

Management of a case of primary vaginal cancer with irreducible massive uterine prolapse - a case report

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Summary

Primary cancer of the vagina constitutes 1-2% of all malignant genital tract tumors in women. As one of the most complicated therapeutic problems in gynecological oncology, this disease had been deemed to be untreatable until the end of 1930s. Presently, as a result of technological improvements in radiotherapy and radical surgery, more favorable prognoses are known to be achieved even in advanced cases. In the present case, a woman with vaginal cancer and Stage IV massive uterovaginal prolapsus, which could not be repositioned under general anesthesia, was repositioned by surgical intervention prior to radiotherapy to avoid any potential vesicovaginal fistula formation. The cervix was bilaterally suspended to the pectineal ligaments by polypropylene mesh.

Key words: Primary vaginal cancer; Uterine prolapse; Vesicovaginal fistula.

Introduction

Primary cancer of the vagina is one of the rare malignant diseases observed in women. It often occurs in the upper one-third part of the vagina on the posterior wall, and epidermoid carcinoma is the most commonly encountered form [1]. Of all cases only 10% are below the age of 40, while 70% are over the age of 50 [1].

The pathogenesis of squamous cell cancer of the vagina is unknown. Chronic irritation and HPV infection have been implicated in the etiopathogenesis [2, 3]. It was found that 6% of the cases of carcinoma of the vagina were associated with prolapse [4]. Treatment of primary vaginal carcinoma possesses some difficulties. Treatment must be individualized and varies depending on the stage of disease, general health condition and age of the patient, and the site of vaginal involvement. Surgery has a limited role in the management of patients with vaginal cancer and radiotherapy is the treatment of choice in most cases. Vesicovaginal fistula formation following or during radiotherapy seems to be increased in patients with primary vaginal cancer and uterovaginal prolapse [5]. Thus delivering radiotherapy after treatment of prolapse may be a legitimate option in preventing possible fistula formations.

In this case report, the management of a woman with a huge irreducible uterovaginal prolapse and Stage II vaginal carcinoma is presented.

Case Report

A 68-year-old multiparous patient presented with the complaint of uterine prolapse and lesion formation. During gynecologic

examination of the patient, who had had her last period 15 years before, a massive uterovaginal prolapse and a wide-base ulcerative lesion, measuring 11 x 7 cm, with infected margins and exophytic appearance on the anterior wall of the vagina were found (Figure 1). The uterus and ovaries were not observed in the pelvis at transabdominal ultrasonographic examination, and bilateral grade 3 hydronephrosis was present. *S. Aureus* strains were cultivated in the culture media taken from the lesion and a proper antibiotic was administered. The incisional biopsy of the ulcerous lesion was reported as well-differentiated squamous carcinoma. Colposcopic examination of the cervix and vulva was normal. Cystoscopy revealed edematous mucosa. The patient was evaluated as having grade 2 vaginal carcinoma with extension to the submucosal layer of the vagina. Whole blood count, liver and renal function tests were unremarkable. Cardiologic consultation of the patient revealed an apical aneurysm in the left ventriculography, and two artery diseases at coronary angiography were detected. Since the cardiologic risk index was high, the patient was considered to not be able to tolerate radical pelvic exenteration. Moreover, because of the total uterovaginal prolapse, radiotherapy was not considered to be a convenient alternative for the patient because of the high potential risk of a vesicovaginal fistula. Thus it was decided to carry out radiotherapy after the prolapsed part had been reduced. However, in our case, reduction was not possible under general anesthesia. Therefore surgical reduction had to be tried by switching to laparotomy. The prolapsed part was reduced by applying pressure on it from outside, while at the same time by pulling the uterus with significant power through the pelvis. Following reduction it was decided to perform hysterectomy and to anchor the vagina to a fixed structure in order to prevent recurrent prolapses. After performing subtotal hysterectomy and bilateral salpingo-oophorectomy, the cervical stump was approximated by continuous suture with no. 1 polydioxane (dexon) sutures. Six 9 cm polypropylene mesh (Surgipro) was folded into two parts. Neoconstructed mesh was 3 cm in width and 10 cm in length. Five centimeters of the open edge of the folded mesh was sutured by three no. 1 prolene sutures. The closed side of the remaining 4 cm of the mesh was cut and a free anterior leaf of the mesh was placed on the ante-

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rior surface of the cervical stump and a posterior leaf of the mesh was placed on the posterior surface of the cervical stump. The anterior leaf was sutured by three prolene no. 1 sutures on the anterior wall of the vagina and the posterior leaf was sutured in the same fashion to the posterior wall of the vagina. Then the space of Retzius was entered and the free end of the mesh was divided into two parts longitudinally up to the vaginal apex where it was attached to the vagina at the middle, like a trouser. Each part was passed under the peritoneal surface clamps near the lateral margins of the bladder by long curve, and then each part of the mesh was anchored to the lateral portion of the ipsilateral pectineal ligament by two no. 1 prolene sutures. The paravaginal defect repair was performed with no. 1 prolene sutures. The enterocele sac was closed by three lines of Moschowitz suture with 2-0 prolene. Then in order to avoid ureteral kinking Halban sutures were applied with prolene 2-0 suture material above these three suture lines. Following peritonization of the vaginal cuff the mesh remained completely retroperitoneal. The abdomen was closed. Posterior compartment repair was also performed.

