

Case Reports

Adenoid Basal Carcinoma of the Cervix: A Rare Case Report

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ABSTRACT

Adenoid basal carcinoma of the uterine cervix is a rare low-grade tumor and its cell origin is still obscure. Adenoid basal carcinoma can be confused with adenoid basal hyperplasia, adenoid cystic carcinoma, and basaloid squamous cell carcinoma of the cervix. We present here a case of a 59 year-old-female who initially presented with a high-grade squamous intraepithelial lesion on Pap smear. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was performed. Histopathology revealed focal invasive adenoid basal carcinoma with extensive areas of a high-grade squamous intraepithelial lesion involving the endocervical gland. The immunohistochemical stain was positive for p16.

Keywords: Adenoid basal carcinoma; HSIL; p16

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INTRODUCTION

Adenoid basal carcinoma (ABC) of the cervix is a rare neoplasm with fewer than 100 reported cases and the majority occur in the 5th decade or older with a predilection for postmenopausal non-Caucasian women.¹ As per the current classification from the World Health Organization, it accounts for less than 1% of all cervical adenocarcinomas.² Adenoid basal carcinoma is postulated to be derived from the multipotential basal or reserve cell layer of the cervical epithelium³, but this has not been confirmed. Clinically, the prognosis is usually favorable; therefore, this carcinoma must be distinguished from the more aggressive adenoid cystic carcinoma and basaloid squamous cell carcinoma of the uterine cervix, which is sometimes very similar histologically. Here we report a case of adenoid basal carcinoma of the cervix discovered incidentally in a patient with HSIL.

CASE REPORT

The patient was a 59-year-old woman who was diagnosed to have a high-grade squamous intraepithelial lesion on a pap smear. She was asymptomatic. TAH with BSO was performed and the specimen was sent for histopathological examination in the histopathology unit of Tribhuvan university teaching hospital. On gross examination, the cervix measured 3.5x2.2x1.8 cm with no obvious lesion. The entire cervix was processed. The sections showed dysplasia in squamous epithelium characterized by disorderly arrangements of cells with crowding and loss of polarity involving the full thickness of the lining epithelium. Mitotic figures were frequent. Extensive endocervical glandular involvement was also noted. Focal areas showed invasive tumors with a depth of invasion being 4 mm and horizontal extent being

3 mm. The invasive tumor is composed of small, rounded nests and islands of basaloid cells having scant cytoplasm, hyperchromatic nuclei, and show nuclear palisading (fig. 1A). Some of these nests show central atypical squamous differentiation capped by smaller rounded basal cells (fig. 1B). Some of these basaloid cells also form acini-like structures focally. Mitotic figures were not noted within the nests and there was no desmoplastic reaction and stromal hyalinization. Other structures were unremarkable.

