Extragenital Mixed Heterologous Tumor of Müllerian Type Arising in the Cecal Peritoneum:

Report of a Case*

PAUL WEIZ-CARRINGTON, M.D., BRADLEY BIGELOW, M.D., ROGER A. SCHINELLA, M.D.

From the Department of Pathology, New York University-Bellevue Medical Center, New York, New York

Mixed müllerian tumors are recognized to occur in the female genitalia. We have encountered a case which we feel arose from the cecal peritoneum, without genital involvement.

Report of a Case

A 77-year-old white woman was admitted to the hospital with a temperature of 104°F, abdominal distention, and rectal bleeding of two days' duration. Past history included diabetes mellitus, myocardial infarction, and cholecystectomy. She had had a normal full-term delivery at the age of 23 years. There was no history suggesting endometriosis.

Radiologic studies disclosed a tumor that displaced the cecum in the right lower quadrant. Laparotomy revealed a cystic pericecal mass, which was removed by ileoectomy.

Although the patient did well during the immediate postoperative period, she died suddenly on the seventh hospital day. An autopsy was performed.

Pathology

The surgical specimen consisted of a segment of terminal ileum in continuity with the cecum and ascending colon. A partially cystic mass, measuring $14 \times 10 \times 10$ cm, was present on the anterior surface of the cecum. The tumor penetrated the bowel wall and communicated with the lumen via a 2-cm punched-out ulcer surrounded by normal colonic mucosa. The tumor had soft and firm areas, and its color ranged from brown to yellow. Several cystic areas, as much as 2 cm in greatest diameter, contained opalescent fluid and were lined by a rough granular surface. Two lymph nodes were involved by tumor.

Microscopically, most of the tumor showed a sarcomatous pattern and was composed of sheets of hyperchromatic, fusiform to oval cells with indistinct cell boundaries. The nuclei of these cells were often pleomorphic, and numerous mitotic figures, including multipolar forms, were identified. The cytoplasm of these cells was abundant and lightly eosinophilic (Fig. 1). Focal areas of malignant neoplastic cartilage and bone were identified (Fig. 2). Although some cells were reminiscent of rhabdomyoblasts, cross-striations could not be identified. A myxoid appearance of the stroma was noticed in some areas, and scattered foci of calcification were seen throughout the tumor.

Within this sarcomatous background, several carcinomatous glands were seen. These were lined by stratified cells with poor polarity, which contained a moderate amount of eosinophilic cytoplasm and vesicular pleomorphic nuclei (Fig. 3). Isolated foci of squamous-cell carcinoma, unrelated to the adenocarcinoma, were also present. Several sections from the surface of the tu-
Fig. 1. Main sarcomatous component of the tumor, showing cells with abundant eosinophilic cytoplasm and pleomorphic nuclei (hematoxylin and eosin; ×125).

Tumor indicated a transition from benign mesothelial lining to malignant multilayered mesothelium (Fig. 4). The latter appeared to be continuous with the underlying tumor. Endometriosis was not found despite numerous sections. The colonic mucosa was unremarkable except for the ulcer communicating with the adjacent tumor.

At autopsy secondary tumor deposits were identified in the liver, diaphragm, paraesophageal lymph nodes, and abdominal wall. Microscopically they contained the mixture of tumor elements described above. The uterus and ovaries were atrophic and were grossly and microscopically free of tumor. Foci of calcification were found on the serosal surface of the uterus. These areas were also free of tumor. There was no evidence of endometriosis. The immediate cause of death was a major pulmonary embolus.

Discussion

Mixed müllerian tumors are divided into homologous and heterologous types. Both contain carcinoma. The homologous tumors contain sarcomatous elements of cell types normally found in the uterus, usually endometrial stromal sarcoma or leiomyosarcoma. The heterologous tumors contain sarcomatous elements of cell types extrinsic to the uterus, such as rhabdomyosarcoma, chondrosarcoma, or osteogenic sarcoma. The present tumor thus conforms to a mixed heterologous tumor of müllerian type.