Vaginal malignant melanoma in a healthy pregnancy - a case report

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Summary

Vaginal melanomas account for fewer than 2% of vaginal malignancies. The mean age at diagnosis is 55 years and the prognosis is poor, with an overall 5-year survival rate of 5% to 10%.

Key words: Malignant melanoma; Pregnancy.

Introduction

Vaginal neoplasms

Intraepithelial neoplasia

Carcinoma in situ of the vagina (VAIN) is much less common than its counterparts on the cervix or vulva. Most lesions occur in the upper third of the vagina, and the patients are usually asymptomatic [3].

Carcinoma in situ of the vagina appears to be related to infection with the wart virus in many cases [3]. Patients with a past history of in situ or invasive carcinoma of the cervix or vulva are at increased risk [3]. Some lesions may occur after irradiation for cervical cancer [3].

Such diagnosis is usually considered because of an abnormal Papanicolaou smear in women who either have had a hysterectomy or no demonstrable cervical abnormality. Definitive diagnosis requires vaginal biopsy, which should be directed by colposcopy or Lugol's iodine staining. Colposcopic findings are similar to those seen in cervical lesions, although thorough colposcopy of all vaginal walls is technically more difficult. In postmenopausal patients, a 4-week course of topical estrogen before colposcopy is indicated to enhance the colposcopic features and eliminate those patients with Papanicolaou smear abnormalities due to inflammatory atypia.

Surgical excision is the mainstay of therapy, and usually requires excision of the vaginal apex. At times, extensive disease requires total vaginectomy and creation of a neovagina using a split-thickness skin graft. Laser therapy and topical 5-fluorouracil are alternatives to surgical excision.

Squamous cell carcinoma of the vagina

Squamous cell carcinoma of the vagina is uncommon. The mean age of patients at presentation is about 60 years [1]. Up to 30% of patients with primary vaginal cancer have had a history of in situ or invasive cervical cancer that was treated at least five years earlier [1]. Symptoms consist of abnormal vaginal bleeding, vaginal discharge, and urinary symptoms. On physical examination, ulcerative, exophytic, and infiltrative growth patterns may be seen. About half of the lesions are in the upper third of the vagina, particularly on the posterior wall [2]. Punch biopsy is required to confirm the diagnosis.

Vaginal cancer spreads by direct invasion as well as by lymphatic and hematogenous dissemination. Direct tumor spread may result in involvement of the bladder, urethra, or rectum, or progressive lateral extension to the pelvic side wall. Lymphatic drainage from the upper vagina is to the obturator, hypogastric, and external iliac nodes, whereas the lower vagina drains primarily to the inguinofemoral nodes. Hematogenous spread is uncommon until the disease is advanced.

FIGO staging for vaginal cancer is clinical, as shown in Table 1. All patients should have at least a chest X-ray, intravenous pyelogram, cystoscopy, and sigmoidoscopy. A pelvic and abdominal computed tomography (CT) scan may be useful to detect lymph node metastases, which can be confirmed by fine needle aspiration, but a finding of involved nodes does not change the FIGO stage.

Radiotherapy is the main method of treatment for primary vaginal cancer. Initial treatment usually consists of 4500 to 5000 cGy external irradiation to the pelvis to shrink the primary tumor and treat the pelvic lymph nodes and paravaginal tissues. Small tumors may then be treated with intracavitary vaginal applicators, but in general, interstitial therapy is preferable because of the higher doses that can be delivered to deeper tissues. When the lower third of the vagina is involved, the groin nodes should either be included in the treatment field or surgically removed.

Radical surgery has a limited role in the management of vaginal cancer. Radical hysterectomy, partial vaginectomy, and pelvic lymphadenectomy may be performed for early lesions in the posterior fornix. Surgery should otherwise be reserved for medically fit patients in whom a central recurrence develops following irradiation. Pelvic exenteration with creation of a neovagina may be

Revised manuscript accepted for publication November 26, 2005

appropriate in such patients provided that there are no lymph node metastases at the time of exploratory laparotomy and adequate surgical margins can be attained.

The overall 5-year survival for vaginal cancer is about 50% [5]. When corrected for death from intercurrent disease, 5-year survival rates are approximately 85% to 90% for Stage I lesions, 55 to 65% for Stage II lesions, 30 to 35% for Stage III lesions, and 5 to 10% for Stage IV lesions [5].

