- 5 Chopra S, Edelstein A, Koff RS, Zimelman AP, Lacson A, Neiman RS. Peliosis hepatis in hematologic disease: report of two cases. *JAMA* 1978; **240**: 1153-5.
- 6 Lacson A, Berman LD, Neiman RS. Peliosis of the spleen. *Am J Clin Pathol* 1979; **71**: 586-90.
- 7 Parsons MA, Slater D, Platts M, Fox M. Splenic peliosis associated with rupture in a renal transplant patient. *Postgrad Med J* 1980; **56**: 796-7.
- 8 Ichijima K, Kobashi Y, Yamabe H, Fujii Y, Inoue Y. Peliosis hepatis: an unusual case involving multiple organs. *Acta Pathol Jpn* 1980; **30**: 109-20.
- 9 Warfel KA, Ellis GH. Peliosis of the spleen: report of a case and review of the literature. *Arch Pathol Lab Med* 1982; **106**: 99-100.
- 10 Garcia RL, Khan MK, Berlin RB. Peliosis of the spleen with rupture. *Hum Pathol* 1982; **13**: 177-9.
- 11 Asano S, Wakasa H, Kaise S, Nishimaki T, Kasukawa R. Peliosis hepatis: report of two autopsy cases with a review of literature. *Acta Pathol Jpn* 1982; **32**: 861-77.
- 12 Diebold J, Audouin J. Peliosis of the spleen: report of a case associated with chronic myelomonocytic leukaemia, presenting with spontaneous splenic rupture. *Am J Surg Pathol* 1983; **7**: 197-204.
- 13 Tada T, Wakabayashi T, Kishimoto H. Peliosis of the spleen. *Am J Clin Pathol* 1983; **79**: 708-13.
- 14 Dejgaard A, Krosgaard K, Jacobsen M. Veno-occlusive disease and peliosis of the liver after thorotrast administration. *Virchows Arch* 1984; **40**: 87-94.
- 15 Bleiweiss IJ, Thung SN, Goodman JD. Peliosis of the spleen in a patient with cirrhosis of the liver. *Arch Pathol Lab Med* 1986; **110**: 669-71.
- 16 Czapar CA, Weldon-Linne CM, Moore DM, Rhone DP. Peliosis hepatis in the acquired immunodeficiency syndrome. *Arch Pathol Lab Med* 1986; **110**: 611-3.
- 17 Diebold J, Audouin J. Association of splenoma, peliosis and lipid histiocytosis in spleen or accessory spleen removed in 2 patients with chronic idiopathic thrombocytopenia purpura after long term treatment with steroids. *Pathol Res Pract* 1988; **183**: 446-52.
- 18 Kubosawa H, Konno A, Komatsu T, Ishige H, Kondo Y. Peliosis hepatis: an usual case involving the spleen and the lymph nodes. *Acta Pathol Jpn* 1989; **39**: 212-5.
- 19 Cochran LB, Freson M. Peliosis of the spleen. *Gastrointest Radiol* 1991; **16**: 83-4.
- 20 Gabor S, Back F, Csiffary D. Peliosis lienis: uncommon cause of rupture of the spleen. *Pathol Res Pract* 1992; **188**: 380-2.
- 21 Engel P, Tjalve E, Horn T. Peliosis of the spleen associated with a paraganglioma. *Acta Radiol* 1993; **34**: 148-9.
- 22 Kohr RM, Haendiges M, Taube RR. Peliosis of the spleen: a rare cause of spontaneous splenic rupture with surgical implications. *Am Surg* 1993; **59**: 197-9.
- 23 Tsuda K, Nakamura H, Murakami T, et al. Peliosis of the spleen with intraperitoneal hemorrhage. *Abdom Imaging* 1993; **18**: 283-5.
- 24 Castelli MJ, Armin AR, Orfei E. Parathyroid peliosis: report of a case and review of the literature. *Pediatr Pathol* 1986; **6**: 127-30.
- 25 Lie JT. Pulmonary peliosis. *Arch Pathol Lab Med* 1985; **109**: 878-9.
- 26 Slater LN, Weelch DF, Min KW. Rochalimea henselae causes bacillary angiomatosis and peliosis hepatis. *Arch Intern Med* 1992; **152**: 602-6.
- 27 Degott C, Rueff B, Kreis H, Duboust A, Potet F, Benhamou JP. Peliosis hepatis in recipients of renal transplants. *Gut* 1978; **19**: 748-53.
- 28 Ganong WF. Other endocrine organs. In: *Review of medical physiology*, 16th edn. USA: Appleton & Lange, 1993; pp 418-9.
- 29 Eschbach JW, Aquiling T, Haley NR, Fan MH, Blagg CR. The long-term effects of recombinant human erythropoietin on the cardiovascular system. *Clin Nephrol* 1992; **38** (suppl): S98-103.
- 30 Trites AEW. Peliosis hepatis: report of a case. *Arch Pathol* 1957; **63**: 183-186.

