Case report

EN BLOC TUMOR RESECTION AND ILIAC ARTERY RECONSTRUCTION USING ILIO-FEMORAL BYPASS IN A HEAVILY PRETREATED PATIENT WITH RECURRENT ENDOMETRIAL CANCER: A CASE REPORT

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This case report presents a 61-year-old woman with a history of endometrial carcinoma, initially treated with hysterectomy and chemotherapy in 2021. In 2023, due to pelvic disease recurrence, she received chemoradiotherapy followed by two lines of systemic therapy for disease progression. In July 2024, further progression was identified, revealing a large retroperitoneal tumor encasing major vessels and directly invading the left external iliac artery. Radiological imaging showed no evidence of distant metastasis.

Following a multidisciplinary discussion, a surgical intervention was planned. The patient underwent an extensive tumor excision, which included resection of the retroperitoneal mass along with the external iliac artery, followed by arterial reconstruction using an ilio-femoral bypass procedure. Histopathological and immunohistochemical analysis confirmed a poorly differentiated carcinoma consistent with endometrial cancer, with metastasis to the retroperitoneal lymph nodes.

The patient tolerated the procedure well and was discharged in satisfactory condition following postoperative care. This case underscores the clinical complexity of managing recurrent endometrial carcinoma with retroperitoneal lymph node metastasis, illustrating that surgical excision can be a vital option when chemotherapy does not achieve sufficient disease control. It emphasizes the importance of precise surgical intervention, particularly for patients with locally advanced recurrent disease.

Key words: endometrial cancer, retroperitoneal tumor, iliac artery reconstruction, ilio-femoral bypass

INTRODUCTION

Endometrial cancer is the most common gynecologic malignancy in developed countries, with a significant proportion of cases being diagnosed at an early stage due to early symptomatology [1]. However, advanced-stage and recurrent endometrial carcinoma present a substantial therapeutic challenge, particularly when the disease metastasizes to atypical sites such as the retroperitoneal lymph nodes [2]. Retroperitoneal lymph node metastasis is a rare but aggressive manifestation of endometrial cancer, often associated with a poor prognosis and a limited response to conventional therapies, including chemotherapy and radiotherapy [3]. Metastasis of endometrial carcinoma to the retroperitoneum is an uncommon event, as endometrial cancer typically spreads via the pelvic and para-aortic lymphatic systems [4,5]. Once the disease reaches the retroperitoneal space, surgical management becomes increasingly complex due to the proximity of vital structures such as the iliac vessels, ureters, and bowel [6,7]. In these cases, the involvement of vascular surgeons becomes critical, as excision of the tumor often requires intricate vascular reconstruction [8]. Chemotherapy remains the first line of treatment for metastatic endometrial cancer, but its efficacy in cases with retroperitoneal lymph node involvement is limited [9,10].

This case report presents an intriguing example of a 61-year-old female who was diagnosed with progressive disease of endometrial cancer and was heavily pre-treated with initial surgery, chemoradiotherapy for disease recurrence, and several lines of chemotherapy for disease progression. After disease progression in retroperitoneal lymph nodes involving the left external iliac artery/vein, radical surgical excision was offered after MDT discussion. The patient underwent an extensive tumor excision, which included resection of the retroperitoneal mass along with the external iliac artery, followed by arterial reconstruction using an ilio-femoral bypass procedure. Remarkably, this approach yielded clinical improvements, resulting in a notable improvement in the patient's performance status and overall quality of life.

