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CASE REPORT

Intestinal Obstruction due to Synchronous Jejunal Stromal Tumor and Adenocarcinoma of the Colon: A Case Report

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ABSTRACT

Gastrointestinal stromal tumor is the most common mesenchymal tumor of the gastrointestinal tract, and surgery is the main treatment. Synchronous tumors of the small and large bowels are rare. We report a case with synchronous jejunal stromal tumor and adenocarcinoma of the colon. A 60-years-old male patient presented with intestinal obstruction and a palpable mass located at the right lower quadrant. He underwent surgery with partial resection of the jejunum and left hemicolectomy. Histological examination revealed a high malignant potential gastrointestinal stromal tumor in the jejunum and adenocarcinoma in the colon. Immunohistochemical stains showed positive staining with CD117, CD34 and S100. Though intestinal obstruction due to gastrointestinal stromal tumor has been reported earlier, this case represents the first case report in the English medical literature of synchronous jejunal stromal tumor and adenocarcinoma of the colon presenting with intestinal obstruction.

Key words: *Gastrointestinal stromal tumor, Synchronous tumors*

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ÖZET

Senkron Jejunal Stromal Tümör ve Kolon Adenokarsinomuna Bağlı İntestinal Obstrüksiyon: Olgu Sunumu

Gastrointestinal stromal tümör gastrointestinal traktın en sık görülen mezenkimal tümörüdür ve temel tedavisi cerrahidir. İnce ve kalın bağırsakların senkron tümörleri nadirdir. Biz senkron jejunal stromal tümör ve kolon adenokarsinomlu bir olguyu sunduk. Altmış yaşında erkek hastada intestinal obstrüksiyon ve sağ alt kadranda palpabl kitle mevcuttu. Hastaya parsiyel jejunum rezeksiyonu ve sol hemikolektomi ameliyatı uygulandı. Histolojik değerlendirme jejunumda yüksek malign potansiyelli gastrointestinal stromal tümör ve kolonda adenokarsinomu ortaya koydu. İmmünhistokimyasal boyamalar ile CD117, CD34 ve S100 ile pozitif boyanma gösterildi. Gastrointestinal stromal tümöre bağlı intestinal obstrüksiyon daha önceden bildirilmiş olsa da, bu olgu intestinal obstrüksiyon ile ortaya çıkan senkron jejunal stromal tümör ve kolon adenokarsinomunun İngilizce tıp literatüründeki ilk olgu sunumudur.

Anahtar kelimeler: *Gastrointestinal stromal tümör, Senkron tümörler*

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INTRODUCTION

Intestinal tumors are found incidentally or may commonly present themselves with complications such as bleeding, obstruction and perforation. Gastrointestinal stromal tumor (GIST) is the most common mesenchymal tumor of the gastrointestinal tract and is seen mostly in the stomach, small intestine, rectum, and esophagus[1]. GISTs are defined as spindle cell, epithelioid or pleomorphic mesenchymal tumors that express the KIT protein (CD117)[2]. Most GISTs are benign, but their behavior and symptoms are related to tumor size and mitotic frequency in addition to the immunohistochemical markers. The commonest presentation is bleeding, which might be acute or chronic resulting in anemia[3]. Larger size GISTs may cause pain or even obstruction if located in the small bowel. Perforation is rare[4]. The incidental discovery of small and benign tumors has increased recently due to increased use of computed tomography and endoscopy of the gastrointestinal tract. Surgery is the treatment of choice. All GIST must be treated using complete en bloc removal of the tumor and surrounding tissues[4].

Synchronous tumors of the small intestine and colon are rare. In this article, we describe a case of synchronous jejunal stromal tumor and adenocarcinoma of the colon who presented with intestinal obstruction.

CASE REPORT

A 60-years-old male patient suffering from abdominal pain, constipation and nausea for the last six months, which increased gradually over time, was admitted to our clinic. The physical examination revealed distended abdomen and palpable mass located at the right lower quadrant with some pain and tenderness. Multiple air fluid levels were present on plain abdominal X-ray, and abdominal ultrasonography showed a mass measuring 13 x 6 cm with 17 mm wall thickness located at the right iliac fossa. On computed tomography, there was a blind loop obstruction at the right iliac fossa, and colonoscopy revealed a mass at the distal part of the transverse colon, partially obstructing the lumen (Figure 1). The biopsies taken from this mass reported an adenocarcinoma of the colon.

