Case Report

Villoglandular papillary adenocarcinoma of cervix: A prognostic dilemma

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ABSTRACT

Adenocarcinomas are the second most common type of cervical cancers in women comprising 10–20% of the cases. Villoglandular papillary carcinoma is a rare histological subtype of invasive adenocarcinoma which usually afflicts young women and carries an excellent prognosis. However, additional histological subtypes mixed with villoglandular papillary adenocarcinoma are very common; therefore, a careful inspection of the specimen should be undertaken and only if it is an exclusive or almost exclusive pattern, should a diagnosis of villoglandular papillary adenocarcinoma be made. This is because the mixed patterns do not present with the same favorable prognosis as the villoglandular adenocarcinoma; moreover, the treatment modalities would also differ. One should consider whether conservative therapy is sufficient because of the predominance of concomitance of other carcinomas besides the villoglandular papillary adenocarcinoma. We present the case of a 47-year-old lady who, on initial biopsy from cervical growth, revealed a villoglandular adenocarcinoma, but subsequent hysterectomy revealed moderately differentiated adenocarcinoma with extrauterine extension.

Key words: Adenocarcinoma, cervix, papillary, villoglandular

INTRODUCTION

Adenocarcinoma constitutes 10–20% of cervical cancers in women.[1] Well-differentiated villoglandular papillary adenocarcinoma has been recently recognized as a distinct histological subtype of cervical adenocarcinoma.[1,2] Although this histological subtype is considered to have good prognosis, there have been cases of villoglandular adenocarcinoma presenting with recurrence and metastasis. So, a conservative approach may not always be good if such a pattern is seen on a small biopsy as it may not be representative of the whole tumor and may be present as a minor component of the adenocarcinoma when the whole mass is processed as in our case of a 47-year-old lady presenting with a history of postcoital bleeding. The biopsy done for the suspicious growth on the cervix revealed a villoglandular adenocarcinoma and following hysterectomy, the tumor comprised predominantly moderately differentiated adenocarcinoma with only a minor component of villoglandular pattern and metastasis to a draining lymph node.

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CASE REPORT

We report a case of a 47-year-old woman, Parity 1 with two live issues, presenting with a history of postcoital bleeding for six months. Pap smear done was unsatisfactory for evaluation. The ultrasonography revealed normal urinary bladder and uterus. Cervix appeared bulky with a hypoechoic lesion measuring 2.9 × 2.8 cm. Minimal fluid was present in the Pouch of Douglas. An impression of a cervical fibroid was made. On per speculum examination, a suspicious growth on the posterior lip of the cervix was noted for which a punch biopsy was done. The biopsy received measured 1 × 0.5 × 0.5 cm and microscopic examination revealed villoglandular adenocarcinoma with fine fibrovascular papillary cores covered by stratified columnar endocervical type epithelial cells with oval nuclei and indistinct nucleoli [Figures 1 and 2]. Mitotic figures of 2–3 / 10HPF (HPF: High power fields) were seen. Inflammatory cells were present within the fibrous cores of papillae. A diagnosis of villoglandular adenocarcinoma was thus made. A radical hysterectomy was also advised.

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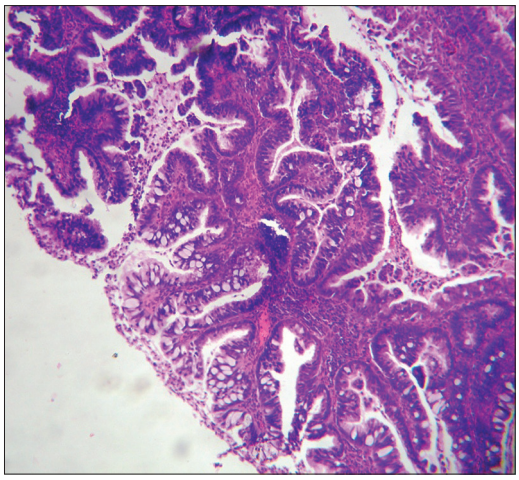

Figure 1: Photomicrograph of the biopsy specimen revealing a predominantly papillary pattern of growth with the papillae covered by stratified squamous epithelium (H and E, 100×)

