EJGO European Journal of Gynaecological Oncology

Vaginal cancer occurring in a woman with longstanding untreated total uterine prolapse

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Summary

Objective: To report on the rare case of a vaginal malignancy occurring in uterovaginal prolapse. *Case Report:* A 94-year-old postmenopausal woman with underlying diabetes mellitus who had been bedridden for over ten years is presented. She also had untreated longstanding uterovaginal prolapse with unknown HPV status. The investigation showed the squamous cell carcinoma (SCC) of the vagina at the lower two-thirds of the posterior vaginal wall with evidence of metastasis to the left high external iliac and internal iliac lymph nodes. Stage III primary carcinoma of the vagina with fourth-degree uterovaginal prolapse was diagnosed according to FIGO classification. Due to the patient's frail, elderly, and bedridden status, she was given palliative radiotherapy as a treatment. The patient passed away after the fifth course of radiotherapy. *Conclusion:* Vaginal cancer occurring in uterovaginal prolapse patients is exceedingly rare. The incidence of vaginal cancer is commonly seen in elderly women. The management of vaginal cancer should adhere to the same guidelines, regardless of uterovaginal prolapse and its complications..

Key words: Vaginal cancer; Uterovaginal prolapse; Squamous cell carcinoma.

Introduction

Vaginal malignancy is a rare condition, representing less than 2% of all gynecological cancers [1]. Squamous cell carcinoma (SCC) accounts for ninety percent of vaginal cancers and frequently occurs in the proximal third of the vagina, notably at the posterior vaginal wall [1]. The incidence of vaginal cancer is usually seen in postmenopausal or elderly women from 60-80 years of age [2]. Theoretically, the key risk factors for vaginal cancer are the same as those for cervical cancer [3]. Human papilloma virus infection is the most common cause of cervical cancer, as well as vaginal cancer [3]. We report a rare case of primary invasive carcinoma of the vagina associated with a total uterovaginal prolapse and review the relevant literature.

Case Report

A 94-year-old postmenopausal woman with underlying diabetes mellitus who had been bedridden for over ten years was referred to a tertiary care hospital with an irregular exophytic mass at the vagina for ten years. She also had the difficulty urinating and untreated longstanding uterovaginal prolapse. She denied having any other abnormal symptoms. She had no history of cervical intraepithelial lesions, and her HPV status was unknown. Per vaginal examination revealed total uterovaginal prolapse with an exophytic mass 10×8 cm in size at the lower two-thirds of the posterior vaginal wall (Figure 1). The cervix looked grossly normal with one centimeter of space between the vaginal tumor and the cervix. No evidence of local spread was detected. A biopsy of the vaginal lesion was taken, and the histopathological result showed SCC of the vagina. A metastatic workup revealed evidence of metastasis to the left high external and internal iliac lymph nodes. Stage III primary carcinoma of the vagina with fourth-degree uterovaginal prolapse was diagnosed according to FIGO classification. Due to

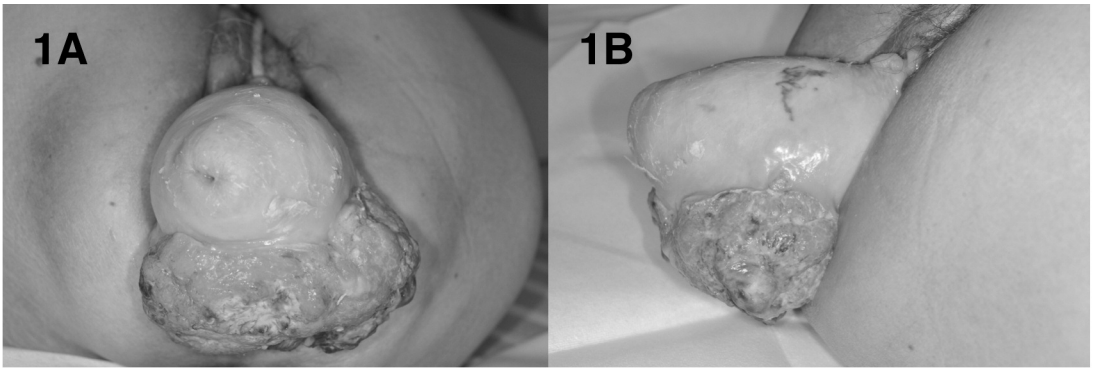

Figure 1. — An exophytic mass 10×8 cm in size at the lower two-thirds of the posterior vaginal wall in complete uterovaginal prolapse at the front view (A) and lateral view (B).