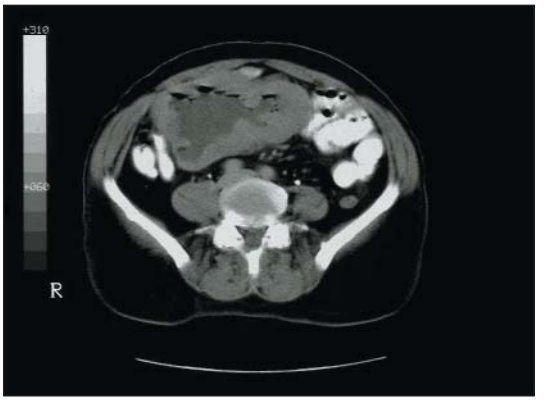

Figure 1. Computed tomography demonstrating blind loop obstruction at the right lower quadrant.

Laparotomy was performed with the pre-diagnosis of colon adenocarcinoma and intestinal obstruction due to abdominal mass. There was free fluid in the abdomen, and a mass filling the whole mesentery, cystic-solid in nature and 15 x 15 x 15 cm in size was found (Figure 2). In addition to these findings, another jejunal mass was detected. The mesenchymal mass was excised completely, and the patient underwent partial resection of the jejunum and left hemicolectomy. The pathological examination revealed a high malignant potential GIST in the jejunum and adenocarcinoma in the colon. The tumor in the jejunum was perforated and peritoneal metastasis was present. The immunohistochemical examinations were positive for CD117, CD34, S100 and SMA, and negative for desmin. Ki67 level was 9-10% (Figure 3-6). The patient was discharged on the

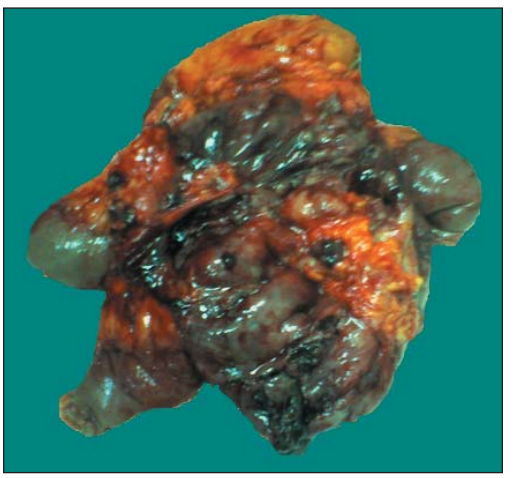

Figure 2. The macroscopic view of the tumoral mass of the intestinal segment.

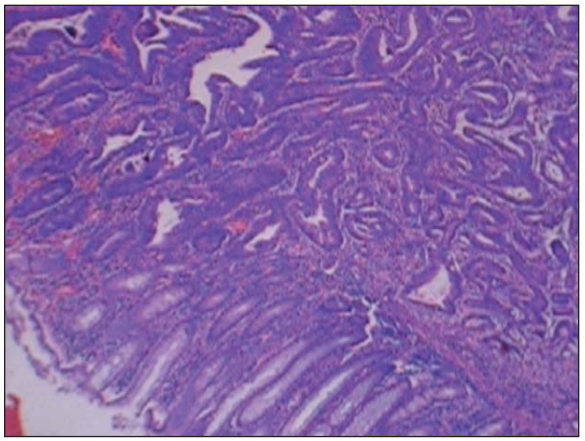

Figure 3. The adeocarcinoma field near normal colonic mucosa (hematoxylin and eosin [HE] x100).

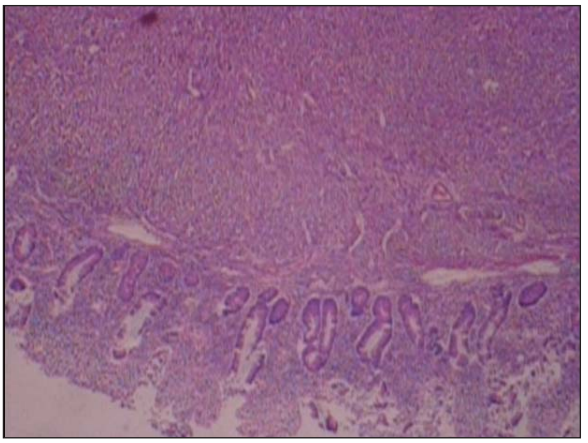

Figure 4. GIST under intestinal mucosa (HE x100).

