Gastrointest Radiol 11:355–356 (1986)

Gastrointestinal Radiology

Primary Adenocarcinoma of the Terminal Ileum Simulating Crohn's Disease

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Abstract. An unusual case of histologically proven ileal adenocarcinoma mimicking regional enteritis in a 22-year-old man is reported. Although in 2 previous reports the patient's age was stressed as an important factor for the differential diagnosis, this was not of diagnostic help in our case. This report emphasizes the need to include other diagnostic possibilities when regional enteritis has an anomalous evolution and responds poorly to treatment.

Key words: Crohn's disease, diagnosis – Ileum, adenocarcinoma.

Primary ileal adenocarcinoma is uncommon. On the other hand, Crohn's disease seems to have become increasingly frequent in recent years, probably due to a real rise in incidence and a greater knowledge of the condition among physicians and radiologists. In fact, when a stricture is seen in the terminal ileum of a young patient, regional enteritis is frequently the first radiologic diagnosis, even though this finding may be caused by other diseases [1–3].

Case Report

A previously healthy 22-year-old white man was admitted with a 6-month history of recurrent crampy abdominal pain and weight loss. Physical examination showed tenderness in the right lower quadrant on palpation. The remainder of the examination, as well as laboratory results, was unremarkable.

Plain abdominal film showed no abnormalities. A barium enema showed a smooth filling defect in the cecum that was interpreted as an enlarged ileocecal valve (Fig. 3).

On gastrointestinal series, an 8–10 cm segment of irregular narrowing in the terminal ileum with thickening of the wall and a pseudodiverticular pouch in the upper intestinal border was found (Fig. 2). Based on radiologic findings, a presumptive diagnosis of Crohn's disease was made.

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A therapeutic trial with corticosteroids and sulfasalazine was instituted. Three months later there was no significant improvement in the patient's clinical status. A right lower quadrant abdominal mass appeared, accompanied by progressively deteriorating clinical condition. Abdominal surgery was performed because of the failure of medical treatment. A large tumoral mass arising from the terminal ileum and infiltrating the cecum, bladder, and pelvic retroperitoneum was found. The tumor was considered to be unresectable and a palliative ileocolic anastomosis was made.

Pathologic study of the biopsy specimen demonstrated a coloid adenocarcinoma (Fig. 1).

Discussion

Adenocarcinoma of the small bowel is a rare condition. It occurs 3–5 times more frequently in the jejunum than in the ileum [4–6]. The peak age of incidence is during the 5th–7th decades, with no significant difference in incidence between sexes [1, 4, 5]. The most common manifestations include intestinal obstruction, anemia, weight loss, and, occasionally, abdominal mass. Perforation with peritonitis or abscess formation is less frequently found [2, 4, 6, 7]. The average duration of the symptoms is 4–7 months.

Most intestinal carcinomas are infiltrative tumors and have a high tendency to circumferential spread through the intestinal wall. This spread causes a fibrotic reaction with narrowing of the intestinal lumen. The gastrointestinal series show an abrupt-edged annular stenosis with irregular mucosal pattern; long stenosis is uncommon. Less frequently, the tumor grows into the lumen as a polypoid lesion [6, 7].

Development of carcinoma in our young patient was unusual. Malignant disease of the terminal ileum, excluding lymphoma, is rare in this age group; inflammatory processes occur more frequently. Furthermore, the radiologic findings in our case suggested Crohn's disease. Smooth thickening of ileocecal valve is not an uncommon feature in regional enteritis, whereas ileal valve carci-

