

**ADENOID BASAL CARCINOMA OF CERVIX - REPORT OF A RARE CASE AND LITERATURE REVIEW****Dr. Priyanka Anand\*<sup>1</sup>, Dr. Poonam Sahni<sup>2</sup>**<sup>1</sup>Consultant Pathologist, Saral, Diagnostic Centre, Pitampura, New Delhi.<sup>2</sup>Director Lab & Head of Department, Senior Consultant Pathologist, Saral Diagnostic Centre, Pitampura, New Delhi.**\*Corresponding Author: Dr. Priyanka Anand**

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**ABSTRACT**

Adenoid basal carcinoma is a rare tumor comprising of both basal and glandular elements with an overall incidence of less than 1% of Cervical Adenocarcinomas. Persistent Human papilloma virus infection is suggested as an etiological agent. We present a case in a 48 year old post-menopausal woman. As it is a rare variant, its differentiation from other other aggressive tumors of similar morphology such as cervical adenoid cystic carcinoma needs consideration because they have an adverse prognosis.

**KEYWORDS:** Basal Carcinoma, Adenoid, Cervical surface epithelial.**INTRODUCTION**

Adenoid basal carcinoma is a rare tumor comprising of both basal and glandular elements. It was first discussed by Baggish and Woodruff in 1966<sup>[1]</sup> with an overall incidence of less than 1% of Cervical Adenocarcinomas.<sup>[2,3]</sup>

It was first classified by Young and Clement under the group of cervical tumors such as Adenosquamous Carcinoma, Adenoid- cystic Carcinoma and Adenocarcinoma admixed with a Neuro-endocrine tumor.<sup>[4]</sup> It mostly affects post- menopausal women. Etiology is related to persistent Human papilloma virus infection.

On cervical cytology, diagnosis remains a challenge, Adenoid basal carcinoma is usually associated with squamous intra-epithelial lesions.<sup>[5]</sup>

It can be rarely associated with squamous cell carcinoma or mixed epithelial/Mesenchymal tumor.<sup>[6,7,8]</sup> Pure forms have a favorable prognosis.

Histopathological examination plays an important role and helps in distinguishing from other aggressive tumors such as cervical adenoid cystic carcinoma as it is associated with adverse prognosis.

We report a case of a rare variant, Adenoid basal carcinoma of cervix in a 48 year old female.

**CASE PRESENTATION**

A 48 year old female G<sub>2</sub>P<sub>2</sub>A<sub>0</sub>, postmenopausal since three years, presented with lower abdominal pain and vaginal

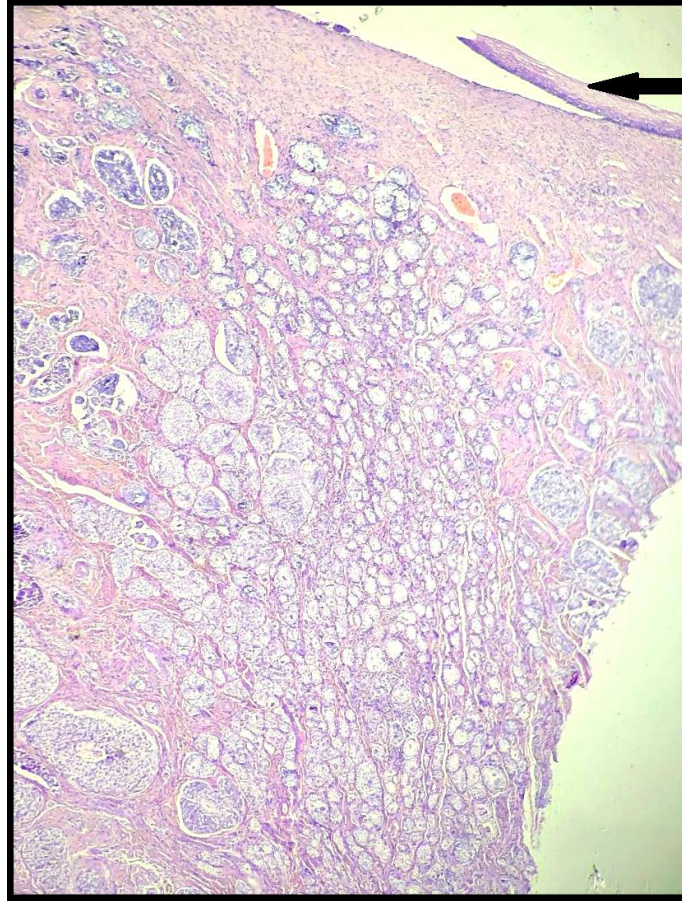
bleeding since six months. Family history and past history was insignificant. Per vaginal examination revealed a 3 cm mass at the isthmus level. On per speculum examination cervix was dilated and a necrotic mass was seen protruding out of the cervical canal. On computerized tomography scan, uterus and ovaries were normal. Irregularities within the peri-uterine fatty tissue layers were noted. Pelvic magnetic resonance imaging revealed an enhancing mass involving the posterior lip of the cervix with a provisional diagnosis of cervical carcinoma.

