

## Carcinoid Tumor and Crohn's Ileitis

David Hazzan MD, Jeremy G. Eckstein MD and Randolph Steinhagen MD

Department of Surgery, Mount Sinai Hospital and Mount Sinai School of Medicine, New York, NY, USA

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The association of Crohn's Disease with colorectal and small bowel adenocarcinoma is well recognized [1], but the coexistence of carcinoid tumor of the terminal ileum and Crohn's disease has been reported in only nine cases [2–5]. To these nine cases we add another, and review the literature.

### Patient Description

A 38 year old woman with a 2 year history of Crohn's disease was admitted to our department to undergo an elective ileocolic resection due to severe inflammation and narrowing of the terminal ileum. The patient has a history of recurrent episodes of small bowel obstruction, and weight loss of 9 kg in the preceding 3 months and 27 kg in the previous 2 years. She was treated unsuccessfully with Pentasa®, Ciprofloxacin® and Metronidazole®.

Colonoscopy was normal and a small bowel series revealed a 20 cm narrowing in the terminal ileum. The abdomen was explored without evidence of disease in the colon. The small bowel was distended, but there were no findings of Crohn's disease from the ligament of Treitz to the

distal ileum. The terminal ileum was thickened and fibrotic for a length of 20 cm. An ileocolic resection was performed.

The pathology report revealed active Crohn's ileocolitis with transmural active chronic inflammation, multinuclear cell reaction, deep ulcerations and submucosal hyperplasia. No dysplasia was identified. An ileal carcinoid tumor 0.8 cm in diameter was identified. The tumor was seen to invade into the muscularis propria and showed solid and tubular architecture, a moderate degree of nuclear pleomorphism and three mitotic figures per 10 high power fields [Figure]. All resection margins were negative for tumor and 1 of 11 lymph nodes was positive for metastatic tumor.

The postoperative course was uneventful. The patient was discharged 6 days after surgery and the postoperative urinary 5-HIAA levels were within normal limits.

### Comment

Twenty-two cases of carcinoid tumor have been reported in association with Crohn's disease. The most common location of the tumor was the appendix in 10 patients, the terminal ileum in 9, the cecum in 2 and the rectum in 1 patient [2–5]. The diagnosis of carcinoid tumor is rare before surgery because both conditions can produce diarrhea, bleeding or small bowel obstruction. Furthermore, carcinoid tumor may resemble regional enteritis

radiologically with rigid loops of bowel and mucosal irregularities [5]. Even during the pathologic examination of the surgical specimen, tumor identification among the intestinal lesions of Crohn's disease can be difficult because dedifferentiation features may be present in Crohn's [2,3].

In contrast to adenocarcinoma in Crohn's disease, there is no epidemiologic evidence of any increased risk of carcinoid tumor. Despite the concordance between the site of the tumor and the site of Crohn's disease, the location of the tumor in Crohn patients cannot be regarded as strong support for a possible relationship, because both diseases frequently involve the terminal ileum and the appendix [3,4].

We cannot draw any conclusion about the relationship between Crohn's disease and carcinoid tumor, but we emphasize that a meticulous pathologic examination should routinely be carried out to avoid missing this atypical tumor.

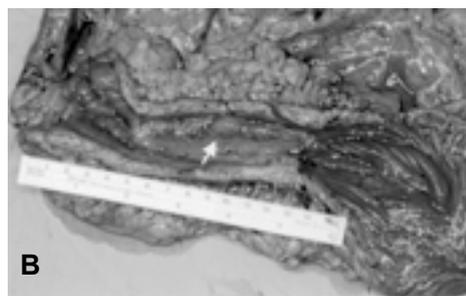
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**Correspondence:** Dr. D. Hazzan, Dept. of Surgery B, Carmel Medical Center, 7 Michal Street, Haifa 34362, Israel.

Fax: 972-4-8346083

email: hazzand@hotmail.co.il



**[A]** Carcinoid tumor with classic organoid pattern and round speckled nuclei. **[B]** Resected ileal segment with Crohn's disease manifested by transmural lymphoid aggregates and aphthous ulcer (short arrow). The wall contains a carcinoid tumor (single long arrow) that invades the muscularis propria.