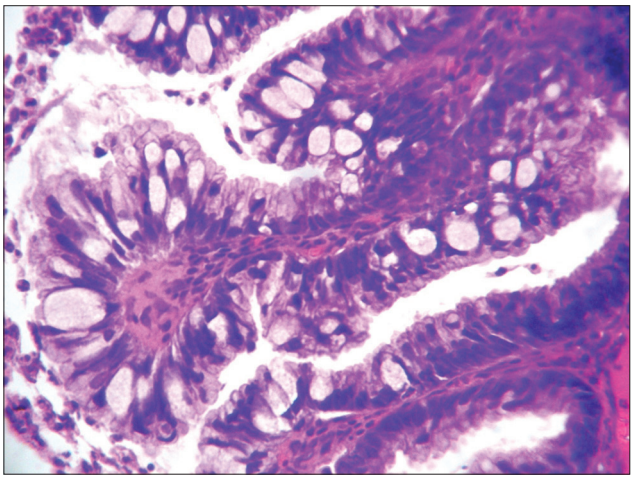

Figure 2: Photomicrograph of the biopsy specimen revealing fine fibrovascular papillary cores covered by stratified columnar endocervical-type epithelial cells with oval nuclei and indistinct nucleoli (H and E, 400×)

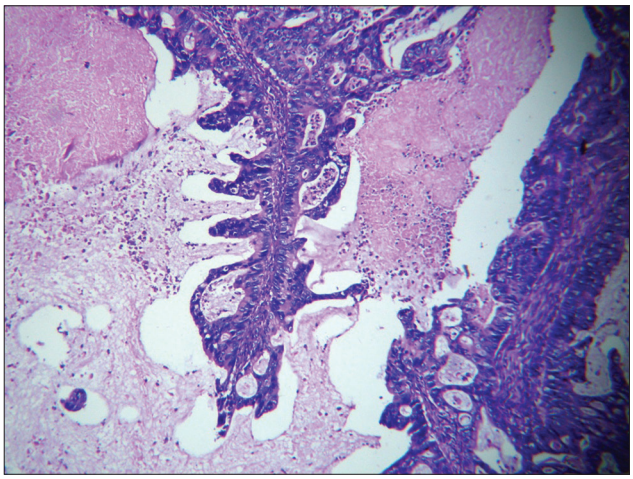

Figure 3: Photomicrograph of the hysterectomy specimen revealing complex glandular pattern; the cells lining the glands have basally located hyperchromatic nuclei with coarse chromatin and increased mitosis (H and E, 100×)

Meanwhile, the patient was worked up for the staging of carcinoma cervix which was staged as stage 1B by clinico-radiological assessment.

As the patient had completed her family, a total abdominal hysterectomy with bilateral salpingo-oophorectomy was done. Microsections examined from the resected specimen showed features of moderately differentiated adenocarcinoma (endocervical type) [Figure 3] with parametrial involvement. One of the right obturator lymph nodes revealed metastasis from adenocarcinoma; rest of the lymph nodes showed reactive changes only. Mitotic figures were 5–6 / 10HPF. There was no evidence of endometrial/ovarian involvement. So, a good prognosis villoglandular carcinoma on biopsy revealed a metastasizing moderately differentiated endocervical adenocarcinoma with minor villoglandular component on the complete resected specimen.

The patient received external beam radiotherapy to the pelvis. She is under follow-up since two months post surgery.

