- 39 Roesler J, Thurigen A, Sun L, *et al*. Influence of CARD15 mutations on disease activity and response to therapy in 65 pediatric Crohn patients from Saxony, Germany. *J Pediatr Gastroenterol Nutr* 2005;**41**:27–32.
- 40 Newby EA, Sawczenko A, Thomas AG, *et al*. Interventions for growth failure in childhood Crohn's disease. *The Cochrane Database of Systematic Reviews* 2005, issue 3. Art No: CD003873. DOI:10.1002/14651858.CD003873.pub2.
- 41 Markowitz J, Grancher K, Rosa J, *et al*. Growth failure in pediatric inflammatory bowel disease. *J Pediatr Gastroenterol Nutr* 1993;**16**:373–80.
- 42 Motil KJ, Grand RJ, Davis-Kraft L, *et al*. Growth failure in children with inflammatory bowel disease: a prospective study. *Gastroenterology* 1993;**105**:681–91.
- 43 Trinh TT, Rioux JD. Understanding association and causality in the genetic studies of inflammatory bowel disease. *Gastroenterology* 2005;**129**:2106–10.
- 44 Newman B, Gu X, Wintle R, *et al*. A risk haplotype in the solute carrier family 22A4/22A5 gene cluster influences phenotypic expression of Crohn's disease. *Gastroenterology* 2005;**128**:260–9.
- 45 Kugathasan S, Judd RH, Hoffmann RG, *et al*. Epidemiologic and clinical characteristics of children with newly diagnosed inflammatory bowel disease in Wisconsin: a statewide population-based study. *J Pediatr* 2003;**143**:525–31.
- 46 Heyman MB, Kirschner BS, Gold BD, *et al*. Children with early-onset inflammatory bowel disease (IBD): analysis of a pediatric IBD consortium registry. *J Pediatr* 2005;**146**:35–40.
- 47 Onnie C, Fisher S, Hampe J, *et al*. Multiple SNPs at the IBD5 locus contribute to the risk of Crohn's disease. *Gut* 2005;**54**:361.
- 48 Waller S, Tremelling M, Bredin F, *et al*. Evidence for association of OCTN genes and IBD5 with ulcerative colitis [abstract]. *Gastroenterology* 2005;**128**:A447.
- 49 Klein W, Tromm A, Griga T, *et al*. Interleukin-4 and interleukin-4 receptor gene polymorphisms in inflammatory bowel diseases. *Genes Immun* 2001;**2**:287–9.
- 50 Aithal GP, Day CP, Leathart J, *et al*. Association of single nucleotide polymorphisms in the interleukin-4 gene and interleukin-4 receptor gene with Crohn's disease in a British population. *Genes Immun* 2001;**2**:44–7.
- 51 Karttunen R, Breese EJ, Walker-Smith JA, *et al*. Decreased mucosal interleukin-4 (IL-4) production in gut inflammation. *J Clin Pathol* 1994;**47**:1015–18.
- 52 Kadivar K, Ruchelli ED, Markowitz JE, *et al*. Intestinal interleukin-13 in pediatric inflammatory bowel disease patients. *Inflamm Bowel Dis* 2004;**10**:593–8.
- 53 Carvalho AT, Elia CC, de Souza HS *et al*. Immunohistochemical study of intestinal eosinophils in inflammatory bowel disease. *J Clin Gastroenterol* 2003;**36**:120–5.
- 54 Noguchi M, Hiwatashi N, Liu ZX, *et al*. Increased secretion of granulocyte-macrophage colony-stimulating factor in mucosal lesions of inflammatory bowel disease. *Digestion* 2001;**63**(suppl 1):32–6.
- 55 The Collaborative Study on the Genetics of Asthma. A genome-wide search for asthma susceptibility loci in ethnically diverse populations. *Nat Genet* 1997;**15**:389–92.
- 56 Xu J, Meyers DA, Ober C, *et al*. Genomewide screen and identification of gene-gene interactions for asthma-susceptibility loci in three US populations: collaborative study on the genetics of asthma. *Am J Hum Genet* 2001;**68**:1437–46.
- 57 Holloway JW, Lonjou C, Beghe B, *et al*. Linkage analysis of the 5q31–33 candidate region for asthma in 240 UK families. *Genes Immun* 2001;**2**:20–4.
- 58 Hizawa N, Freidhoff LR, Ehrlich E, *et al*. Genetic influences of chromosomes 5q31–q33 and 11q13 on specific IgE responsiveness to common inhaled allergens among African American families. Collaborative Study on the Genetics of Asthma (CSGA). *J Allergy Clin Immunol* 1998;**102**:449–53.
- 59 Randolph AG, Lange C, Silverman EK, *et al*. The IL12B gene is associated with asthma. *Am J Hum Genet* 2004;**75**:709–15.
- 60 Howard TD, Whittaker PA, Zaiman AL, *et al*. Identification and association of polymorphisms in the interleukin-13 gene with asthma and atopy in a Dutch population. *Am J Respir Cell Mol Biol* 2001;**25**:377–84.

EDITOR'S QUIZ: GI SNAPSHOT

An unusual cause of abdominal pain

Clinical presentation

A 39 year old man presented with right iliac fossa pain. He had a 10 year history of intermittent abdominal pain, diarrhoea, rectal bleeding, and orogenital ulceration. Previous colonoscopy was normal but biopsies showed an early indeterminate colitis. A barium follow through was suggestive of a terminal ileal stricture and a labelled white cell scan showed increased uptake in the right iliac fossa. A diagnosis of ileal Crohn's was made and he was started on intravenous steroids.

His symptoms settled and he was discharged on oral prednisolone and mesalazine. He subsequently had a colonoscopy which reached into the terminal ileum and looked normal. A week later, the pain recurred in spite of high dose oral steroids. His abdomen was soft with no signs of peritonism. Inflammatory markers were normal and stool cultures were negative. He had a plain abdominal radiograph (fig 1).

Question

What does the x ray show?

See page 1137 for answer

This case is submitted by:

M J Williams

Department of Gastroenterology, Lincoln County Hospital, Lincoln, UK

S Chippington

Department of Radiology, Derby City General Hospital, Derby, UK

J Lund

Department of Colorectal Surgery, Derby City General Hospital, Derby, UK

Figure 1 Abdominal radiograph.

A F Goddard

Department of Gastroenterology, Derby City General Hospital, Derby, UK

Correspondence to: Dr M J Williams, Department of Gastroenterology, Lincoln County Hospital, Greetwell Road, Lincoln LN2 5QY, UK; mike.williams@doctors.org.uk

doi: 10.1136/gut.2005.085993