

Uterine Carcinosarcoma Initially Diagnosed as High-Grade Serous Endometrial Carcinoma, A Case Report

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How to cite this paper: Tshibola Nkashama, M., Nayam, F., Ngouomo, L., Ehlali, I., Bensouda, M.M., Guebessi, N.B., Mahdaoui, S., Boufettal, H. and Samouh, N. (2025) Uterine Carcinosarcoma Initially Diagnosed as High-Grade Serous Endometrial Carcinoma, A Case Report. *Case Reports in Clinical Medicine*, 14, 197-201.

<https://doi.org/10.4236/crcm.2025.144026>

Received: November 11, 2024

Accepted: April 20, 2025

Published: April 23, 2025

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Abstract

Uterine carcinosarcoma, also known as malignant mixed Müllerian tumor (MMMT), is a rare and aggressive neoplasm that combines carcinomatous and sarcomatous components. Previously classified among uterine sarcomas, it is now recognized as an endometrial epithelial tumor, with prognosis primarily determined by the carcinomatous component. This pathology predominantly affects postmenopausal women and typically presents with postmenopausal bleeding. Initial clinical and radiological evaluations often underestimate the disease's extent. In the case presented, a patient initially diagnosed with FIGO stage II high-grade serous carcinoma was reclassified as FIGO stage IIIB after surgery revealed carcinosarcoma. Pathological analysis of surgical specimens confirmed a carcinosarcoma, accounting for the rapid progression despite management, including surgery and chemotherapy. This case highlights the exceptionally aggressive nature of carcinosarcomas and underscores the importance of a multidisciplinary approach to optimize patient care.

Keywords

Uterine Carcinosarcoma, High-Grade Serous Endometrial Carcinoma, Malignant Mixed Müllerian Tumor, Endometrium

1. Introduction

Carcinosarcoma, also known as malignant mixed Müllerian tumor (MMMT), represents a distinct pathological entity. It is a malignant tumor combining sarco-

matous and carcinomatous components [1]-[3]. Historically classified as a Müllerian tumor, recent changes in its classification have complicated bibliographic research.

The origin of carcinosarcomas remains debated, with two main hypotheses: one suggests a totipotent stem cell that differentiates into both epithelial and mesenchymal components [4], which is the most likely, while the other postulates the coexistence of two independent cellular populations. These tumors were long considered uterine sarcomas, but their prognosis is now known to depend primarily on the carcinomatous component. They are currently classified as epithelial tumors of endometrial origin.

Histological analysis suggests that carcinosarcomas resemble epithelial metaplasia and derive from a single clone [5]. This could explain why their prognosis, lymphatic dissemination, and overall disease behavior are similar to those of carcinomas.

We report a case of uterine carcinosarcoma initially diagnosed as high-grade serous carcinoma.

2. Medical Case

A 75-year-old woman, G5P5, with a history of atrial fibrillation managed with rivaroxaban and hypertension treated with bisoprolol, presented with abnormal uterine bleeding one week prior to consultation.

Gynecological examination revealed a polyp prolapsing through the cervix. Pathological analysis suggested high-grade serous carcinoma.

MRI revealed irregular endometrial thickening infiltrating more than 50% of the myometrial thickness and extending to the cervical canal, classified as FIGO stage II as shown in **Figure 1**.



Figure 1. MRI T2-weighted sagittal section showing irregular endometrial thickening.

Based on the staging and histology, total hysterectomy with bilateral salpingo-

oophorectomy, omentectomy, peritoneal biopsy, and pelvic and para-aortic lymphadenectomy were planned.

Intraoperatively, carcinomatosis was discovered. The surgical procedure included total hysterectomy with bilateral salpingo-oophorectomy, infracolic omentectomy, peritoneal biopsy, and peritoneal cytology as shown in **Figure 2**. Pathological analysis revealed a carcinosarcoma with heterogeneous tissues, reclassified as FIGO stage IIIB.

The patient was treated with palliative chemotherapy (paclitaxel and carboplatin) but succumbed to the disease seven months post-surgery.



Figure 2. Macroscopic image of surgical specimens including the uterus, adnexa, omentum, ascitic fluid, and peritoneal biopsy samples.

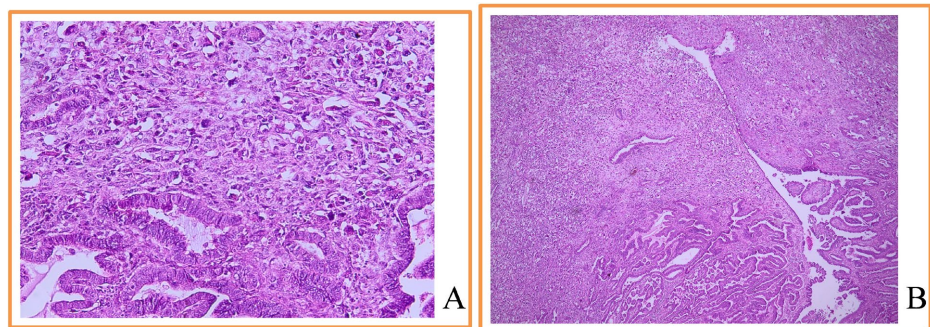


Figure 3. Microscopic image of histological section: A: Tumor proliferation with dual components: sarcomatous and carcinomatous [HE, x40]. B: The cells of both components exhibit marked atypia [HE, x20].

3. Discussion

Carcinosarcoma is a malignant mixed Müllerian tumor combining a mesenchymal malignant component with an epithelial carcinomatous component [6] as shown in **Figure 3**.

Although historically considered a uterine sarcoma, its prognosis is now understood to depend primarily on the carcinomatous component. These tumors are

currently classified as endometrial epithelial neoplasms [7] [8].

Carcinosarcomas predominantly affect postmenopausal women and typically present as abnormal genital bleeding [9] [10], as observed in our patient.

Clinical and radiological evaluations often underestimate disease extent [11]. In this case, the initial diagnosis was high-grade serous carcinoma based on a cervical polyp analyzed in a peripheral laboratory. MRI classified the tumor as FIGO stage II, but intraoperative findings of carcinosarcoma upgraded the disease to FIGO stage IIIB. Subsequent pathological analysis confirmed carcinosarcoma, a more aggressive entity that explains the rapid progression.

4. Conclusions

Uterine carcinosarcoma, also referred to as malignant mixed Müllerian tumor, is a rare and highly aggressive neoplasm predominantly affecting postmenopausal women. Combining carcinomatous and sarcomatous components, its prognosis remains poor due to its aggressive nature and advanced stage at diagnosis.

This case highlights the challenges of early detection and the critical role of a multidisciplinary approach in managing this complex pathology.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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