

Case Report

A Rare Case of Uterine Serous Carcinoma: Importance of Early Detection and Comprehensive Treatment in Postmenopausal Women

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Keywords

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Abstract

Introduction: Uterine serous carcinoma (USC) is an uncommon but highly aggressive subtype of endometrial cancer, constituting approximately 10% of all endometrial carcinoma cases. Due to its aggressive nature, it is often diagnosed at an advanced stage, with a significant proportion of patients presenting with metastasis. **Case Presentation:** This report deals with a case of a 75-year-old postmenopausal female with a history of obesity and hypertension, presenting with abnormal vaginal bleeding over 2 years. Her obstetric history included three cesarean sections, and she had not undergone a speculum examination for 35 years. Transvaginal ultrasound revealed a heterogeneous structure with cystic changes nearly filling the uterine cavity, suggestive of an intrauterine polyp. Dilation and curettage under general anesthesia disclosed that the uterine cavity is filled with gray, soft endometrial material. Histopathological examination confirmed the diagnosis of serous papillary carcinoma of the endometrium. Subsequent imaging was unremarkable for distal metastasis. The patient underwent an abdominal total hysterectomy with bilateral adnexectomy and pelvic lymphonodectomy. Histopathology indicated high-grade papillary serous adenocarcinoma with minimal myometrial invasion and metastasis in 3 out of 10 regional lymph nodes. Postoperatively, she received 25 sessions of radiotherapy and four doses of chemotherapy with paclitaxel and carboplatin. Nine months post-surgery, the patient remains in good health and adheres to a strict monitoring protocol. This case emphasizes the necessity of comprehensive diagnostic evaluations and aggressive treatment in postmenopausal women presenting with vaginal bleeding. **Conclusion:** Despite its typically poor prognosis, early

diagnosis and treatment of USC can lead to favorable outcomes. This case underscores the importance of timely intervention in managing postmenopausal vaginal bleeding, particularly in the context of potential malignancies.

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Introduction

Serous carcinoma is the most common malignant tumor in the ovaries but is an uncommon and aggressive subtype in the uterine cavity. About 10% of all endometrial cancers are serous carcinoma [1]. About 60–70% of patients with uterine serous carcinoma (USC) already have metastasis at the time of diagnosis [2]. Symptoms include postmenopausal vaginal bleeding, pelvic pain, weight loss, bloating, and feeling pressure or a lump in the pelvis [3].

As with the more aggressiveness in endometrial serous carcinoma, surgery to remove the uterus, cervix, tubes, and ovaries is usually the first step in treatment [4]. Treatment after surgery for patients who have serous carcinoma that has invaded the wall of the uterus or the cervix should undergo chemotherapy and radiation [4].

We present a case of a 75-year-old female with USC that caused postmenopausal vaginal bleeding. This case report has been reported in line with the CARE (CAse REport) Criteria by the authors, attached as online supplementary material (for all online suppl. material, see <https://doi.org/10.1159/000542359>) [5].

Case Presentation

A 75-year-old postmenopausal female, obese, and hypertensive presented with abundant vaginal bleeding for the past 2 years. She reported no abdominal pain or changes in bowel or bladder habits. Her obstetric history includes three previous cesarean sections, and her last speculum examination was 35 years ago. The patient strongly refused a vaginal examination and demanded that the vaginal examination be done only under anesthesia.

A transvaginal ultrasound revealed a heterogeneous structure with cystic changes measuring 20 × 20 × 15 mm, occupying nearly the entire uterine cavity, accompanied by strip effusion (shown in Fig. 1). The ovaries were normal in shape and size, and there was no free fluid in the pouch of Douglas, suggesting a differential diagnosis of intrauterine polyp, either benign or malignant.

Dilation and curettage (D&C) were performed under general anesthesia. The vagina and the cervix uteri were unremarkable. The uterine sonde length was 9.5 cm. The endometrial material was gray, very soft, and in a large amount, revealing a uterine cavity filled with gray, very soft endometrial material. Histopathological examination confirmed serous papillary carcinoma of the endometrium. Subsequent CT scans of the chest and abdomen were unremarkable post-D&C.

An abdominal total hysterectomy with bilateral adnexectomy and lymphonodectomy was performed without complications during or postoperatively (shown in Fig. 2). Histopathology indicated a high-grade papillary serous adenocarcinoma of the endometrium (GIII) (shown in Fig. 3), with the tumor invading less than half of the myometrium (1–2 mm) and no involvement of the cervix (shown in Fig. 4). Metastasis was found in 3 out of 10 regional lymph nodes, but all surgical margins were free of the tumor (shown in Fig. 5).

Fig. 1. Ultrasound imaging shows the unhomogeneous tissue in the uterine cavity. This image was taken during the initial diagnostic phase and highlights the cystic changes nearly filling the uterine cavity, which were suggestive of an intra-uterine polyp.



