



UTERINE CARCINOSARCOMA MIMICKING BENIGN GYNECOLOGICAL LESIONS: CASE SERIES AND LITERATURE REVIEW.

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ABSTRACT

Background: Uterine carcinosarcoma (UCS) is a rare, aggressive uterine malignancy that may mimic benign gynecological lesions, leading to delayed diagnosis. **Case Series:** We present two postmenopausal women with UCS initially suspected as benign lesions. Case 1 (58 years) presented with mild postmenopausal bleeding, Case 2 (60 years) with abdominal pain, dysuria, and vaginal discharge without bleeding. Both underwent staging laparotomy, and histopathology confirmed biphasic UCS. Case 2 experienced rapid postoperative recurrence. **Conclusion:** UCS can mimic benign gynecological lesions. Early histopathological evaluation, comprehensive surgical staging, and adjuvant therapy are essential, although outcomes vary due to the aggressive nature of the disease.

KEYWORDS :

INTRODUCTION

Uterine carcinosarcoma (UCS), also known as malignant mixed Müllerian tumor (MMMT), is a rare and highly aggressive uterine malignancy, representing approximately 1–5% of all uterine tumors [1,2]. Historically classified as a sarcoma, evidence supports a monoclonal epithelial origin with secondary sarcomatous differentiation, leading to its reclassification as a high-grade endometrial carcinoma [3]. UCS predominantly affects postmenopausal women and commonly presents with abnormal uterine bleeding, pelvic pain, or rapidly enlarging uterine masses [1,4].

Early diagnosis is challenging because UCS can mimic benign gynecological conditions such as endometrial polyps or leiomyomas, and imaging features are often nonspecific [2]. Prognosis is poor, with survival influenced by tumor stage, histopathology, and biological aggressiveness [1,4]. We report two cases of UCS initially mimicking benign lesions, highlighting the importance of clinical suspicion, imaging, and histopathological confirmation for timely diagnosis and management.

Case Summaries

Case 1

A 58-year-old postmenopausal woman (P2L2) with type 2 diabetes mellitus, hypertension, and hypothyroidism presented with mild postmenopausal bleeding. Ultrasound suggested an endometrial polyp, and she underwent endometrial polypectomy. Unexpectedly, histopathology revealed UCS.

The patient underwent staging laparotomy with total abdominal hysterectomy (TAH), left salpingo-oophorectomy (SO), pelvic lymphadenectomy, infracolic omentectomy, and peritoneal fluid cytology. Intra-operatively, dense omental adhesions and nodules were noted, but no ascites or overt peritoneal disease was observed (Figure 1A–C). Histopathology confirmed biphasic Uterine carcinosarcoma, FIGO Stage I, with immunohistochemistry (IHC) positive for cytokeratin (CK), vimentin, and aberrant p53. Postoperative recovery was uneventful, and adjuvant chemotherapy with carboplatin and paclitaxel was administered.

Figure 1. Gross Pathological Specimens from Case 1 Staging Surgery

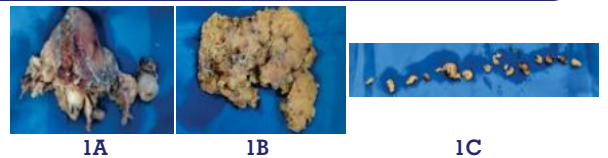


Figure 1- (A) Formalin fixed Uterine specimen following TAH demonstrating a polypoid endometrial mass occupying the uterine cavity. (B) Formalin-fixed infra-colic omentum showing nodular deposits and dense adhesions identified intra-operatively. (C) Resected pelvic lymph nodes submitted for histopathological evaluation.

Case 2

A 60-year-old postmenopausal woman (P3L3) with type 2 diabetes mellitus, hypertension, and coronary artery disease presented with intermittent lower abdominal pain, dysuria, and persistent vaginal discharge for four months, without bleeding. MRI revealed a large multilobulated abdominopelvic mass (6.8 cm CC × 10.5 cm TR × 5.7 cm AP) displacing the uterus posteriorly, abutting the bladder, sigmoid colon, and right iliac vessels. The uterus appeared normal, and minimal free fluid was seen in the Pouch of Douglas. Tumor markers were elevated (CA-125 208 U/mL, CEA 8.32 ng/mL, LDH 2012 U/mL), raising suspicion for malignancy.

Staging laparotomy included TAH, bilateral SO, infracolic omentectomy, and peritoneal fluid cytology. Intra-operatively, the uterus was found to contain a bulky, irregular, multilobulated mass. Total hysterectomy with bilateral salpingo-oophorectomy and sampling of pelvic/para-aortic lymph nodes was performed.

Gross examination revealed a variegated cut surface with firm gray-white areas, soft gelatinous regions, hemorrhage, and necrosis, replacing the endometrium and invading the myometrium. (Figure 2 A-B). Peritoneal fluid cytology was positive for malignant cells. These findings were consistent with a biphasic uterine carcinosarcoma (malignant mixed Müllerian tumor). Based on intra-operative and cytologic findings, the tumor was staged as FIGO 2018 Stage IIIA (tumor invades serosa and/or positive peritoneal cytology).

