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CASE REPORT

Vaginal Metastatic Recurrence of a Bladder Tumor after Anterior Pelvectomy – A Case Report

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ABSTRACT

Background: Vaginal metastatic recurrence after anterior pelvic pelvectomy for bladder tumor is a rare occurrence that remains unexplained and requires specific recommendations to prevent or effectively treat it in a timely manner.
Case report: We report on a 69-year-old female patient with a history of hyperthyroidism who had undergone anterior pelvic pelvectomy for bladder tumor and presented a year later with vaginal bleeding. Gynecological examination with a speculum revealed four small budding tumors on the anterior vaginal wall. An anatomopathological study confirmed urothelial carcinoma. We performed surgical excision of all masses and complemented it with radiotherapy.
Conclusion: The purpose of our presentation is to discuss predictive factors for vaginal metastatic recurrence and to emphasize the importance of gynecological examination in follow-up after anterior pelvic pelvectomy, which we believe should be included in the recommendations for such follow-up.

KEYWORDS: Recurrence, Urothelial carcinoma, Vaginal metastasis.

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INTRODUCTION

Anterior Pelvectomy is the standard treatment for infiltrating bladder tumors in women [1]. Follow-up testing typically involves imaging and urethroscopy [2]. While metastatic recurrences are commonly observed in the liver, lungs, and bones [3], vaginal metastases are rare and can unfortunately go undetected in imaging examinations, as in the current case we are presenting. Early detection is critical to ensure appropriate care. In this article, we present our case to emphasize the importance of implementing certain recommendations to avoid such unpleasant situations.

CASE REPORT

A 69-year-old woman with a history of hyperthyroidism, taking synthetic antithyroid drugs for treatment, presented with hematuria for a year and a half. She underwent transurethral resection of the bladder in our department in March 2021, with an anapath revealing low-grade urothelial carcinoma G2 (pT2a, G2). A thoraco-abdomino-pelvic computed tomography scan showed thickening of the bladder wall, which was irregular, with no evidence of regional or distant metastases (see Figure 1(a)).
Our patient then underwent radical anterior pelvectomy with bilateral pelvic lymphadenectomy and ileal conduit urinary diversion. Intraoperatively, the tumor was found to be limited to the bladder without any infiltration into adjacent organs. The definitive pathological examination of the surgical specimen confirmed the diagnosis of bladder urothelial carcinoma along with diffuse bladder carcinoma in situ (CIS). The surgical margin was negative, and there was no cancer cell infiltration in either the resected uterus or the anterior wall of the vagina, with no lymph node involvement.
A year after the surgery, the patient presented with vaginal bleeding, and a physical examination revealed four papillary lesions on the anterior vaginal wall, developed away from the margin of section (see Figure 1(b)). A punch biopsy of the lesions demonstrated a striking resemblance in histological appearance to that of the original operative specimen. We performed a complete excision of the vaginal mass, which was laborious, as shown in Figure 1(c). The definitive examination of the surgical specimen confirmed the histological nature of these lesions as UC, as shown in Figure 2. Three months later, a vaginal examination found good scarring and a normal appearance of the vaginal wall without any detectable tumor. The patient was then referred to the oncology department for further care, where irradiation of the vaginal cavity was performed. Presently, the patient is alive and well, with no documented recurrence.

Figure 1: (a) A thoraco-abdomino-pelvic CT scan showed thickening of the bladder wall, which was irregular. (b) Physical examination showed a tumor on the anterior wall of the residual vagina. (c) Postoperative image showing complete excision of the vaginal mass.