Fig. 2. Post-surgical procedures (enlarged uterus and unremarkable adnexae). This image displays the uterus post-total hysterectomy with bilateral adnexectomy, indicating successful removal without complications.



Four weeks postoperatively, a PET scan showed no pathological concentration of the radioactive substance. The patient underwent 25 sessions of radiotherapy and four doses of chemotherapy with paclitaxel and carboplatin. Nine months postoperatively, the patient is doing well and adheres to a strict monitoring and control protocol for her disease.

Discussion

A representative non-endometrioid endometrial carcinoma is USC, which accounts for about 10% of all endometrial cancers. Despite being the second most common type of endometrial cancer, USC is still considered a relatively rare tumor [1].

Diagnosing USC in postmenopausal women can be challenging due to its aggressive nature and the often nonspecific symptoms, particularly in cases where the presentation is atypical, such as prolonged vaginal bleeding without other symptoms like pelvic pain or abdominal discomfort. In this case, the patient presented with 2 years of postmenopausal bleeding but had not undergone a speculum examination for 35 years, increasing the difficulty of early detection.

Initial imaging with transvaginal ultrasound revealed a heterogeneous structure occupying the uterine cavity, initially suggestive of a benign intrauterine polyp. D&C were performed under general anesthesia, and the histopathological examination confirmed the diagnosis of GIII of the endometrium, a subtype of USC. The delay in diagnosis was primarily due to the atypical presentation and the patient's long gap in gynecological care.

Fig. 3. This image shows the papillary structures of USC. The histopathological examination confirmed high-grade papillary serous adenocarcinoma (GIII), providing a visual confirmation of the aggressive cancer type.

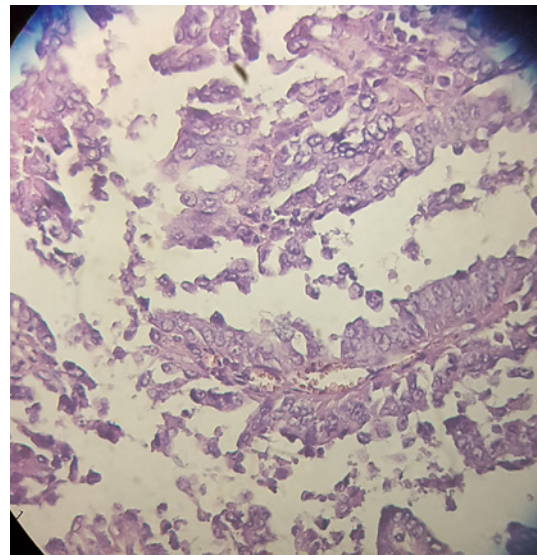


Fig. 4. This image shows tumor invasion of the myometrium. The tumor was found to invade less than half of the myometrium, indicating a relatively early stage of myometrial penetration.

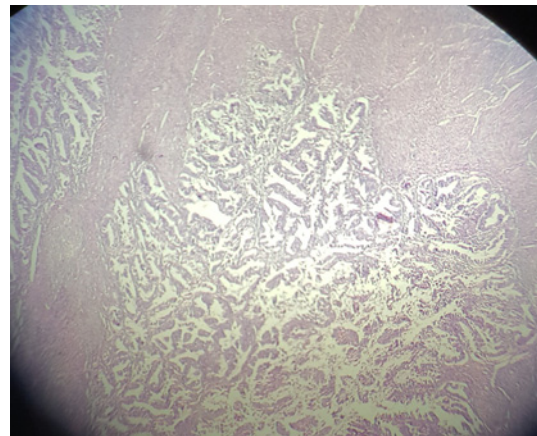
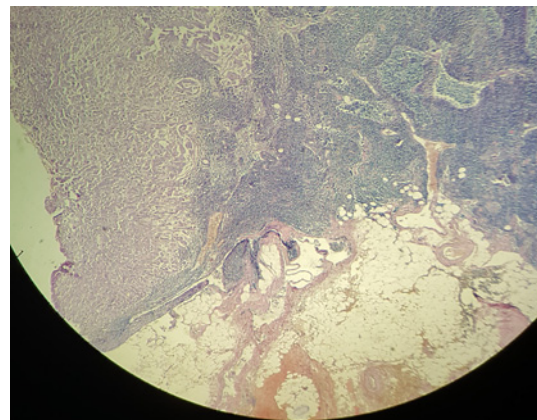


Fig. 5. This image shows the metastasis to pelvic lymph nodes. Metastasis was found in 3 out of 10 regional lymph nodes, which underscores the spread of the carcinoma and the need for comprehensive post-surgical treatment.