Rapid postoperative recurrence occurred on POD 20 with ascites and recurrent mass. Adjuvant chemotherapy with carboplatin and paclitaxel was initiated.

Figure 2. Imaging and Intra-operative Findings from Case 2

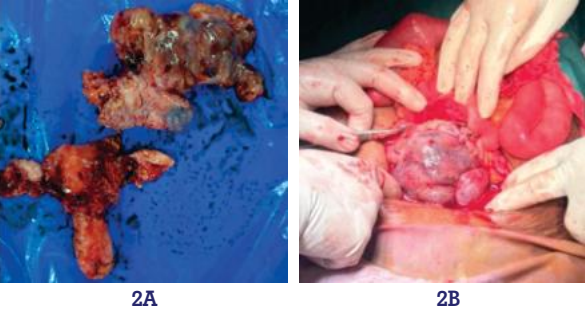


Figure 2- (A) Uterine specimen following TAH demonstrating a well-circumscribed subserosal leiomyoma causing uterine contour distortion. (B) Intra-operative photograph showing a large multilobulated abdominopelvic mass occupying the pelvis, displacing adjacent bowel loops and pelvic structures.

Diagnostic Challenges:

Uterine carcinosarcoma often presents with nonspecific symptoms and heterogeneous imaging findings, frequently mimicking benign gynecological conditions. This leads to preoperative mis-diagnosis and delayed recognition, with definitive diagnosis established only on histopathology demonstrating biphasic epithelial and mesenchymal components.

Table 1: Clinico-pathological Comparison

Parameter	Case 1	Case 2	Literature Comparison
Age (yrs)	58	60	60–80 (peak 70)
Parity	P2L2	P3L3	No consistent association
Menopausal Status	Post-menopausal (6 yrs)	Post-menopausal (15 yrs)	>90% post-menopausal
Presenting Complaint	Postmenopausal bleeding	Abdominal pain, dysuria, discharge	PMB 70–90%; atypical less common
Comorbidities	DM, HTN, Hypothyroidism	DM, HTN, CAD	DM, HTN, Obesity, metabolic syndrome
Imaging	Endometrial polyp	Broad ligament leiomyoma / ovarian neoplasm	Often misdiagnosed as benign
Tumor Markers	Normal CA 125	CA-125 208 U/mL, CEA elevated, LDH 2012 U/mL	Elevated in advanced disease; non-specific
Surgery	TAH + unilateral SO + pelvic LN + omentectomy	TAH + BSO + omentectomy	Standard: TAH + BSO ± staging
Intra-operative Findings	Omental adhesions	Large abdominopelvic mass	Advanced disease in 30–40%
Histopathology	Biphasic	Biphasic	Epithelial + mesenchymal
IHC	CK+, Vimentin+, p53+	CK+, Vimentin+, p53+	Confirms monoclonal origin
FIGO Stage	I	IIIA	40% present as Stage III/IV

Post-op Course	Uneventful	Rapid progression	Aggressive with early recurrence
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DISCUSSION

UCS can present with atypical symptoms such as pelvic masses, urinary complaints, or nonspecific pain, often mimicking benign lesions and delaying diagnosis [1,2]. In our series, Case 1 presented with postmenopausal bleeding resembling an endometrial polyp, while Case 2 presented with pelvic discomfort and urinary symptoms without bleeding, with imaging suggestive of a broad ligament mass. This aligns with literature reporting that up to 50% of UCS cases are initially misdiagnosed [2,3].

Definitive diagnosis depends on histopathology and IHC, confirming the biphasic pattern and monoclonal epithelial origin [3,4]. Both cases demonstrated CK and vimentin positivity with aberrant p53 expression, highlighting the need for early tissue diagnosis even when imaging appears benign [3].

Surgical staging with TAH, salpingo-oophorectomy, lymphadenectomy, omentectomy, and peritoneal cytology is essential [1,2]. Case 1 remained stable postoperatively, whereas Case 2 had early recurrence, demonstrating variable clinical course and aggressiveness even in macroscopically limited disease [1,4]. Adjuvant chemotherapy with carboplatin and paclitaxel is standard, with radiotherapy reserved for selected cases [4]. Literature indicates 30–40% of UCS present with extrauterine spread at diagnosis, contributing to poor prognosis [1,2].

Overall, this series emphasizes the diagnostic challenges, clinical heterogeneity, and importance of early histopathological evaluation to guide timely multimodal management [1].

Limitations

Small sample size, retrospective design, limited follow-up, and incomplete molecular data restrict generalizability and outcome assessment.

CONCLUSION

UCS can mimic benign gynecological lesions, leading to delayed diagnosis. Early histopathologic evaluation, comprehensive surgical staging, and adjuvant therapy are essential, although outcomes vary due to the aggressive nature of the disease. Clinicians should maintain a high index of suspicion for UCS in postmenopausal women presenting with atypical pelvic symptoms or masses [1].

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