CASE PRESENTATION

We present a case of a heavily pretreated patient with recurrent endometrial cancer. The patient is a 61-year-old woman with a history of moderately differentiated adenocarcinoma of the endometrium (GRADE-2), for which she underwent a hysterectomy with appendages in 2021. In 2023, due to pelvic disease recurrence, she received chemoradiotherapy followed by two lines of systemic therapy for disease progression. In July 2024, further pro-

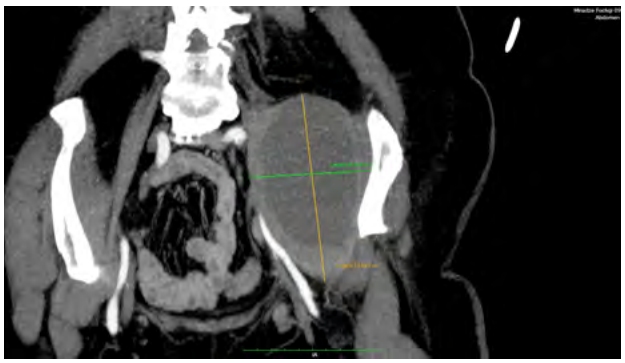

Figure 1. A large retroperitoneal tumor (CT coronal view)

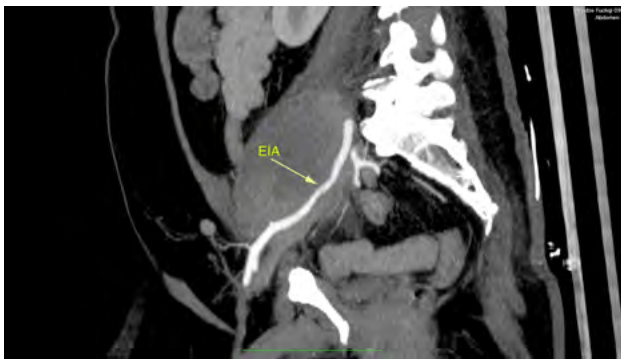

Figure 2. Retroperitoneal tumor associated with left external iliac artery (CT sagittal view)

gression was identified. She presented to our clinic with complaints of severe pain in the left lower quadrant of the abdomen and the left groin area. The patient also has a history of type 2 diabetes mellitus, diagnosed in 2010, which remains unmanaged.

On physical examination, the patient appeared with excessively developed subcutaneous fat. She was alert, oriented, and cooperative. Her vital signs were within normal limits (T: 36.3°C, P: 88 bpm, BP: 125/80 mmHg). The abdomen was soft but tender upon palpation in the left lower quadrant. There were no signs of peritoneal irritation. Cardiovascular and respiratory system examinations were unremarkable.

A CT scan of the abdomen with contrast, performed in July 2024, revealed a large retroperitoneal tumor closely associated with the left external iliac artery (Figure 1). The tumor was suspected to involve surrounding structures, including the iliac vein, artery, and ureter (Figure 2).

Despite chemotherapy to control the progression of the disease, a multidisciplinary decision was made to proceed with surgical intervention. The patient was scheduled for tumor excision and ilio-femoral bypass due to the involvement of critical vascular structures. image.jpeg

Histopathological Examination showed a poorly differentiated carcinoma of the retroperitoneal area involving soft tissue specimens and lymph nodes. Immunohistochemical Examination showed that the phenotypic and morphological changes in the tumor are most consistent with endometrioid-type carcinoma.

Surgical Intervention

In August 2024, the patient underwent a complex surgical procedure involving the excision of the retroperitoneal tumor and ilio-femoral bypass. The surgical approach included an incision from the left pubic symphysis to the rib cage, opening the retroperitoneal space. The tumor was found to be invading the iliac vein and artery, as well as closely adhering to the ureter and iliac bone (Figure 3). Following the excision of the tumor, ilio-femoral bypass was performed using a Dacron Graft 8 mm (Figure 4) . Postoperatively, the patient was managed with antibiotics, anticoagulants, crystalloids, and erythrocyte mass transfusions. image.jpegimage.jpeg

