Adenocarcinoma in a Hysterectomized Woman – Case Report

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ABSTRACT
The presence of glandular cells in the vagina of hysterectomized women might have several origins. These cells may undergo malignant changes and thus give rise to primary adenocarcinoma of the vagina. This kind of neoplasia is rare and the most common risk factor for its development is the intrauterine exposure to diethylstilbestrol.

We report the case of a 70 year-old patient with a clinical history of hysterectomy at the age of 36 to control bleeding after miscarriage. A mass in the anterior wall of the vagina was detected by the ultrasound examination. A vaginal cytology showed atypical glandular cells with features of adenocarcinoma, not otherwise specified. A subsequent biopsy showed a vaginal adenocarcinoma. There was no clinical information about possible intrauterine exposure to diethylstilbestrol.

Key-words: adenocarcinoma, vaginal cytology, hysterectomy, diethylstilbestrol.
INTRODUCTION

Glandular cells can occasionally be found in vaginal cytologies of women who underwent hysterectomies\(^1\). However, the origin and the cause associated with the presence of these cells is not exactly known\(^2\).

According to literature, the incidence of primary vaginal adenocarcinoma is low (5-10% of all the vaginal carcinomas)\(^3\),\(^4\).

In the following case, which reports a primary adenocarcinoma of the vagina, the etiological origin of the lesion is unknown, judging by the fact that there is no available data concerning the use of diethylstilbestrol by the patient’s mother.

CLINICAL HISTORY

Seventy year-old woman with a history of total hysterectomy performed at the age of 36, after genital bleeding resulting from miscarriage. In 2013, due to symptoms of mixed urinary incontinence, the patient was submitted to a transvaginal ultrasound exam, which showed an irregular mass of 2.9 x 2.1cm in the anterior wall of the vagina. Afterwards, a vaginal cytology was performed.

CYTOLOGICAL FINDINGS

The liquid-based vaginal cytology showed an atrophic epithelium, containing clusters of glandular type cells with increased nuclear-to-cytoplasmatic ratio, irregular nuclear membrane and irregularly distributed chromatin, as well as small but prominent micronucleoli. The presence of rosette pseudo-formations (Fig.1) and feathering was also observed (Fig.2).

The final cytological result was adenocarcinoma, Not Otherwise Specified (ADC, NOS).

COMPLEMENTARY EXAMINATIONS

The patient was submitted to a computed tomography (CT scan), which did not detect any lesions.

An abdominal-pelvic Magnetic Resonance Imaging (MRI) found a mass in the anterior wall of the vagina and vaginal apex, with a noticed loss of the cleavage plane with the posterior wall of the bladder.

A biopsy of the vaginal mass was then performed. The urethrocystoscopy showed that the trigone was deformed by a lesion extrinsic to the vesical mucosa.
HISTOLOGICAL FINDINGS

The biopsy of the vaginal lesion showed vaginal mucosa with groups of glandular cells exhibiting criteria for architectural, cytological and proliferative dysplasia, namely the formation of papillary structures (Fig.3). In this context, glandular proliferation was observed, with irregular formations, pleomorphic cells and large, elongated and hyperchromatic nuclei – features of a vaginal adenocarcinoma (Fig.4).

DISCUSSION

A 70 year-old woman, with a history of previous hysterectomy, was referred to the Gynecology Service after the imagiological finding of a mass in the anterior wall of the vagina. The vaginal cytology showed clusters of glandular type cells with malignant features (Fig.1 and Fig.2). The correlation between the clinical and the cytological findings allowed to make a differential diagnosis of adenocarcinoma, NOS.

The histological diagnosis was interpreted as Vaginal Adenocarcinoma.

The data obtained from the complementary examinations and the cytological and histological evaluations disclosed the existence of a primary neoplasia, stage IV (a neoplasia measuring 6x5 cm, invading the posterior wall of the bladder), with no evident metastases. The patient was later submitted to radiation therapy due to vaginal adenocarcinoma, stage IV. So far, no evidence of tumor recurrence has been reported.

The etiological origin of glandular cells in hysterectomized patients cannot always be explained. In fact, the presence of these cells in the vagina may result from several conditions, such as endometriosis and vaginal adenosis.

The study of the vaginal adenocarcinoma began mainly between 1940 and 1970, after the application of DES to prevent miscarriages and other pregnancy complications. According to literature, intrauterine exposure to this synthetic compound with estrogenic effect means a stronger predisposition to pathologies of the reproductive system. In this context, female descendants were often affected by cervical and vaginal adenosis, adenocarcinoma and squamous-cell carcinoma. The majority of the vaginal adenocarcinoma cases associated with intrauterine exposure to DES occurs in young women. In contrast, the cases unrelated to DES exposure occur mainly in postmenopausal women, and might be related to diode laser treatments and 5-fluorouracil medication, among others.

Due to cytological similarities with endocervical and endometrial adenocarciitomas, it becomes important to exclude the existence of these neoplasias
through the differential diagnosis of the primary vaginal adenocarcinoma².

CONCLUSION

Vaginal adenocarcinoma is a rare tumor, especially when its development is unrelated to intrauterine exposure to DES.

Lastly, such cases alert to the importance of observing the whole vaginal wall in addition to the transitional zone during the gynecological examination, since the cytological evaluation is crucial to the diagnosis and follow-up of this type of vaginal lesions.

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REFERENCES