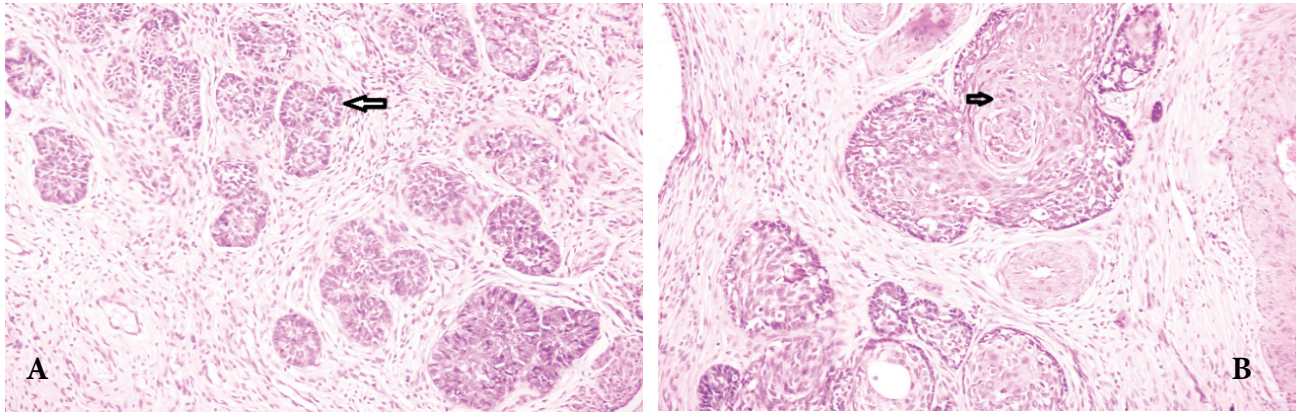


Figure 1: A) Photomicrograph showing nests of basaloid tumor cells with scant cytoplasm and hyperchromatic nuclei showing peripheral nuclear palisading (arrow). B) Photomicrograph showing squamoid differentiation (arrow) in between tumor cells. (HE stain; 100X)

Ectocervical and endocervical margins along with both right and left parametria were free of tumor. Lymphovascular and perineural invasions were not noted. On immunohistochemistry, p16 was strongly positive (fig.2) for both HSIL and invasive nests of adenoid basal carcinoma. The tumor was staged according to the American Joint Committee of Cancer 8th edition/Federation of international Gynecologists and Obstetricians 2015 as pT1a2Nx/IA2.

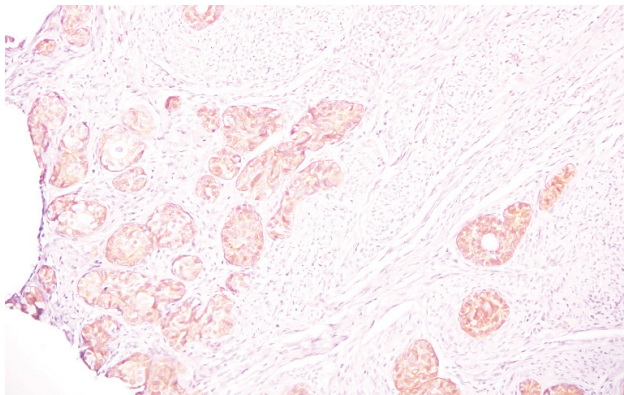


Figure 2: IHC stain (100x) showing diffuse p16 positivity in tumor cells.

DISCUSSION

Adenoid basal carcinoma of the uterine cervix is an uncommon lesion. The patients present with a wide array of clinical features. Most of them are usually asymptomatic (68%) and usually come to medical attention after an abnormal cervical smear result. Symptoms, if present, include genital bleeding, cervical prolapse, and abdominal mass. Grossly, most of the cervix appears normal (69%) with no obvious gross mass. In most of the reported cases, adenoid basal carcinoma was associated with cervical intraepithelial neoplasia (CIN) (89%).¹

Histologically, adenoid basal carcinoma is frequently confused with adenoid cystic carcinoma (ACC), which is also a rare neoplasm arising in the uterine cervix.⁴ Grossly, adenoid cystic carcinoma frequently forms an irregular polypoid mass, whereas adenoid basal carcinoma usually does not form a gross mass. Histologically, adenoid basal carcinoma is characterized by less pleomorphic nuclei and less mitotic activity. The formation of true lumina with microvilli is characteristic of adenoid cystic carcinoma.⁵ However, in the present case, few acini with true lumina-like structures were seen. Both adenoid basal carcinoma and adenoid cystic carcinoma show squamous differentiation within the cancer cell nests. Therefore, the existence of true lumina or squamous differentiation cannot be used to differentiate these two neoplasms. In adenoid cystic carcinoma, necrosis is common and hyalinization is seen in the stroma, whereas adenoid basal carcinoma does not show such changes. Lymphatic invasion is seen in adenoid cystic carcinoma but not in adenoid basal carcinoma.⁶ CIN is associated with both cancers, but more frequently in adenoid basal carcinoma.⁴ The differential diagnosis of these two cancers is essential because the clinical outcome is significantly different. Adenoid cystic carcinoma behaves aggressively, i.e. lymphatic invasion is a common and local recurrence or metastatic spread is frequent, and about half of the reported patients died of the tumor or had local recurrence along with distant metastasis to the lungs, liver, bone or other sites.³ Takeshima et al.⁷ correlated the occurrence of ABC to human papillomavirus infection. Jones et al.⁸ characterized the presence of HPV type 16 among the five cases he studied. Both adenoid cystic carcinoma and ABC show p16 positivity. Immunohistochemical studies show positive reactivity to collagen IV and laminin for ACC whereas these stains do not highlight the tumor cells of ABC.⁹ Basaloid squamous cell carcinoma of the cervix is rare but aggressive neoplasm. Small islands of basaloid squamous cell carcinoma may be composed of variably sized nests of relatively small, hyperchromatic tumor cells, which may mimic adenoid basal carcinoma (ABC) and smaller ABC-like nests. However, ABC lacks or has fewer mitotic figures.¹⁰ Adenoid basal hyperplasia may also resemble adenoid basal carcinoma,

