Case Report

Uterine carcinosarcoma, an unusual histologic presentation

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ABSTRACT
We report a case of a carcinosarcoma of the uterus with rare and unusual features in an 82 year old female who presented with postmenopausal vaginal bleeding for two months. Histopathology of surgical specimen revealed uterine carcinosarcoma with metastases to omentum. (Rawal Med J 2009;34:120-122).

Key Words: Carcinosarcoma, omental metastases, unusual histology.

INTRODUCTION
Carcinosarcoma of the uterus is an aggressive neoplasm of the female genital tract composed of an admixture of malignant epithelial and mesenchymal components that usually deeply invades the myometrium and is often associated with intra-abdominal and retroperitoneal metastases. Although, it is the most common neoplasm of the mixed epithelial and mesenchymal tumor group, it only comprises 1.5% of all malignant uterine tumors. Lesion may present with vaginal bleeding, an abdominal mass, pelvic pain or rarely an upper vaginal mass. Imaging usually reveals an enlarged uterus with a widened endometrial cavity and deep myometrial invasion. Conventionally, the primary tumor in the uterus is composed of both epithelial and mesenchymal components. Our case is unusual in that the primary tumor in the uterus consisted solely of a sarcomatous component while the metastatic deposit in the omentum was composed only of a carcinomatous component.

CASE PRESENTATION
An 82 year old woman presented with mild to moderate postmenopausal bleeding for two months. There was no associated abdominal/pelvic pain or palpable mass. She had hypothyroidism and was on thyroxin 150mg daily for 30 years. Family history for breast cancer was positive. CA 125 was 458.0 u/ml, Carcino-embryonic antigen 3.87 ng/ml and Alpha-fetoprotein 2.78 IU/ml. There were no previous gynecological/obstetric problems or complications.
MRI revealed a 9x6 cm mass in the uterine cavity which was infiltrating into the myometrium, parametrial space, and parauterine fat. Extended total abdominal hysterectomy with bilateral salpingo-oophrectomy was performed. A mass of 9.5x 5x 4 cm was present in the uterine cavity with a 2 x 2 cm nodule in the omentum.
The lesion was occupying the entire uterine cavity without any extension into the cervix. Grossly, the tumor was homogenous, grayish-tan, soft, friable and hemorrhagic. Microscopically, the sections from the uterus showed only a homologous sarcomatous component while the metastatic deposit in the omentum was solely carcinomatous (Fig 1). Immunohistochemistry revealed that the sarcomatous areas were strongly positive for vimentin and focally for cytokeratin establishing the diagnosis of carcinosarcoma (Fig 2).

**DISCUSSION**

Carcinosarcomas occur at a median age of 65 years. Tumor may occur in patients with previous pelvic irradiation or in those with long term use of tamoxifen. Occasionally it may arise within a benign endometrial polyp. As in our case, imaging usually reveals an enlarged uterus with a widened endometrial cavity and deep myometrial invasion; this extended into the parametrial space and fat. Macroscopically, the tumor usually presents as a polyploid bulky necrotic and hemorrhagic mass. Microscopically, the malignant epithelial element is usually glandular and most commonly consists of a squamous or undifferentiated cancer. The glandular component may be endometroid or non-endometroid. As was in our patient, the sarcomatous element may be homologous consisting of a mesenchymal component which contains an undifferentiated sarcoma, leiomyosarcoma or endometrial stromal sarcoma or heterologous, consisting of mesenchymal elements most commonly malignant cartilage or malignant skeletal muscle, although other elements such as osteosarcoma and liposarcoma may rarely occur.1 Eosinophilic hyaline inclusions are commonly seen in sarcomatous elements. On Immunohistochemistry, the epithelial elements are immunoreactive with anti-cytokeratin...
antibodies and the mesenchymal elements are immunoreactive with vimentin. Stromal component may show rhabdomyoblastic differentiation confirmed with desmin or muscle specific actin. The tumor may contain estrogen and progesterone receptors.¹

**Fig 2.** Sarcomatous areas showing strong positivity for vimentin and focally for cytokeratin (X 200M).

Total abdominal hysterectomy, bilateral salpingo-oophrectomy with excision of the extra-uterine component followed by pelvic irradiation is the treatment for all stages of disease, as was in our patient. Uterine carcinosarcomas are being recognized as aggressive adenocarcinomas with a poor overall prognosis, and not a sarcoma.² According to Temkin et al the depth of myometrial invasion correlates with disease free survival but not with overall survival.³ Heterologous mesenchymal components indicate a worse outcome. Tumor spreads by lymphatics. In our patient, the omental metastatic deposit was comprised of a carcinomatous component. Studies have shown that metastatic foci and foci within lymphatics or vessels are commonly carcinomatous with sarcomatous foci being very rare.⁴ Preoperative CA-125 elevation is associated with deep myometrial invasion and extra uterine disease while postoperatively this is a prognostic factor for poor survival.⁵ In our patient, CA-125 was raised by more than ten times the normal value suggesting myometrial invasion and extrauterine disease. Carcinosarcomas are uncommon but among the most malignant uterine neoplasms known to occur. An optimal treatment for this aggressive tumor remains to be established.

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REFERENCES