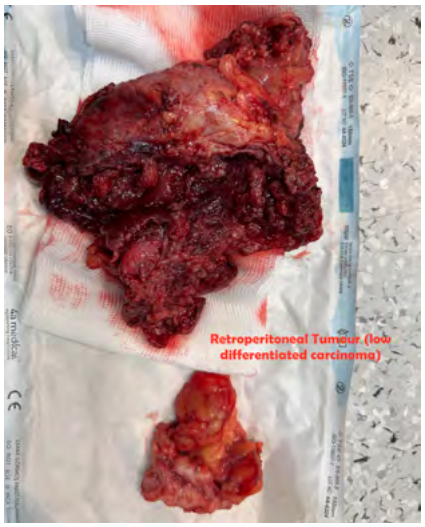

Figure 3. A poorly differentiated carcinoma of the retroperitoneal area

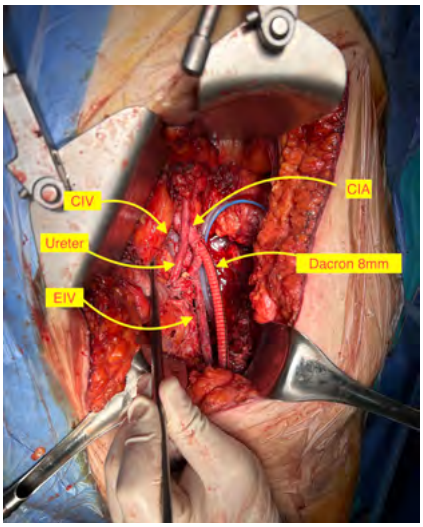

Figure 4. Ilio-Femoral shunt (Dacron graft 8mm)

OUTCOME AND FOLLOW-UP

After ten days of hospital care, during which her condition remained stable, she was discharged in satisfactory condition. Follow-up plans include regular imaging and consultations with oncology and vascular surgery teams to monitor for any signs of recurrence or complications.

DISCUSSION

Retroperitoneal cancers, particularly those that recur after initial treatment, present significant challenges in terms of surgical management and prognosis.

As vascular surgeons, our role in the management of such cases is paramount. This patient's tumor was not only located in the retroperitoneum but also encased the iliac vessels, necessitating ilio-femoral bypass following tumor excision [11,12]. The technical challenges associated with this type of surgery cannot be overstated, as the tumor's proximity to major vessels significantly increases the risk of intraoperative complications [13,14]. In recent literature, surgical resection combined with vascular reconstruction has been shown to improve local control and, in some cases, extend survival in patients with retroperitoneal metastasis of endometrial cancer [15,16]. This approach, while not curative, can provide symptomatic relief, prevent further vascular compression, and enhance the quality of life [17]. This case highlights the necessity of a multidisciplinary approach to recurrent endometrial carcinoma, where oncologists, gynecologists, and vascular surgeons collaborate to provide optimal care [18]. Surgical resection remains the definitive option regardless of chemotherapy, especially in the presence of vascular involvement [19]. By excising the tumor and performing ilio-femoral shunting, the goal was to reduce the tumor burden and prevent complications related to vascular compression [20,21].

This case exemplifies the difficulties in managing such tumors because of their proximity to vital structures such as blood vessels, nerves, and organs. The patient's history of endometrial adenocarcinoma with subsequent metastatic spread underscores the importance of vigilant follow-up and early intervention in cases of suspected recurrence. The decision to perform ilio-femoral shunting was led by the tumor's involvement with the iliac artery, demonstrating the need for advanced surgical techniques in managing complex retroperitoneal tumors. The patient's successful recovery post-surgery, despite her history of uncontrolled diabetes and previous chemotherapy, highlights the importance of a multidisciplinary approach in managing such cases. This case also raises important considerations for the prognosis of patients with recurrent retroperitoneal tumors. The involvement of the iliac vessels and close proximity to other critical structures suggest a guarded prognosis, with careful monitoring required to detect any signs of further recurrence or metastasis.

CONCLUSION

This case report illustrates the complexities of managing recurrent retroperitoneal cancer, particularly when the tumor involves critical structures like the iliac artery and vein. Surgical intervention, combined with comprehensive postoperative care, can lead to successful outcomes even in challenging cases. However, the risk of recurrence remains significant, necessitating ongoing follow-up and a multidisciplinary approach to care.

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