Revised manuscript accepted for publication March 14, 2018

Eur. J. Gynaecol. Oncol. - ISSN: 0392-2936
XL, n. 6, 2019
doi: 10.12892/ejgo4651.2019

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Table 1. — *Review of the literature on uterine prolapse complicated by vaginal cancer.*

Number	First author	Age (years)	Histological type	Diagnosis	Type of operation	Other treatment
1	Howat [4], 1984	74	Squamous	CA vagina with procidentia associated with enterovaginal VV fistula and prolapse of small bowel loop	Total hysterectomy with bilateral salpingo-ophorectomy and resection anastomosis of bowel	None
2	Rao [5], 1989	44	squamous	Third-degree uterine prolapse	None with FIGO Stage I vaginal carcinoma	External telecobalt radiotherapy
3	Rao [5], 1989	45	Squamous	Third-degree uterine prolapse with FIGO Stage I vaginal carcinoma	none	External telecobalt radiotherapy
4	Rao [5], 1989	50	Squamous	Third-degree uterine prolapse with FIGO Stage I vaginal carcinoma	none	External telecobalt radiotherapy
5	Rao [5], 1989	55	Squamous	Third-degree uterine prolapse with FIGO Stage III vaginal carcinoma	none	External telecobalt radiotherapy
6	Rao [5], 1989	61	Squamous	Third-degree uterine prolapse with FIGO Stage I vaginal carcinoma	Refused treatment	Refused treatment
7	Rao [5], 1989	72	Squamous	Third-degree uterine prolapse with FIGO Stage IV vaginal carcinoma	None	External telecobalt radiotherapy
8	Karateke [6], 2006	68	Squamous	Stage II vaginal carcinoma with third-degree uterovaginal prolapse	Subtotal hysterectomy and bilateral salpingo-oophorectomy with the cervix bilaterally suspended to the pectineal ligaments by polypropylene mesh	Radiotherapy
9	Iavazzo [7], 2007	80	Squamous	Third-degree uterine prolapse with FIGO stage I vaginal carcinoma	Radical vaginal hysterectomy and excision of the upper two-thirds of the vagina without pelvic lymphadenectomy external	Radiotherapy
10	Gupta [8], 2007	60	Squamous	Third-degree uterovaginal prolapse with FIGO stage III vaginal carcinoma	None	Chemoradiation
11	Ghosh [9], 2009	50	Squamous	Stage I primary carcinoma of the vagina with third-degree uterovaginal prolapse with cystocele and enterorectocele	Radical vaginal hysterectomy with bilateral extraperitoneal pelvic lymphadenectomy	None
12	Batista [10], 2009	73	Verrucous epidermoid carcinoma	Vaginal vault prolapse with stage I vaginal carcinoma	Partial transvaginal colpectomy	External radiotherapy
13	Acharya [11], 2012	84	Squamous	N/A	N/A	N/A
14	Kim [1], 2013	80	Squamous	Third-degree uterine prolapse with cystocele and rectocele with FIGO Stage IVb vaginal carcinoma	None	None
15	Wang [12], 2014	61	Squamous	Third-degree uterine prolapse with FIGO Stage I vaginal carcinoma	Vaginal hysterectomy with vaginal apex fixation, with partial vaginectomy to remove the vaginal carcinoma and anterior and posterior colporrhaphy	Radiotherapy
16	Current study	94	Squamous	Third-degree uterine prolapse with FIGO Stage III vaginal carcinoma	None	None

**N/A: not available*

the patient's frail, elderly, and bedridden status, she was given palliative radiotherapy as a treatment. The patient passed away after the fifth course of radiotherapy.

Discussion

Primary malignant vaginal cancers are rare and account for only approximately 1–2% of all gynecological cancers [3]. They are most frequently reported in patients 60-80 years of age [2]. SCC accounts for more than 95% of vaginal cancers is and typically involves the proximal third of the anterior or posterior of the vagina[3].

Based on a search of the English-language literature in print and on PubMed, we found only 16 cases (including our own data) of primary vaginal cancer occurring in uterovaginal prolapse patients reported [1, 4-12]. The mean age ± SD was 65.7 ± 14.8 years. Only one case was vaginal vault prolapse with vaginal cancer. SCC was reported in 93.75% of cases, and epidermoid carcinoma was reported in 6.25% of cases (one case), as shown in Table 1.

The combination of vaginal malignancy and uterovaginal prolapse is relatively rare, as is irreducible prolapse [12]. Ulcerative vaginal carcinoma lesions are usually present in prolapse patients. A possible explanation for this is that the displacement of the vagina to the outside environment leads to harmful exudate, which causes chronic irritation of the exposed vagina and contributes to these ulcerative morphologies. In our case, the diabetic patient's HPV status was unknown and the cervix appeared to be grossly normal. Therefore, it may be chronic mechanical irritation in the immunocompromised host and neglecting to treat the prolapse that increased the patient's risk of developing vaginal cancer. Punch biopsy of the lesions or colposcopic examination can be used to confirm histological diagnosis before the operation in prolapse patients in whom an abnormal vaginal mass is present in order to exclude underlying malignancy.

There is still controversy regarding the proper management of this kind of malignancy due to the rarity of the disease. Surgery is suitable only in the early stages of the disease when there is no evidence of metastasis, whereas radiotherapy is preferable in advanced cases. In our case, the patient received palliative radiotherapy due to the advanced stage of the disease and her medically ill status.

Conclusions

Vaginal cancer occurring in uterovaginal prolapse patients are exceedingly rare. The incidence of vaginal cancer is commonly seen in elderly women. The management of vaginal cancer should adhere to the same guidelines, regardless of uterovaginal prolapse and its complications.

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