

# Cecal Cancer Associated with Distal Ileal Thickening: Report of A Case and Its Clinical Significance

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## Abstract

The occurrence of ischemic inflammatory changes proximal to a colonic malignancy as a complication of carcinoma of the colon has been documented. This association was usually reported to occur in the colon, but rare cases of cecal cancer associated with distal ileal thickening were described previously. We report an elderly man with cecal carcinoma associated with distal ileal thickening presenting with intermittent abdominal cramping and abdominal distention of one month duration. The patient was uneventfully discharged 10 days after operation and subsequently the patient underwent chemotherapy. ( J Intern Med Taiwan 2010; 21: 144-147 )

**Key Words :** Cecal cancer, Ileum, Small bowel dilatation

## Introduction

The association of obstructing or potentially obstructing colorectal carcinoma and ischemic colitis in patients without an antecedent history of inflammatory bowel disease had been documented since the early 1960s<sup>1</sup>. Colitis proximal to an obstructing colonic lesion has been termed pseudoulcerative colitis<sup>2</sup>, acute necrotizing colitis<sup>3</sup>, obstructive colitis<sup>4</sup>, colitis and antecedent carcinoma<sup>5</sup> and obstructing carcinoma with acute proximal ulcerative colitis<sup>6</sup>. However, to our knowledge, there are few reports regarding the changes in the distal

ileum in patients with colon cancer, especially of the cecum or ascending colon<sup>7</sup>. We report an unusual case of cecal cancer associated with distal ileal thickening demonstrated by computed tomography (CT) of the abdomen and pathologically surgical resected specimen.

## Case Report

A 70-year-old man presented with intermittent crampy abdominal pain and abdominal distention associated with poor appetite for one month. There was a past history of hypertension for 20 years and

diabetes mellitus for 15 years. Hepatoma was diagnosed 2 years ago and transcatheter arterial embolism was successfully carried out. There was no rectal bleeding previously. Physical examination findings of the abdomen were negative except for abdominal distention with diffuse tympanism to percussion without tenderness. Laboratory data were white cell count  $3800/\text{mm}^3$  (normal range:  $4000-10000/\text{mm}^3$ ), hemoglobin 12.7 g/dL (13-17 g/dL), AST 19 IU/L (5-40 IU/L), ALT 23 IU/L (5-40 IU/L), BUN 24 mg/dL (6-22 mg/dL), Cr 0.9 mg/dL (0.5-1.3 mg/dL),  $\text{Na}^+$  128 mmol/L (135-153 mmol/L) and  $\text{K}^+$  3.9 mmol/L (3.5-5.3 mmol/L). Plain radiographs of the abdomen revealed gas distention of the small bowel (Fig. 1). CT of the abdomen disclosed an irregular tumor lesion in the cecum and distal ileal wall thickening associated with small bowel distention (Fig. 2, 3). Four days later, laparotomy was performed and showed edematous change of the terminal ileum and dilatation of the small bowel. The patient underwent right hemicolectomy and lymph nodes dissection with an ileocolic anastomosis. Histopathologic examination demonstrated a 5.2 x 4.5 cm fungating adenocarcinoma of the cecum with involvement of the ileocecal valve, which had spread to the serosa with lymph nodes involvement. There was also submucosal edema in the distal ileum with normal mucosa, and without cancer cell infiltration, or vascular invasion or thrombosis. Postoperative recovery was uneventful and the patient was discharged 10 days after surgery. Subsequently the patient received chemotherapy.

## Discussion

Obstructive colitis, an ulceroinflammatory process of the colon proximal to an obstructing colonic lesion<sup>8</sup>, is an uncommon condition. Obstructive colonic lesions have been reported, including colonic carcinoma, volvulus<sup>9</sup>, diverticulitis<sup>10</sup>, fecal impaction<sup>11</sup>, post-operative stricture<sup>11</sup>,



Fig.1. Abdominal radiograph showing gas distention of the small bowel.



