Carcinosarcoma of the Rectosigmoid Colon: Report of a Case

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Abstract
We report an unusual case of carcinosarcoma of the colon. An 80-year-old woman was admitted to our hospital with lower abdominal pain. Computed tomography showed a large pelvic mass, 18 cm in maximal diameter, and barium enema and colonoscopy both showed a type-2 tumor in the sigmoid colon. We performed Hartmann’s procedure with resection of the ileocolic segment. Immunohistochemical stains of the resected specimen revealed that most of the tumor consisted of spindle cell sarcoma with neural and muscle differentiation, while only the superficial area of an ulcerated lesion contained adenocarcinoma positive for carcinoembryonic antigen. The patient died of a fast-growing recurrent pelvic tumor 6 months postoperatively. Our experience of this case and our review of eight other cases in the English literature indicate that wide resection provides the best chance of cure, but careful postoperative follow-up is essential.

Key words Carcinosarcoma · Colon

Introduction
Carcinosarcoma is a relatively rare tumor, usually composed of carcinomatous components close to, or intermixed with, sarcomatous components.1 The most common sites of this tumor are the head and neck, respiratory tract, uterus, ovaries, and fallopian tubes.2-4 Within the digestive tract, this tumor most often occurs in the esophagus,2,5 followed by the stomach.6 We report a rare case of carcinosarcoma in the colon, and review the literature on this unusual disease.

Case Report
An 80-year-old woman was admitted to our hospital for investigation of lower abdominal pain. Physical examination revealed a large, fixed mass in the lower abdomen. Laboratory data showed a low hemoglobin level (9.9 g/dl) and an elevated serum carcinoembryonic antigen (CEA) level (27.1 ng/ml, cutoff: 6.7 ng/ml). Barium enema and colonoscopy showed an ulcerated type 2 tumor in the rectosigmoid colon (Fig. 1a, b), but biopsy revealed only necrotic tissue. Computed tomography (CT) demonstrated a heterogeneous tumor, 18 cm in maximal diameter, in the pelvis (Fig. 2). There was no evidence of liver metastasis or paraaortal lymph node swelling. A chest X-ray was normal. Laparotomy was performed under the diagnosis of suspected carcinoma of the rectosigmoid colon, which revealed a large extramural tumor of the rectosigmoid colon, firmly fixed to the adipose tissue of the retroperitoneum and ileum for a length of 30 cm. The uterus and ovaries appeared normal and uninvolved in the tumor. Macroscopically curative surgery, including resection of the rectosigmoid and sigmoid colon with lymph node dissection (D3 level), ileocolic resection, and sigmoid colostomy using Hartmann’s procedure, was performed. The patient had an uneventful postoperative course but unfortunately, presented 5 months later with vaginal bleeding caused by intrapelvic recurrence. She died of the disease 6 months postoperatively. A postmortem examination was not done.

Gross Findings
The resected specimen consisted of a segment of rectosigmoid and sigmoid colon and an ileocolic segment 30 cm long. The tumor had an extramural growth and the cut surface revealed a whitish-gray appearance (Fig. 3).
**Pathological Findings**

Microscopically, most of the tumor showed sarcomatous features with pleomorphic or spindle-shaped tumor cells that had compactly proliferated and infiltrated the subserosa. There were numerous (>20/10 high-power fields) and bizarre mitotic figures (Fig. 4a). A distinct adenocarcinomatous component was noted in a superficial part of the ulcerated lesion. The cells in this component formed irregular glands, corresponding to moderately differentiated adenocarcinoma (Fig. 4b). There was no apparent transition between the carcinomatous and sarcomatous cells because of the interposition of necrotic tissue (Fig. 4c). Epicolic lymph nodes were positive for adenocarcinoma without any components showing sarcomatous features.

**Immunohistochemical Stain**

Immunoreactivity for CD 34, CD 117(c-kit), myoglobin, desmin, vimentin, HHF 35, α-SMA (smooth muscle actin), S-100, cytokeratin (CK), and CEA was examined. In the sarcomatous component, desmin, myoglobin, HHF 35, and S-100 were positive for some malignant cells (Fig. 4d), while CD 34, CD 117, vimentin, α-SMA, CK, and CEA were negative for all malignant cells. In the adenomatous component, CK and CEA were positive for most of the malignant cells. Therefore, this tumor demonstrated both epithelial and mesenchymal (neural and muscle) differentiation, confirming the diagnosis of carcinosarcoma.