

The small bowel has always been a weak spot in endoscopy, as it is completely inaccessible to viewing with conventional endoscopes and can only be partly viewed with push enteroscopy and retrograde ileoscopy. Smaller lesions are often missed on barium studies, leading to a need for intraoperative or laparoscopy-assisted panenteroscopy [1]. The advent of capsule endoscopy added another dimension to small-bowel evaluation [2,3]. We present here the first capsule endoscopy images of small-bowel tuberculosis, in a 23-year-old man with fever, weight loss (> 10 kg in 3 months), diarrhea persisting for 6 months, and an inconclusive work-up that included a complete blood picture, stool examination and culture, chest and abdominal radiography, ultrasonography, and barium studies. Upper endoscopy and push enteroscopy were normal. Colo-

noscopy showed a few scattered small ulcers in the sigmoid colon, while retrograde ileoscopy revealed deep mucosal ulcers typical of tuberculosis [4]. Multiple mucosal biopsies from the terminal ileum showed areas of necrosis, inflammatory cellular infiltrate with pale granulomas containing epithelioid cells and Langerhans giant cells against a background of caseating necrosis, diagnostic of tuberculosis. In view of the predominant symptom of diarrhea, capsule endoscopy was carried out to evaluate the extent of small-bowel involvement. There were multiple scattered short oblique or transverse mucosal ulcers with a necrotic base through out the jejunum and ileum (Figures 1A–D). Small-bowel involvement in tuberculosis and Crohn's disease are morphologically similar, and are often difficult to differentiate. The histological

features, such as larger granulomas lined with epithelioid cells against a background of caseous necrosis, with or without acid-fast bacilli, are considered diagnostic of tuberculosis [5]. Diarrhea in small-bowel tuberculosis can be due to extensive mucosal involvement per se, or may be due to intestinal stasis related to strictures and associated bacterial overgrowth. Capsule endoscopy in the present case excluded any strictures and demonstrated extensive mucosal involvement with tuberculosis, confirmed on ileoscopic biopsies.

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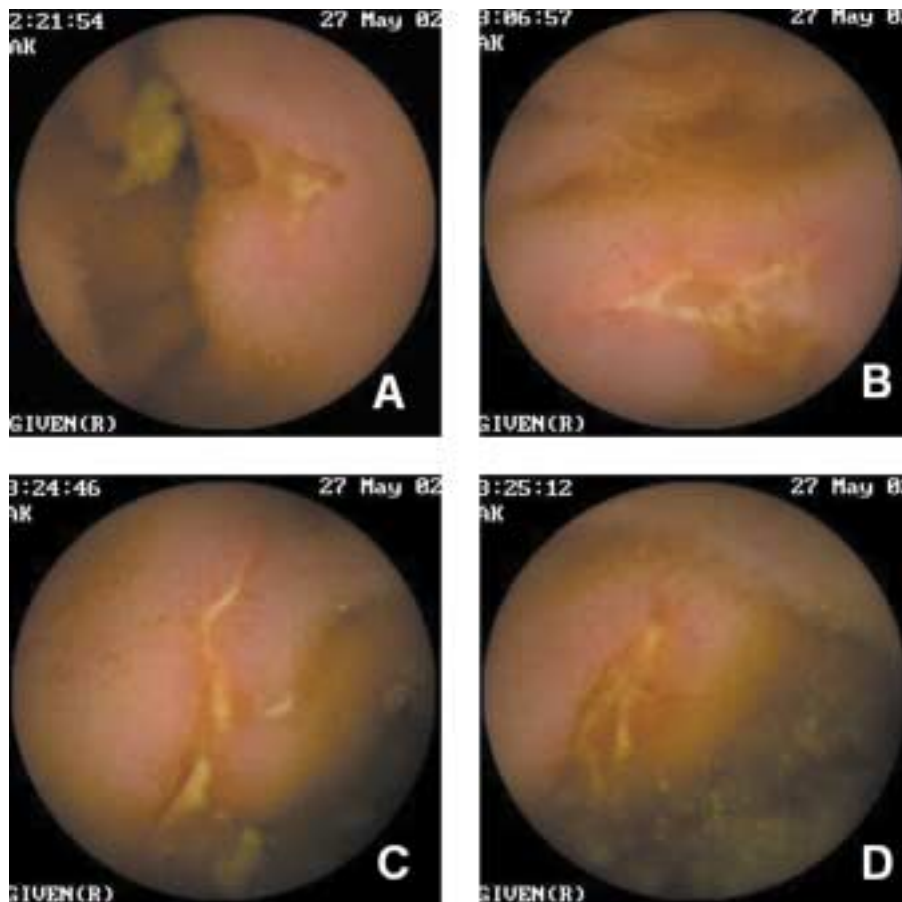


Figure 1 A–D M2A wireless capsule endoscopic images, showing mucosal ulcers with a necrotic base in the ileum.

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