DISCUSSION

Villoglandular carcinoma constitutes a rare histological subtype of invasive adenocarcinoma of the uterine cervix. This form of adenocarcinoma usually afflicts young women and is believed to carry an excellent prognosis.[1] Since Young and Scully first described 13 patients with villoglandular papillary adenocarcinoma in 1989, a total of 75 patients have been reported in the literature within several small series and as case reports. Villoglandular papillary adenocarcinoma typically affects women of reproductive age and the age at presentation is usually between 33 and 37 years. Its incidence has been quoted as 3.7–4.8% of the adenocarcinomas of the cervix.[3,4] The etiology of villoglandular papillary adenocarcinoma has not been well established.[5] An association between the use of oral contraceptives and villoglandular papillary adenocarcinoma was suggested by Jones *et al*. Although there are reports of an association between the use of oral contraceptives and cervical adenocarcinoma, a specific association is not found between the reproductive function of the patient and cervical adenocarcinoma.[6] Our patient had no history of use of oral contraceptives. Grossly, all tumors present as friable papillary or polypoid masses, protruding from the cervical canal and ranging in diameter from 0.5 to 7 cm. Microscopically, the tumors are composed of fingerlike papillary projections comprising cells with mild–moderate atypia with moderate mitotic activity. Treatment modalities range from cone biopsies to simple and radical hysterectomy with or without pelvic lymph node dissection and pre–postoperative radiation therapy.[7-9] Villoglandular papillary adenocarcinoma exhibits three distinguishing features: Exophytic proliferation, papillary architecture, and mild to moderate cellular atypia. The epithelium can show a mixture of endometrial,

endocervical, and intestinal differentiation. Additional histological subtypes mixed with villoglandular papillary adenocarcinoma are very common and has been reported in 51% of the patients. In 30% of the patients, villoglandular papillary adenocarcinoma has been associated with other types of invasive cancer such as squamous cell carcinoma and endocervical adenocarcinoma.[10,11] Young and Scully recommended careful inspection of the histological specimen and if the villoglandular component is an exclusive or almost exclusive pattern, then a diagnosis of villoglandular papillary adenocarcinoma can be ascribed.[1] Other papillary adenocarcinomas can present a difficulty in diagnosis. Serous papillary adenocarcinomas of the cervix resemble serous carcinomas of the ovary but have finer, more irregular, and more cellular papillae than villoglandular papillary adenocarcinoma. Their papillae harbor a more complex architecture with tufting, less cytoplasm, marked nuclear atypia, and high mitotic activity. The clear cell papillary adenocarcinomas of the cervix are characterized by marked cytological atypia, high mitotic activity, and occasionally, the presence of psammoma bodies. The papillae are as fine as those in serous papillary carcinomas but are more regular and their cores often exhibit hyalinization.[10,11] Villoglandular papillary adenocarcinoma should be distinguished from endocervical adenocarcinoma with a minor villoglandular component. The predominant papillary component and mild cytological atypia of villoglandular papillary adenocarcinoma compared with the marked cytological atypia of adenocarcinoma should help in the differentiation of the two. The rare adenosarcoma (increased stromal cellularity and mitotic activity but with minimal epithelial cytological atypia) and minimal deviation adenocarcinoma (adenoma malignum: Extensive and diffusely infiltrative growth pattern with the absence of cytological atypia) should also be considered in the differential diagnosis of villoglandular papillary adenocarcinoma. The prognosis following surgical treatment is excellent. Surgical treatments described are cone biopsy alone (7 patients), simple hysterectomy (11 patients), and radical hysterectomy (57 patients). Disease-free periods have ranged from 13 months to 7 years. Only one death has been reported in the literature in a woman who had iliac node metastases in association with clinical stage 1B villoglandular papillary adenocarcinoma. Thirty-six months after a radical hysterectomy, she developed vaginal recurrence and died of the disease in 46 months. The usually good prognosis is also reflected by the early stage that most tumors associated with villoglandular papillary adenocarcinoma present, with over 94% of patients having stage 1 disease.[12]

The absence of lymphovascular invasion and nodal metastases is usual. Because of the inherent good prognosis of this tumor, fertility-conserving procedures have been suggested.[1] Young and Scully recommended that the initial treatment should be a cone biopsy if three criteria were fulfilled: (1) The margins of the cone are clear of the disease, (2) the depth of invasion is no more than 3 mm, and (3) there shall be no evidence of lymphovascular invasion on histology.

CONCLUSION

Villoglandular papillary adenocarcinoma of the cervix is considered to have a favorable prognosis, and likewise, the treatment described is also conservative. However, one must be very careful in making its diagnosis, and signs of other aggressive subtypes should always be searched for. Moreover, an admixture of villoglandular subtype with a serous component has a prognosis similar to serous adenocarcinoma; therefore, a vigorous treatment is essential with surgery and chemoradiotherapy with a strict follow-up for the possibility of recurrence.

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