Pellagra complicating Crohn's disease

Irshad Zaki, Leslie Millard

Summary

We report a 53-year-old patient with clinical features of pellagra as a complication of Crohn's disease. His symptoms improved rapidly on taking oral nicotinic acid and vitamin B complex. We suggest the paucity of reported cases of pellagra in Crohn's disease is a reflection of poor recognition of this complication.

Keywords: pellagra, Crohn's disease

Pellagra is derived from the Italian words 'pelle agra' meaning rough skin and was first described in 1735 by the Spanish physician Casal. The disease is a result of deficiency of nicotinamide or disturbance of other pathways of tryptophan metabolism. Pellagra was originally of epidemic proportions in areas where maize was the principal component of the diet. However, with appropriate food supplements, pellagra is now rarely seen in developed countries, but is still relatively common in poorer areas. Other causes include carcinoid syndrome, treatment with isoniazid and Hartnup disease.

Case report

A 53-year-old caucasian man presented with a two-month history of a pruritic photosensitive

Figure The patient at presentation with an erythematous rash worst on his nose, upper lip and chin. Fine surface wrinkling and superficial scaling is also visible.

Department of
Dermatology,
University Hospital,
Queens Medical
Centre, Nottingham
NG7 2UH, UK
I Zaki
L Millard

Accepted 2 March 1995

rash affecting the face, forearms and neck. The affected areas were erythematous and well demarcated with fine surface wrinkling (figure). He had suffered for seven years with extensive radiologically proven Crohn's disease which had been controlled by medical treatment alone. His main symptom was of abdominal pain until the onset of the rash, when he subsequently also developed diarrhoea. In addition, he found his work as a postmaster difficult due to experiencing problems with simple mental arithmetic. Formal examination confirmed mild impairment of short-term memory and cognitive function.

He was extensively investigated and was found to be anaemic (haemoglobin 9.8 g/dl) with a normocytic normochromic picture. He also had a low serum ferritin of 14 µg/l (normal range 25–350 µg/l) but serum levels of albumin, calcium, B12 and folate were all normal. Renal and liver function tests were also normal and he did not have steatorrhea. A skin biopsy taken from the neck was unremarkable, showing a thin epidermis and non-specific inflammatory changes in the dermis. Skin scrapings for mycology were negative.

Our patient exhibited the classically described triad in pellagra of diarrhoea, dermatitis, and dementia.¹ He was prescribed oral nicotinic acid, an adequate diet and vitamin B complex which resulted in a resolution of his rash and diarrhoea within two weeks. His short-term memory also improved within three months of treatment.

Discussion

There have been infrequent reports of pellagra in Crohn's disease.²⁻⁴ Malabsorption and

Learning points

- pellagra is caused by a deficiency of niacin
- inadequate diet is the most common cause in developing countries, but it is also seen in chronic alcoholics and those with gastrointestinal disease
- rare causes include carcinoid syndrome, Hartnup disease, and isoniazid therapy
- the triad of dermatitis, diarrhoea, and dementia is classical of pellagra. The skin changes usually appear on areas exposed to sun, heat and pressure
- pellagra is rarely reported in patients with Crohn's disease. A high degree of clinical suspicion is required to establish the diagnosis

inadequate dietary intake have both been implicated,⁵ although other biochemical features of chronic malabsorption were not present in our patient. High-dose oral supplements are usually adequate but there are no studies specifically looking at the effect of Crohn's disease on the absorption and metabolism of nicotinamide. As the disease is rare in developed countries, the degree of clinical suspicion is likely to be low. The diagnosis of pellagra is usually established on clinical grounds and we suggest the paucity of reported cases does not reflect its true prevalence in patients with Crohn's disease. Greater awareness of this complication and direct questioning regarding skin problems is vital if the correct treatment is to be offered.

1 Fine RM, Rudman D. Pellagra. *Clin Dermatol* 1988; 2: 1–5.

2 Lucey MR. Recurrent pellagra in Crohn's disease. *Lancet* 1982; 2: 559.

3 Pollack S, Enat R, Haim S, Zinder O, Borzilai D. Pellagra as the presenting manifestation of Crohn's disease. *Gastroenterology* 1982; 82: 948–952.

4 Lifshitz AY, Stern F, Kaplan B, Sofer E, Sela BA, Schewach-Millet M. Pellagra complicating Crohn's disease. *J Am Acad Dermatol* 1992; 27: 620.

5 Silk DBA, Payne-James J. Inflammatory bowel disease: nutritional implications and treatment. *Proc Nutr Soc* 1989; 48: 355–61.