

## A Case of Adenoid Basal Carcinoma of the Uterine Cervix

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Adenoid basal carcinoma of the uterine cervix is uncommon neoplasia mostly occurring in postmenopausal women. It has excellent prognosis and a favorable clinical course. In addition, adenoid basal carcinoma is differentiated from adenoid cystic carcinoma by histologic and cellular morphologies, and immunohistochemistry. In this paper, we present the case of a 22 year old Korean female. She initially had a high-grade squamous intraepithelial lesion (HSIL) on Pap smear and a subsequent cervical loop electrosurgical excision procedure (LEEP) specimen revealing adenoid basal carcinoma. The lesion showed the histologic characteristics of adenoid basal carcinoma. Because of the lesion's low potential for recurrence and metastasis, the young primipara had a conization procedure performed and has been under close observation. (**J Menopausal Med 2013;19:154-157**)

**Key Words:** Carcinoma basal cell

### Introduction

After its composition was firstly described by Billroth<sup>1</sup> in 1856, Tcherkoff and Sedlis<sup>2</sup> reported lesions of the same type in the uterine cervix. Later Baggish and Woodruff<sup>3</sup> recognized it as a distinct type of cervical neoplasm from adenoid cystic carcinoma. The incidence of adenocarcinoma of the uterine cervix is reported to account for less than 1%. Although the origin is debatable, it is considered derived from multipotential cells of the basal layer or reserve cells of cervical epithelium. Clinically, adenoid basal carcinoma is differentiated from other types of cancer for the rare metastasis and the excellent prognosis. It mostly occurs between the ages of 40 and 70 years. Moreover, it is commonly subclinical and detected by Pap smear.

Twenty-two-year-old young female with adenoid basal carcinoma of the uterine cervix have been rarely reported in

the literature. In Korea where carcinoma of uterine cervix is one of the most common malignancy, adenoid basal carcinoma of the uterine cervix is considered relatively rare. The author reports a case of adenoid basal carcinoma of the uterine cervix.

### Case Report

The patient was a 22-year-old Korean woman who presented with a history of abnormal genital bleeding for 3 weeks. She had borne one children and had regular menstrual period.

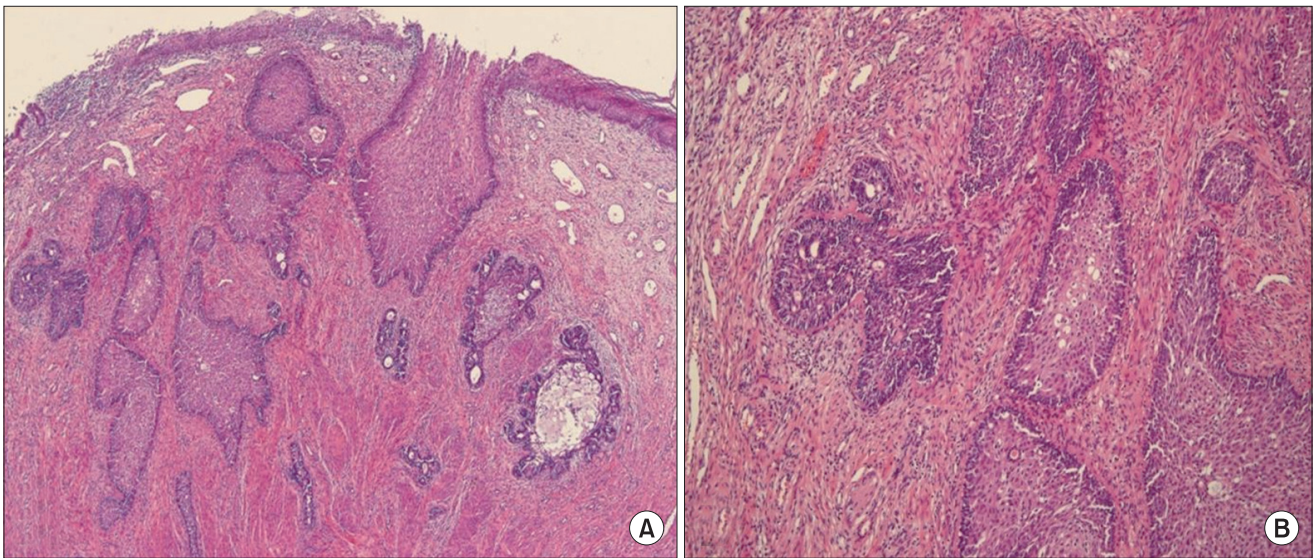
No gross lesion was noted on the cervix and the Pap smear was reported to be high-grade squamous intraepithelial lesion (HSIL). The colposcopy performed, followed by three cervical biopsies. The results showed severe dysplasia with glandular involvement. The serum