Table 1. — *International Federation of Gynecology and Obstetrics Staging of Vaginal Cancer.*

Stage	Description
Stage I	Carcinoma limited to the vaginal wall.
Stage II	Carcinoma has involved the subvaginal tissue but has not extended onto the pelvic side wall.
Stage III	Carcinoma has extended to the pelvic side wall.
Stage IV	Carcinoma has extended beyond the true pelvis or has involved the mucosa of the bladder or rectum.
Stage IVa	Spread to bladder or rectum.
Stage IVb	Spread to distant organs.

Rare vaginal cancers

Adenocarcinoma

Most adenocarcinomas of the vagina are metastatic, usually from the cervix, endometrium, or ovary, but occasionally from more distant sites such as the kidney, breast, or colon. Most primary vaginal adenocarcinomas are clear cell carcinomas in female offspring of women who ingested diethylstilbestrol (DES) during pregnancy [3]. Primary adenocarcinomas of the vagina not related to DES are rare but may arise in the residual glands of müllerian (paramesonephric) origin, Gartner's duct (a remnant of the embryonic wolffian or mesonephric duct), or foci of endometriosis [2].

Malignant melanoma

Vaginal melanomas account for fewer than 2% of vaginal malignancies and the mean age at diagnosis is 55 years [5]. This carcinoma usually occurs on the distal anterior wall. Radical surgery has been the traditional treatment and radical hysterectomy and vaginectomy or some type of pelvic exenteration may be requered, depending on the location and extent of disease. A reasonable alternative is conservative tumor resection and postoperative radiation therapy. The use of high-dose fractions (greater than 4000 cGy) may be beneficial. The prognosis is poor, with an overall 5-year survival rate of 5% to 10% [5].

Sarcoma

Vaginal sarcomas are rare. In adults, leiomyosarcomas are most common, whereas in infants and children, sarcoma botryoides predominates [4]. The latter term comes from the Greek *botrys*, a bunch of grapes, which these lesions usually grossly resemble. The mean age at diagnosis of sarcoma botryoides is two to three years, with a range of six months to 16 years [3]. They are usually multicentric; histologically the tumor is an embryonal rhabdomyosarcoma. Treatment consists of surgical resection of gross disease followed by adjuvant chemotherapy, with or without radiation therapy.

Case Report

A patient at the 36th week of gestation, with a previous operative delivery because of an obvious fetopelvic disproportion and the presence of condylomata in the cervical canal in the active phase, was sent by her gynecologist for routine examination of human papillomavirus (HPV) re-infection.

During colposcopic and smear examination to stage the virus type and administer preventive antibiotic therapy, a change was observed which was suspicious of melanoma in the distal third of the front vaginal fornix. Not one of the examinations performed in the previous three years had shown any similar formation.

Cervical smears indicated existence of Staphylococcus aureus and enterococcus infections sensitive to penicillin and erythromycin preparations.

We repeated the examination by hysteroscopy and performed vaginoscopy. The findings pointed to a dark prominence in the area of rugae vaginalis in the distal third of the upper fornix, up to 2 mm in size, without similar changes in the surrounding tissue or other parts of the vaginal wall. Hyperechogenous echoes or increased vascular patterns were not present. A tendency toward other parts of the body was excluded. Family history was negative. By gynecological examination and ultrasonography of the small pelvis veins, increased lymph drainage and node enlargement were excluded.

Since the described change was malignant and melanoma-like, although it was difficult to establish the diagnosis in a term-pregnant woman having her second child, we decided to perform excision after the delivery and then to diagnose further. In the 38th week of gestation, the patient was delivered by cesarean section. A healthy female baby weighing 3,450 g was born. With the patient under anesthesia, we performed an excision of the described change, 3 cm wide and 0.5 to 0.75 cm deep, with multiple rinses by *octenidindi* and normal saline solution. Double vicryl stitches were applied on the front vaginal wall and the catheter was removed three days after delivery.

Histological analysis pointed to the suspicion of malignant melanoma.

Considering the established diagnosis and the fact that the patient had had two healthy children, in agreement with the patient and medical board, radical hysterectomy with the upper third of the vagina and nodes extirpation were performed. Histological findings did not indicate node infiltration. The patient was referred to the Institute of Radiology 20 days after the cesarean section and ten days after re-intersection for high-dose radiation. Lactation was suspended.

Discussion

Today, 47 months after the surgery, the patient has had no recurrence, and the quality and standard of her life are satisfactory. She has regular examinations.

Conclusion

Although the speculum is more than necessary and many times confirmed as an excellent tool in the hands of gynecologists, it is necessary to rotate it and to always keep in mind that the vaginal wall is excellent ground for pathological changes.

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