54**, 1.

² Stillman, R G, *Medical Record*, 1912, **81**, 594.

³ Yam, L T, *et al*, *American Journal of Medicine*, 1972, **53**, 193.

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