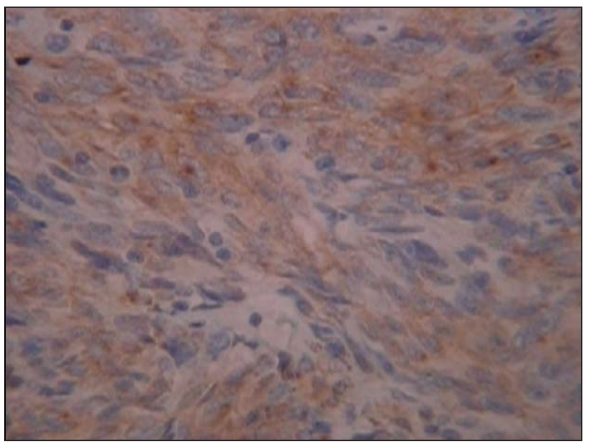

Figure 5. GIST tumor cells stained positive with CD117 (x400).

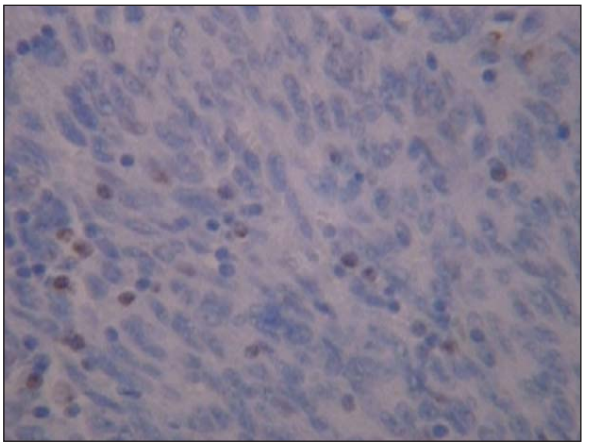

Figure 6. GIST tumor cells stained positive with Ki67 (x400).

13th day without any complication, and adjuvant chemotherapy was planned. He was given imatinib mesylate 400 mg/day for a period of 12 weeks as a first step after medical oncology consultation.

DISCUSSION

GISTs are seen rarely and account for 0.1-3% of all gastrointestinal neoplasms and 5.7% of sarcomas[1-7]. GISTs are the most common mesenchymal tumors of the gastrointestinal tract. Their incidence is estimated as 10-20/10^6, and diagnosis is most commonly made between 55 to 65 years of age[8]. GISTs can be seen anywhere in the gastrointestinal tract including the omentum or mesentery, but are most commonly seen in the stomach and duodenum, followed by the small intestine. Clinical findings are related to tumor size. Small tumors are generally asymptomatic and recognized at surgery incidentally. Large tumors can present with gastrointestinal bleeding, abdominal pain, mass, nausea, vomiting or obstruction[9]. Intestinal obstruction is reported in up to 30% of clinical series, but in most articles it is reported as less than 10%[10-14].

The best treatment for primary tumor is accepted as complete excision. Approximately half of the patients have metastasis at the time of diagnosis, most commonly to the liver and peritoneum[8]. Lymph node enlargement is not a feature[15]. Incomplete resection, age over 50, tumor size over 5 cm, mitosis more than 5 and non-smooth muscle histologic feature have been reported to decrease survival[16]. It is also

thought that GISTs that express CD34 in addition to CD117 exhibit more aggressive behavior[17]. In our case, the clinical findings were abdominal mass and intestinal obstruction. At laparotomy, it was found that the jejunal stromal tumor was perforated, which is an uncommon finding in GIST. The patient underwent partial jejunal resection and left hemicolectomy; therefore, complete resection of both stromal and epithelial tumors was achieved. Because of the present peritoneal metastasis and CD117 and CD34 positivity, the patient was considered to have an unfavorable prognosis, and adjuvant chemotherapy, including the receptor tyrosine kinase inhibitor imatinib, was given.

There are rare cases of synchronous tumors with GIST reported in the literature. Synchronous stromal and epithelial tumors of the stomach, synchronous gastric and gallbladder adenocarcinoma and stromal tumor of the stomach, somatostatinoma of the papilla of Vater with multiple GISTs, synchronous gastric stromal tumor and cecal adenocarcinoma, multiple GISTs and synchronous ileal carcinoids, double cancer involving oral malignant melanoma and GIST, and synchronous duodenal GIST and adenocarcinoma of the colon have been reported in the literature[18-24]. In this case, jejunal stromal tumor occurred together with adenocarcinoma of the colon. This case represents the first case report in the English medical literature of synchronous jejunal stromal tumor and adenocarcinoma of the colon.

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