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**Fig. 1.** (A) Low power view of rounded nests of basaloid cells infiltrating the stroma. Microcyst formation occurs along with nests of darker basaloid cells with scanty cytoplasm ( $\times 40$ ). (B) Note the peripheral palisading of tumor cells and gland formation ( $\times 100$ ).

level of the tumor marker carbohydrate antigen (CA) 125 was elevated (48 U/mL; normal  $< 35$  U/mL), whereas the serum levels of carcinoembryonic antigen (CEA), CA 19-9,  $\alpha$ -fetoprotein and squamous cell carcinoma antigen were within the normal ranges. No further relevant features were found on general examination. Concerned with the patient's HSIL results, the clinician performed a cervical loop electrosurgical excision procedure (LEEP) and observed multiple erosions of inflammation overlying the cervix. The clinician was able to discover HSIL with superficial glandular extension and report adenoid basal carcinoma. The patient is being closely followed up and has shown no evidence of recurrence within 24 months after the operation.

Macroscopically, the tumor size of the lesion was 1.0 cm in the largest dimension. Microscopically, tumor cells were arranged in small nests or cords, with focal squamous differentiation, however, cystic change was not noted. Tumor cells showed small, less pleomorphic nuclei, and less mitotic activity. Palisading of nuclei was observed at the periphery of the nests. No desmoplastic reaction was observed in the stroma (Fig. 1). The other cervix showed focal severe dysplasia and a few koilocytes were present. The adenoid basal carcinoma was adjacent to the HSIL lesion, but no transition between the two lesions was observed. Immunohistochemical staining was performed in order to further elucidate the nature of the tumor. Stains for P16 and Ki-

67 showed positive staining, whereas staining for cytokeratins were negative (Fig. 2).

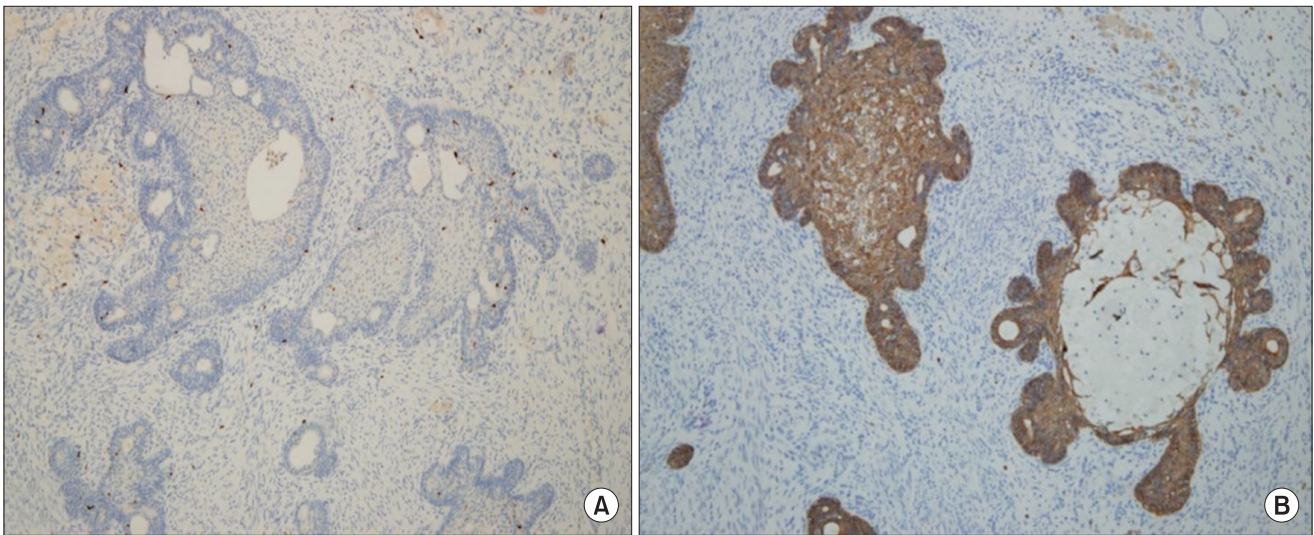
## Discussion

Cervical cancer is the second most common cancer among women worldwide and is one of leading causes of death by cancer in women.<sup>4</sup>

