

Sarcomatoid carcinoma of the colon

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ABSTRACT

Sarcomatoid carcinomas are rare and aggressive tumors composed of both epithelial and mesenchymal elements. Our case is a 39 year old man who was hospitalized for mechanical bowel obstruction. Histopathological examination showed typical adenocarcinomatous areas admixed with sarcomatous areas and "sarcomatoid carcinoma of the colon" was diagnosed. Immunohistochemistry revealed strong positivity for cytokeratin and EMA in adenocarcinomatous areas and also in most of the cells of the sarcomatous areas. The patient is alive 4 months after surgery without evidence of recurrence. To our knowledge, there were only 8 cases of sarcomatoid carcinoma of the colon reported to date in the literature. [Turk J Cancer 2005;35(3):138-140]

KEY WORDS:

Colon, sarcomatoid carcinoma

Sarcomatoid carcinomas are controversial and rare biphasic tumors composed of both carcinomatous and sarcomatous elements. They may occur in different organs and anatomical locations such as upper aerodigestive and respiratory tract, urinary bladder, pancreas, prostate and small intestine (1-6).

CASE REPORT

A 39-year old man was admitted to an urban hospital with mechanical bowel obstruction and sigmoid loop colostomy was performed because of a mass in the rectosigmoid area causing total obstruction of the lumen. He was then sent to 4th General Surgery Clinic of İzmir Atatürk Training Hospital.

Macroscopically the resected 18 cm colorectal specimen showed an ulcero-fungating mass 6x5 cm in diameter which obstructed the lumen almost completely. There were 2 polyps in the vicinity of the tumor which were 1,5 and 0,5 cm in diameter and 41 lymph nodes were resected from the meso.

Histologically the tumor was composed of a mixture of carcinomatous and sarcomatous areas (Figure 1). The carcinomatous component was a moderately differentiated adenocarcinoma with intracytoplasmic and luminal mucin production in some areas. Sarcomatous component was composed of anaplastic giant cells with strangely shaped nuclei showing bizarre mitoses but there was also a population of smaller spindle cells which were arranged in short fascicular and haphazard pattern (Figure 2).

Immunohistochemical studies showed strong positivity for cytokeratin and EMA in adenocarcinomatous areas and also in many of the bizarre giant cells of the sarcomatous areas (Figure 3). These sarcomatous areas were mainly vimentin positive but smooth muscle actin and myoglobin negative.



Fig 1. Carcinomatous and sarcomatous areas of the tumor (H&E, x110)

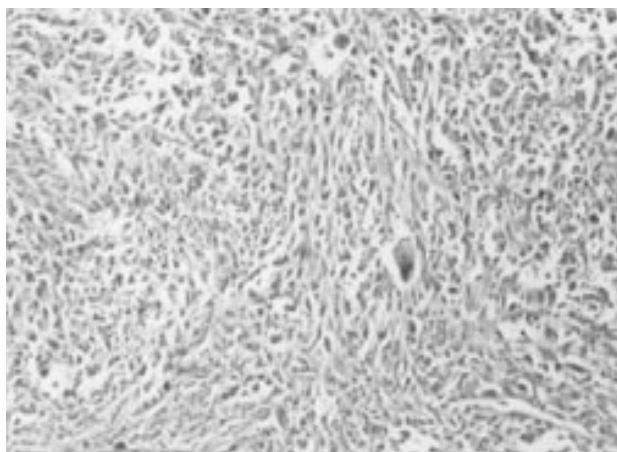


Fig 2. Sarcomatous areas with anaplastic giant cells, (H&E, x220)

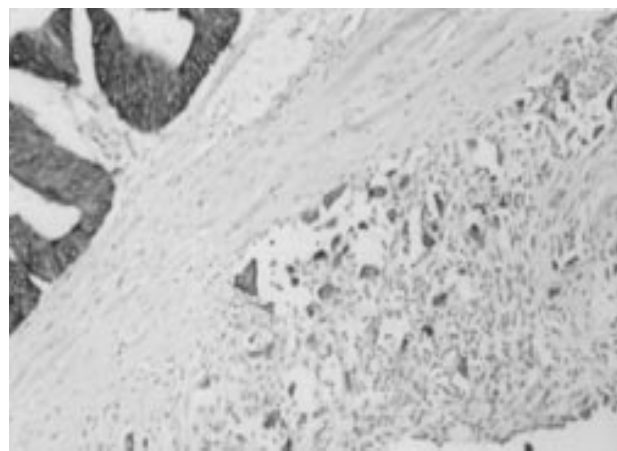


Fig 3. Strong positivity for keratin in carcinomatous areas and also in many cells of the sarcomatous areas (Keratin, x220)

The two polyps found were adenomatous and the larger one showed focal malignant transformation.

The two lymph nodes out of 41 examined lymph nodes were metastatic and interestingly it was sarcomatous in one lymph node and carcinomatous in the other.

The postoperative course was uneventful and the patient received 3 cycles of chemotherapy with local radiotherapy. He is alive with no evidence of disease 4 months after surgery.

DISCUSSION

Sarcomatoid carcinomas which may occur in various organs and anatomical locations are high grade tumors that behave aggressively regardless of treatment (1-3). There is no agreement on nomenclature and these tumors have been described under a variety of names e.g., “carcinosarcoma”, “pseudosarcomatous carcinoma” and “carcinoma with mesenchymal stroma” causing a great uncertainty about their classification and histogenesis.

The histogenesis of sarcomatoid carcinomas is uncertain and various hypothesis have been proposed to explain the biphasic nature of these tumors. One is collision theory of independent neoplastic growths from multipotent stem cell, epithelial to mesenchymal conversion by epithelial-stromal reaction and the other is the combination of the two (1,2,4). As we could demonstrate the epithelial nature of the sarcomatous tumor cells immunohistochemically with cytokeratin and EMA positivity in our patient, this finding supports the dedifferentiation of carcinoma cells which means epithelial to mesenchymal conversion.

These tumors when located in the upper aerodigestive tract including esophagus and stomach have polypoid architecture and can be diagnosed early and usually have a relatively favorable prognosis. But sarcomatoid carcinomas of the lower intestinal tract have an aggressive clinical course because of their rapid growth and high frequency of recurrence and distant metastasis (1,2).

We could find 8 cases of sarcomatoid carcinoma of the colon in the Medline search which the outcome of all patients reported indicate an aggressive biological course (1-6).

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