except the absence of deep invasion into the stroma and usually extending less than 1 mm from the basement membrane. There is no HPV infection with the absence of immunohistochemical p16 expression in the case of adenoid basal cell hyperplasia. Human papillomavirus infection was noted in 4 (80%) of 5 adenoid basal carcinomas which were done by Kerdraon et al¹¹, which was in the same range as previous studies (88%).

CONCLUSION

Adenoid basal carcinoma is a rare variety of cervical carcinoma. It should be differentiated from aggressive neoplasm since has a low potential for recurrence and metastasis.

REFERENCES

1. DePond WD, Flauta VS, Lingamfelter DC, Schnee DM, Menendez KP. Adenoid basal carcinoma of the cervix in a 20-year-old female: a case report. *Diagn Pathol.* 2006;1(1):1-4. [Crossref](#)
2. Russell MJ, Fadare O. Adenoid basal lesions of the uterine cervix: evolving terminology and clinicopathological concepts. *Diagn pathol.* 2006;1(1):18. [Crossref](#)
3. Senzaki H, Osaki T, Uemura Y, Kiyozuka Y, Ogura E, Okamura A, et al. Adenoid basal carcinoma of the uterine cervix: immunohistochemical study and literature review. *Jpn J ClinOncol.* 1997;27(6):437-41. [Crossref](#)
4. Ferry JA, Scully RE. "Adenoid cystic" carcinoma and adenoid basal carcinoma of the uterine cervix. A study of 28 cases. *Am J Surg Pathol.* 1988;12(2):134-44. [Crossref](#)
5. Mazur MT, Battifora HA. Adenoid cystic carcinoma of the uterine cervix: ultrastructure, immunofluorescence, and criteria for diagnosis. *Am J clin pathol.* 1982 ;77(4):494-500. [Crossref](#)
6. King LA, Talledo OE, Gallup DG, Melhus O, Otken LB. Adenoid cystic carcinoma of the cervix in women under age 40. *Gynecol Oncol.* 1989;32(1):26-30. [Crossref](#)
7. Takeshima Y, Amatya VJ, Nakayori F, Nakano T, Iwaoki Y, Daitoku K, Inai K. Co-existent carcinosarcoma and adenoid basal carcinoma of the uterine cervix and correlation with human papillomavirus infection. *Int J Gynecol Pathol.* 2002;21(2):186-90. [Crossref](#)
8. Jones MW, Kounelis S, Papadaki H, Bakker A, Swalsky P, Finkelstein SD. The origin and molecular characterization of adenoid basal carcinoma of the uterine cervix. *Int J Gynecol Pathol.* 1997;16(4):301-6 [Crossref](#)
9. Grayson W, Taylor LF, Cooper K. Adenoid cystic and adenoid basal carcinoma of the uterine cervix: comparative morphologic, mucin, and immunohistochemical profile of two rare neoplasms of putative reserve cell origin. *Am J Surg pathol.* 1999;23(4):448-58. [Crossref](#)
10. Kwon YS, Kim YM, Choi GW, Kim YT, Nam JH. Pure basaloid squamous cell carcinoma of the uterine cervix: a case report. *J Korean Med Sci.* 2009;24(3):542-5. [Crossref](#)
11. Kerdraon O, Cornélius A, Farine MO, Boulanger L, Wacrenier A. Adenoid basal hyperplasia of the uterine cervix: a lesion of reserve cell type, distinct from adenoid basal carcinoma. *Hum Pathol.* 2012;43(12):2255-65. [Crossref](#)