The postoperative course was uneventful. On the eighth postoperative day, the patient was discharged. At the 20th postoperative month the patient, who had received 5000 cGy external radiotherapy to the tumor, was still under our surveillance with no evidence of disease.

Discussion

Since 80-90% of neoplasias found in the vagina are metastatic cancers of the cervix, vulva, or endometrium, primary cancer of the vagina is rarely seen. The average age of diagnosis is 60. Perez *et al.* reported that 76% of the patients were over the age of 50 [6]. In our case the patient was a 68-year-old woman who had been suffering from uterine prolapse for five years. The size of the lesion may differ from an occult lesion to the diameter of 10 cm as in our case (Figure 1), and its gross appearance could be polypoid, exophytic, and wide-based.



Figure 1. — Massive uterovaginal prolapse and a wide-base ulcerative lesion measuring 11 x 7 cm with infected margins and exophytic appearance on the anterior wall of the vagina.

Since patients in most cases are older, sexually inactive and do not have periodic pelvic examinations, vaginal cancer is a disease that is diagnosed, in general, at a later stage [6]. Vaginal carcinoma is graded clinically according to the FIGO grading system. In grading, surgical-pathological criteria are not used. The FIGO grading system requires tumor invading only the vagina to be named as primary vaginal cancer [7]. In cases of tumors invading both the cervix and the vagina, the origin of the disease must be deemed to be of cervix-origin, and the patient should be diagnosed with cervical cancer [7]. If there is a tumor which invades both the vulva and vagina, this tumor should be evaluated as a primary vulvar cancer [7]. In our case, no pathology was found in the colposcopic and histopathologic examinations of the vulva or cervix. The carcinoma was diagnosed as FIGO grade 2 vaginal cancer since it invaded the submucosal layer of the vagina. As in our case, in general, 75% of the cases present as Stage II-IV diseases [7]. This shows that vaginal cancer is diagnosed at a late stage, and that the type of treatment and cure ratios that will be carried out would be affected negatively.

Management of women with uterovaginal prolapse and primary vaginal carcinoma is further challenging if the patients are in advanced stage requiring radiotherapy and have medical illnesses preventing them from radical surgery. In our case, the patient had serious cardiac problems impeding the radical surgery. There was the choice of external radiotherapy with telecobalt. However, with external radiotherapy, there is a high risk of a vesicovaginal fistula. Development of vesicovaginal fistulas was observed in two (18.1%) out of 11 cases with irreducible third degree prolapses to which external radiotherapy was delivered [5]. The incidence of vesicovaginal fistula in cases of vaginal carcinoma without prolapse is 1.25%, which is much lower than that of cases with prolapse [8]. Therefore, in our case, to prevent potential vaginal fistula formation, carrying out radiotherapy following uterovaginal repositioning was considered as a solution. However, in our case, reduction was not possible under general anesthesia. Therefore, external radiotherapy was delivered following the surgical reduction. Via a short-lasting operation, the uterus was reduced by pulling it through the pelvis while at the same time applying significant force from outside. To prevent the recurrence of prolapse after reduction, the cervix was suspended bilaterally to the pectineal ligament following subtotal hysterectomy.

In conclusion, in cases of vaginal carcinoma with uterine prolapse, performing radiotherapy following reduction seems to be a legitimate option to decrease the incidence of a vesicovaginal fistula (VVF). However, it may not be possible to reposition the prolapse and to carry out radiotherapy under general anesthesia in case advanced stage vaginal cancer develops on the massive uterovaginal prolapse base. Repositioning in these types of cases during laparotomy, the uterus can be reduced by being pulled through the pelvis, while being pushed in with outer pressure. In our case, subtotal hysterectomy was performed after reduction. The reason to perform

subtotal hysterectomy is to fix the vaginal apex in order to avoid any recurrence of prolapse. We performed subtotal hysterectomy both to pull the uterus powerfully and symmetrically from its anterior and posterior walls, with the pectineal ligament being preferred for suspension instead of the sacral promontory as it was less invasive. It should not be forgotten that the reduction procedure requires enormous power. We suggest that in order to prevent any recurrence of prolapse after reduction, that the cervix be suspended to the rectus muscle, to Cooper's ligament, or to the sacral promontory by means of polypropylene mesh by performing subtotal hysterectomy as a practical method. Though anatomically a more physiological procedure, we did not prefer to anchor the cervix to the sacrum because of the complexity of this procedure when compared to anchoring to the pectineal ligaments in order to shorten the operation time. In our case, the patient has not developed a vesical-vaginal fistula. Furthermore the treatment of uterine prolapse was also accomplished. However, to precisely show the superiority of radiotherapy following reduction, additional cases are needed.

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