It is generally considered that adenoid basal carcinoma of the cervix is a rare lesion which occurs mostly among postmenopausal African-American women. However, recently there have been reports that the tumors can also occur in Asian women. In Korea, there were four cases reported of adenoid basal carcinomas of the cervix.

The rare form of mucinous adenocarcinoma of the cervix, adenoma malignum, requires differential diagnosis. Especially because it is histologically and radiologically similar to the benign form and often causes confusion upon diagnosis.<sup>5</sup>

Adenoid basal carcinoma is located below the epithelium. With naked eyes, it is observed as normal cervix without clear lesion. When identified by screening test, it is mostly presented as HSIL. Histologically, it is composed and proliferates in the form of nests of small round cells. The cells are characterized by relatively a large dense nucleus and the light cytoplasm (Fig. 1). The most important differential



**Fig. 2.** Immunohistochemical stains of the tumor. (A) Ki-67 was detected in some nuclei. (B) Diffuse expression of p16 is evident in all components of the tumor.

diagnosis is adenoid cystic carcinoma because of the local invasion and remote metastasis. As its name suggests, the histological aspects of the two tumors include basaloid cell proliferation, squamous and granular differentiated filament. Ferry and Scully<sup>6</sup> reported that adenoid cystic carcinoma is derived from adenoid basal carcinoma. Brainard and Hart<sup>7</sup> proposed the use of the term basal cell epithelioma as adenoid basal carcinoma with typical histological structure is not malignant. We summarize that both adenoid basal carcinoma and adenoid cystic carcinoma originate from the reserve cells in the uterine cervix. They are further classified as a benign or malignant tumor. Adenoid cystic carcinoma is often called cylindroma. Billroth<sup>1</sup> first used the term to describe the tumor in 1859. The tumor is often observed in salivary glands, sometimes in respiratory organ, skin, head and neck mucosa, and breast. It is found rarely in the female genital organs, if found, mostly in the cervix, Bartholin's gland, and endometrium. A common symptom of adenoid cystic carcinoma of the uterine cervix is postmenopausal menorrhagia. In many cases, it often appears as undifferentiated cells on Pap smear. More than half of the patients are diagnosed with clinical stage I with unfavorable prognosis. In contrast to adenoid basal carcinoma, adenoid cystic carcinoma appears as a polyp at the cervix. Histologically, it shows an increase in cell size, the number of cell colonies, the number of mitotic cells, and

organic reaction.<sup>8-10</sup>

Immunohistochemically, adenoid basal carcinoma of the uterine cervix typically shows positive staining for Ki-67 and p16. Grayson et al.<sup>11</sup> observed that immunohistochemical analysis of the adenoid cystic carcinoma revealed positive staining for epithelial membrane antigen (EMA), collagen IV and laminin, while adenoid basal carcinoma revealed positive staining for EMA and negative staining for collagen IV and laminin.

Adenoid basal carcinoma is a slow-growing cancer. Its prognosis is promising for a low potential for metastasis and recurrence. Only a few bad cases have been reported. In 1998, Ferry and Scully<sup>6</sup> reported one patient, a 67-year-old female, who died in 3 months as a result of metastatic lung cancer from adenoid basal carcinoma. On the other hand, adenoid cystic carcinoma has a relatively poor prognosis. It is accompanied by lymph node metastasis and tumor infiltrating lymphocytes. It is treated with hysterectomy, chemotherapy, and radiation therapy.

In conclusion, for treatment and clinical management of patients, it is important to understand adenoid basal carcinoma differently from other kinds of uterine cervix cancer. It is also critical to distinguish adenoid basal carcinoma of low metastatic potential and favorable prognosis from adenoid cystic carcinoma of similar shapes and unfavorable prognosis.



In this paper, we have discussed a primipara young woman under close observation after conization. For young female cases have been rarely reported, the case provides a clinical insight into diagnosis of adenoid basal carcinoma.

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