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Uterine carcinosarcoma with chondrosarcoma component in a 60-year-old woman

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Summary

Carcinosarcoma of the uterus (malignant mixed Müllerian tumor: MMMT) is a rare and very aggressive form of uterine cancer. It represents about 3-4% of uterine malignancy. This is a biphasic tumor that contains both carcinoma and sarcoma components. The author reports an original case of a carcinosarcoma of the uterus with heterologous sarcoma component in a 60 year-old Caucasian woman, revealed by gynecological bleeding. The patient underwent radical surgery with a large lymph node dissection (54 nodes) and peritoneal cytology. It was a pT3apN1, FIGO Stage III. It was decided to deliver adjuvant chemotherapy followed by radiotherapy.

Key words: Uterine carcinosarcoma; Rare gynecological tumor; Gynecological bleeding; Chondrosarcoma; MMMT.

Introduction

Uterine carcinosarcoma, also known as malignant mixed Müllerian tumor (MMMT) are highly aggressive, uncommon, biphasic tumors. They are composed of epithelial and mesenchymal components and seem to have the same origin. Their frequency is about 3-50% of all uterine cancers. They can develop in the vagina, cervix, ovary, and most rarely in the fallopian tubes. The entity was first described in 1852. The authors recognized a mixed mesodermal tumor called "endochondroma". The sarcomatous elements can be homologous, composed of tissues native to the uterus. The heterologous type can contain cartilage, skeletal muscle, or bone.

Case Report

The authors report the case of a uterine carcinosarcoma in a sixty year-old Caucasian woman. She did not have any medical past. She presented with gynecological bleeding for several weeks. At physical examination, a bulky uterus and foul bleeding discharge were found. A computed-tomography scan showed several 20-mm sized para-aortic lymph nodes, with metastatic center. Multiple biopsy cores were done; they revealed large necrosis area, and tumor cell proliferation evocative of carcinosarcoma.

Magnetic resonance imaging of the pelvis showed a heterogenous uterus and abnormal signal of the left fallopian tube and left ovary, several bilateral external and internal iliac nodes, and para-aortic adenomegalies. Positron emission tomography found the same constatations. Preoperative markers Ca125 were 101.4ng/ml and ACE 14 ng/ml.

The patient underwent radical surgery: laparotomy, total hysterectomy, bilateral salpingo-oophorectomy, and digestive resection. Pelvic lymphadenectomy was performed and para-aortic lymph nodes were removed (a total of 54 nodes). Peritoneal cytology was done.

On gross examination, uterus was heavily infiltrated by necrotic tumor. The tumor measured 13×11 cm and invaded the serous side of the uterus. Peritoneal cytology was negative for atypic cells. The right fallopian tube was six-cm long and the right ovary was cystic ovary measuring 4.2×3.5×3.3 cm with citrin content, without any inner or outside vegetations. On histological staining, it was a biphasic tumor. The carcinomatous component was predominant. The cells exhibited an increased nucleo-cytoplasmic ratio with round anysocaryotic nuclei and prominent nucleoli. Epidermoid area were present. These cells expressed cytokeratin CK AE1-AE3 and hormonal receptors. P53 was not overexpressed. The sarcomatous part was made of fusiform, atypic cells or voluminous isolated cells with hyperchromatic nuclei sometimes plurinuclear cells. These cells were clearly positive for vimentin and CD10 and in some place actin smooth muscle. PS100 was focally overexpressed in chondroid stromal area. Desmin and myogenin were negative. Necrosis was present in 50% of the surface. There was no lymphatic invasion or perineural sheathing. The tumor infiltrated the myometrium and crossed the serous side near the colon. Uterine cervix, parameters, and colon were not invaded. A total of 54 lymph nodes were removed. Three were metastatic, infiltrated by the carcinomatous component. On the basis of these findings, the diagnosis of 13-cm uterine carcinosarcoma was made, with predominant endometrioid grade 3 carcinomatous component, and heterologous sarcomatous with a chondrosarcomatous component. The tumor was a pT3apN1, FIGO Stage IIIC2. It was decided to deliver adjuvant chemotherapy (paclitaxel+carboplatin AUC5 regimen), followed by adjuvant radiotherapy.

Discussion

Uterine carcinosarcoma accounts for about 40% of all uterine sarcomas and less than 5% of all uterine tumors [1]. It is now considered as a dedifferentiated or metaplastic

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form of endometrial carcinoma.

Afro-American women are at greater risk of developing carcinosarcomas, compared with Caucasians [2]. Women are usually over 50-years-old; most cases occurring between 60 and 70 years. The median age is 62 years [3].

Etiological factors implicated include pelvic irradiation, obesity, nulliparity, and exposure to the human papillomavirus or exogenous estrogen [4].

The present patient did not have any pregnancy and had taken contraceptive pills for about ten years.

It is believed that carcinosarcomas have the same monoclonal origin from stem cells. However the origins remain unclear. The clinical presentation is non-specific. The "symptoms triad" indicative of carcinosarcoma rather than endometrial adenocarcinoma includes pain, severe vaginal bleeding, and the passage of necrotic tissues per vaginum [5]. The tumors are characterized by the unique biphasic morphology; composed of both epithelial and mesenchymal elements. In the literature, the mesenchymal elements may be homologous or heterologous with mixed components like rhabdomyosarcoma (18%), chondrosarcoma (10%), osteosarcoma (5%) or liposarcoma (1%) [6]. Carcinosarcomas express epithelial pan-cytokeratin and epithelial membrane antigen (EMA) and stromal markers.

No consensus guidelines have been established for the management of uterine carcinosarcomas [7]. The primary treatment option remains surgery with total abdominal hysterectomy with bilateral salpingo-oophorectomy. The role of lymphadenectomy is controversial.

Most studies focus on the development of postoperative adjuvant treatment. Postoperative multimodal adjuvant therapy with chemotherapy followed by radiotherapy has not showed any benefit in survival. The prognosis of the tumors is worse than that of endometrial carcinoma, because of their high rates of distant metastases and recurrences [8].

Conclusion

Uterine carcinosarcoma is a rare, aggressive neoplasm, with a poor prognosis. Its management remains controversial. No guideline exists and respective multicentric trials are needed to maximize the probability of cure.

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