Fig.2. Computed tomography of the abdomen with contrast enhancement showing an irregular thickening of the cecum (arrow) and distal ileal wall thickening (arrowhead) associated with small bowel distention.

and incarcerated hernia<sup>12</sup>. Obstructive colitis is reported to occur in 1-7% of patients with partial or complete obstruction of the colon due to carcinoma<sup>8,13,14</sup>. The inflammatory segment was

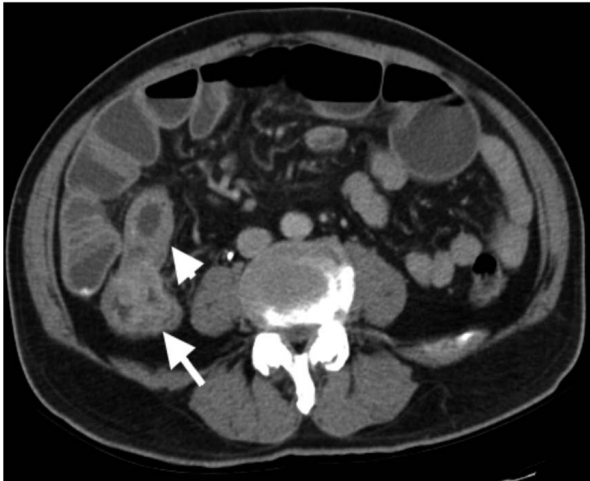


Fig.3. Computed tomography of the abdomen with contrast enhancement showing an irregular tumor lesion in the cecum (arrow) and distal ileal wall thickening (arrowhead).

contiguously proximal to the tumor or had an intervening segment of normal mucosa between the inflammatory segment and tumor. The bowel distention plays a major role in the pathogenesis of inflammatory change, because distended colonic lumen may produce local hemodynamic disturbances and focal circulatory insufficiency<sup>4</sup>. It has been also postulated that alteration of flora or proliferation of bacteria due to stagnation of bowel contents in obstruction may contribute to the colitis<sup>3</sup>. The thickening wall of the distal ileum in patients with known colon cancer as in our case is possibly caused by the same mechanism occurring in the colon.

Signs and symptoms arising from obstructive bowel inflammation may be attributed to the primary obstructive lesion. Diagnosis of obstructive colitis in the colonic carcinoma, mostly reported in the radiological or surgical literatures, can be based on the endoscopic, radiologic and histopathologic findings. In addition to the distal stenosing lesion, endoscopic features of obstructive colitis include erythematous and edematous mucosa, submucosal hemorrhage, scattered or extensive mucosal ulceration<sup>15</sup>. Occasionally, mucosal gangrene is seen<sup>1</sup>.

A segment of normal bowel intervening between the obstructing lesion and the area of colitis is often seen. Radiological changes of obstructive colitis in barium enema include "thumb-printing" pattern or irregular narrowing and isolated discrete ulcerations<sup>16</sup>. However, the typical radiological signs need not be present. The presence of obstructive colitis proximal to colonic carcinoma results in focal or diffuse bowel wall thickening on CT that can be mis-interpreted as tumor spread, causing over staging of the tumor<sup>17</sup>.

Detecting ischemic change proximal to colonic carcinoma is important for two reasons. First, understanding this disease will help surgeons prevent possible postsurgical complications including peritonitis, perforation<sup>18</sup> and breakdown of anastomoses made through involved segments of colon that may appear externally normal at surgery. In some reports, up to 25% of cases of obstructive colitis have had anastomotic complication<sup>10</sup>. Second, concomitant presence of an ischemic segment in colonic carcinoma may give a false radiologic impression regarding tumor length or depth of the tumor invasion. The surgeon dealing with obstructive carcinoma of the colon must keep this condition in mind.

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## 盲腸癌合併遠端迴腸壁腫脹： 一病例報告及其臨床之重要性

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### 摘 要

大腸癌合併近端腸子發生缺血性發炎之變化，這是一種已被証實之大腸癌的併發症，通常發生在大腸，而盲腸癌合併遠端迴腸壁增厚之病例則較少被報導。我們報告一例70歲男性病患以一個月間歇性的腹痛及腹脹來表現之盲腸癌合併增厚之遠端迴腸壁。病人接受手術且順利地在術後第十天出院，之後接受化學治療。