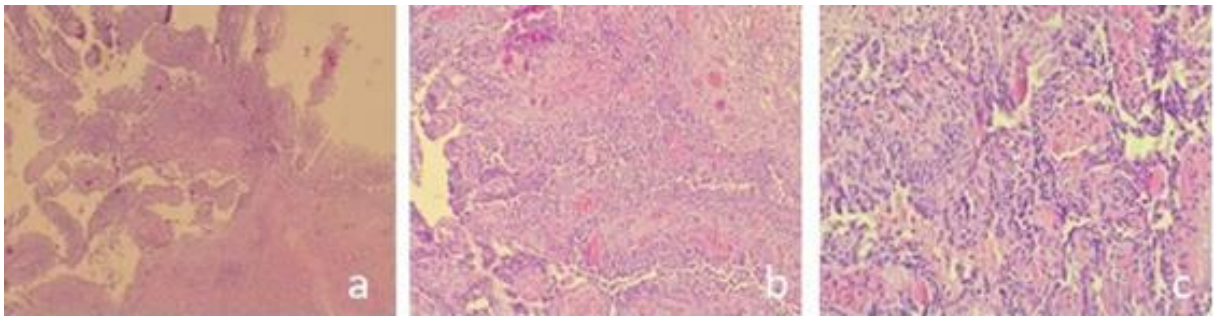

Figure 2: Microscopic examination of the surgical specimen for the vaginal tumor showed urothelial carcinomatous proliferation (hematoxylin-eosin stain, original magnification: (a) ×40, (b) ×100, (c) ×400).

DISCUSSION

The occurrence of urothelial carcinoma (UC) in the vaginal wall is a rare and heterogeneous condition. The most common secondary locations of urothelial carcinomas are the liver, lungs, and bones [3]. Vaginal recurrence of bladder carcinoma is also very rare, with only a few cases reported in the literature [4-7]. As a result, practical indications or guidelines cannot be provided to prevent this rare phenomenon.

The pathogenesis of vaginal recurrence of UC is considered to be residual UC or metastatic recurrence. In most cases, it is a tumoral residue of UC. Certain elements are in favor of this, such as the presence of positive margins (R1 resection) on microscopic examination and the development of the tumor at the level of the section slice scar [8]. In the case study discussed, the margins were negative (R0 resection), and the tumor grew away from the section slice. This leads us to consider it as a metastatic recurrence, despite the fact that it is a rare or even exceptional situation.

Several factors have been implicated in vaginal recurrence according to Chin et al. These include previous surgery and radiation to the organs in the pelvic region, unusual histological tumors (non-UC), and tumors located in the bladder neck and urethra. Patients with positive pelvic nodes at cystectomy are more likely to have vaginal recurrence than those with negative nodes [9, 10]. Additionally, the presence of lymphatic permeation allows cancer cells to migrate not only to lymph nodes but also to adjacent tissues, such as the vaginal wall [5]. The patient in this case did not present any of the mentioned factors, which suggests that other factors should be considered, such as the presence of CIS, as seen in our case.

There is little agreement on optimal treatment guidelines for these metastases because they are so rare. A combination of surgery, radiotherapy, and chemotherapy has been used in the treatment of these patients [9]. The discovery of a vaginal recurrence at an early stage, where complete resection is possible, seems to have a better prognosis compared to a discovery at a locally advanced stage where resection cannot be complete [7, 9]. The importance of a pelvic examination in routine follow-up of female cystectomy patients is highlighted by these findings.

The recommendations of urology societies concerning follow-up after cystectomy mainly focus on radiological assessment and urethroscopy, with no emphasis placed on clinical examination [1, 2]. In our opinion, urology societies should systematically include vaginal examination in the follow-up procedures for patients who have had previous pelvectomy, especially as it is an inexpensive examination that is completely affordable and requires little time. Despite the rarity of these situations, it is crucial to ensure that patients receive appropriate and comprehensive care during follow-up.

CONCLUSION

Special attention should be given to patients who are at risk of developing vaginal recurrence of UC. As urologists, it is important to remember to approach patient care as clinicians and not solely rely on imaging for follow-up after cystectomy. It is recommended to perform a systematic clinical examination, which includes a vaginal examination with a speculum, to avoid these rare occurrences. Early detection of vaginal recurrence ensures better treatment outcomes and improved prognosis. Therefore, we suggest that urology societies should incorporate routine vaginal examination in their follow-up procedures for patients who have undergone pelvectomy, as it is an affordable and time-efficient examination that can provide significant clinical information.

ABBREVIATIONS

UC: Urothelial carcinoma.
CT: computed tomography.
CIS: Carcinoma in situ.

PATIENT CONSENT

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

AUTHORS' CONTRIBUTIONS

The participation of each author corresponds to the criteria of authorship and contributorship emphasized in the Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals of the International Committee of Medical Journal Editors. Indeed, all the authors have actively participated in the redaction, the revision of the manuscript, and provided approval for this final revised version.

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