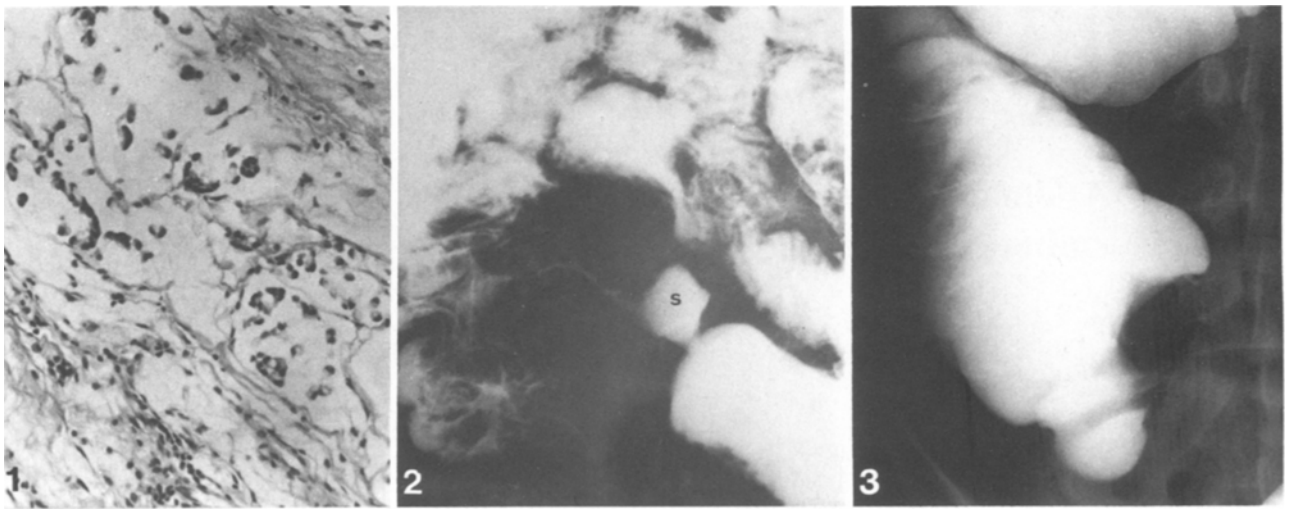

Fig. 1. Photomicrograph shows neoplastic epithelial proliferation within mucinous areas. The neoplastic cells are in line or free-floating, presenting mucosecretory activity with an occasional signet ring pattern (hematoxylin and eosin, × 500).

Fig. 2. Small bowel examination reveals segmental narrowing of the terminal ileum simulating the string sign and associated with a pseudodiverticulum (*S*).

Fig. 3. Spot film of the cecum shows a smooth filling defect in the region of the ileocecal valve.

nomas usually show marked lobulation and irregularity [8]. Likewise, ileal stenosis mimicking a string sign and pseudodiverticulum supported such a diagnosis (Fig. 2).

Pseudodiverticula in the small bowel have been reported in regional enteritis [8], systemic sclerosis [7], ischemic enteritis [7, 9], and peritoneal metastatic seeding [3], the former being the most common. All of these processes involve the intestinal wall in an asymmetrical fashion; pseudodiverticula represent spared areas. Usually the patient's age and the clinical setting are helpful in the differential diagnosis.

Although a gross pathologic specimen was not available for examination, based on the radiologic findings it can be assumed that the small intestine was the origin of the tumor in our case. Mucus-secreting adenocarcinomas found in the biopsy specimen do not exclude a small-bowel origin [10].

To our knowledge, 2 other cases of ileal carcinoma simulating Crohn's disease have been reported in the literature [1, 2]. Both cases were in older patients, aged 60 and 64 years. These examples reemphasize that terminal ileal disease should not immediately be assumed to be regional enteritis. Other diagnostic possibilities should be considered including intestinal adhesions, peritoneal carcinomatosis, carcinoid tumors, intestinal tuberculosis, abdominal abscesses, endometriosis, intestinal ischemia, and radiation enteritis [3].

Carcinoma complicating Crohn's disease is unusual. Only 38 cases have been reported, usually after symptoms have been present for more than 10 years. Bypass surgery is a common association [11]. Absence of previous history of illness in our case makes this complication improbable.

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Received: October 23, 1985; accepted: December 5, 1985