This case underscores the importance of maintaining a high index of suspicion in postmenopausal women presenting with atypical symptoms. While vaginal bleeding in postmenopausal women is often attributed to benign causes, the possibility of malignancy,

especially aggressive subtypes like USC, must be thoroughly investigated. Comprehensive diagnostic evaluations, including imaging, biopsy, and histopathological studies, are critical for early detection and appropriate management of USC. Early intervention is key to improving outcomes, as illustrated by this case, where a delayed diagnosis could have resulted in a worse prognosis.

Therefore, the initial management for most women with USC is surgery with comprehensive surgical staging [6]. Patients with USC should receive adjuvant chemotherapy, typically platinum plus Taxane combination, in order to reduce the risk of developing recurrence [7]. Adjuvant radiotherapy can be considered to reduce local and loco-regional control, especially in patients with nodal involvement. Adjuvant radiotherapy recommendations strongly depend on stage/risk group of disease and knowledge of lymph node status [1]. This patient underwent total hysterectomy with bilateral salpingo-oophorectomy and lymphonectomy. Histopathology revealed a high-grade USC (GIII). Metastasis was found in 3 of 10 regional lymph nodes. Adjuvant therapy was applied, including radiotherapy and chemotherapy. Paclitaxel was used in this case as chemotherapy.

Although targeted therapies like trastuzumab have shown promise, especially for HER2/neu-positive USC, these options were not utilized due to their high cost and the patient's financial constraints, as such therapies are unaffordable for many patients in Syria. Despite the lack of targeted therapies, this patient had a good outcome given the generally poor prognosis associated with USC, underscoring the variability in disease progression and response to treatment among patients. The absence of other symptoms commonly associated with advanced malignancies, such as abdominal pain or significant changes in bladder habits, highlights the sometimes subtle and insidious presentation of this disease.

Despite the typically poor prognosis associated with USC, the patient in this case experienced a favorable outcome. USC is known for its aggressive nature, with a high likelihood of metastasis at the time of diagnosis. In this case, metastasis to regional lymph nodes was confirmed, which generally indicates a worse prognosis. However, several factors likely contributed to the positive outcome.

First, the early-stage detection of the tumor, despite the patient's 2-year history of postmenopausal bleeding, played a crucial role. Although the cancer had metastasized to 3 out of 10 lymph nodes, the tumor had minimal invasion into the myometrium, which is a known factor for improved prognosis. Second, the patient underwent comprehensive surgical staging, which included total hysterectomy, bilateral adnexectomy, and pelvic lymphonectomy. This thorough surgical approach likely prevented further spread of the disease.

Furthermore, the patient's postoperative treatment regimen, including 25 sessions of radiotherapy and four doses of chemotherapy with paclitaxel and carboplatin, provided effective adjuvant therapy to control any residual cancer cells. Studies have shown that combining chemotherapy with radiation therapy improves survival in patients with USC, particularly in those with nodal involvement.

Women should regularly visit their doctors; this patient had not seen a doctor for 35 years, underscoring the significant risks associated with prolonged gaps in medical care. This case highlights the critical need for increased awareness and education among women regarding the importance of regular medical check-ups, especially as they age. Routine gynecological exams are vital for the early detection of various conditions, including malignancies, which can significantly improve prognosis and outcomes. Early detection is also key for identifying benign polyps that may progress into malignant conditions, such as those seen in uterine cancers. Timely interventions, enabled by regular visits, are particularly crucial for aggressive diseases like USC, where early diagnosis and treatment can

make a substantial difference. Moreover, this case could inform future clinical guidelines by reinforcing the importance of routine gynecological check-ups for postmenopausal women, especially those presenting with atypical symptoms like prolonged vaginal bleeding. Greater awareness and patient education on the necessity of routine exams could lead to earlier detection of malignancies like USC, thereby improving both prognosis and survival rates.

Conclusion

This case highlights the need for early detection and treatment of USC, given its aggressive nature and poor prognosis. Regular gynecological check-ups and prompt investigation of postmenopausal vaginal bleeding are crucial for improving patient outcomes. The patient's good outcome despite the typical prognosis associated with USC underscores the potential benefits of early and comprehensive treatment, including surgery, chemotherapy, and radiotherapy. Increased awareness and education about the importance of regular medical check-ups, especially as women age, are essential for early detection and intervention of conditions like USC, ultimately leading to improved prognosis and outcomes.

Statement of Ethics

This retrospective review of patient data did not require ethical approval in accordance with local/national guidelines. Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Conflict of Interest Statement

The authors declare no conflict of interest.

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Author Contributions

Amjad Hijazi, Gieth Alahdab, and Aland Oso: Writing – original draft, review, and editing. Ahmad Abboud: supervision, review, editing, and performing patient's histopathology. Safa K. Salman: supervision, final review and editing, patient's gynecological care, surgery, and follow-up. All authors read and approved the final manuscript. Safa K. Salman is the guarantor.

Data Availability Statement

All data generated or analyzed during this study are included in this article and its online supplementary material. Further inquiries can be directed to the corresponding author.

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