The patient underwent total hysterectomy with bilateral salpingo-oophorectomy and pelvic lymph node clearance. The specimen was sent for histopathological examination.

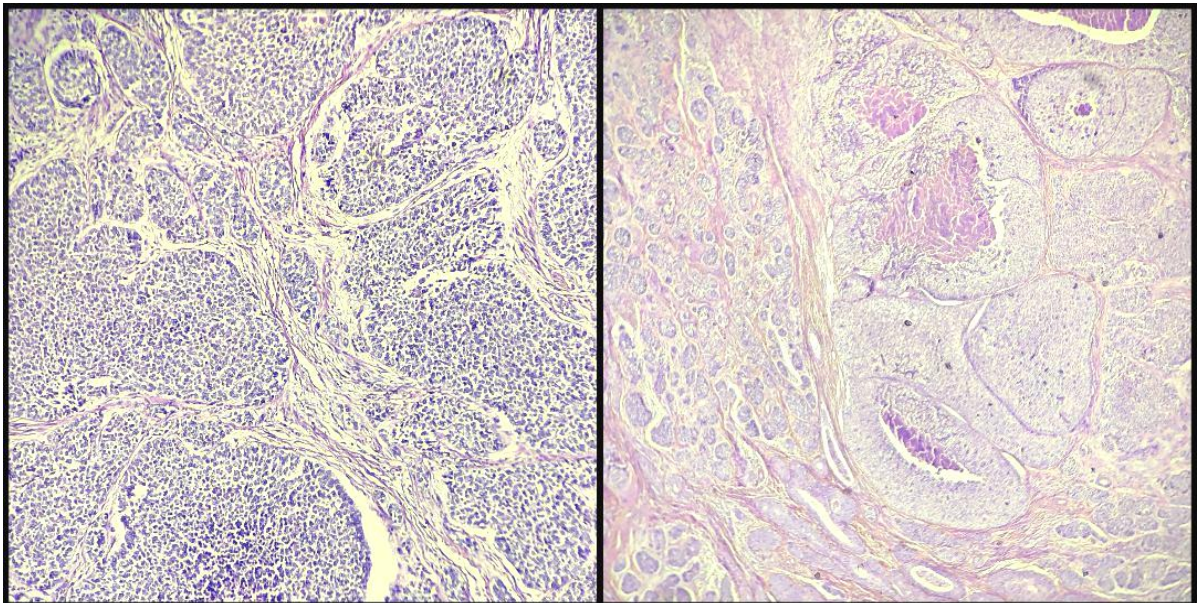
On gross examination, uterus was unremarkable. Cervical mucosa on cut section was smooth, glistening, tan-brown in appearance.

Microscopically, sections from the cervix revealed cells arranged in cords, nests with a typical peripheral palisading. The cells were having round to ovoid, uniform nucleus, inconspicuous nucleoli and scant cytoplasm. Mitotic activity was low and no atypical mitotic figures were seen. The tumor showed an infiltrative pattern. No desmoplastic response was seen. No vascular invasion was noted. Sections from the endometrium showed cystic atrophic endometrium and were free of tumor. Bilateral fallopian tubes and ovaries were unremarkable. Twelve lymph nodes were identified, all free of tumor. A diagnosis of 'Adenoid Basal Carcinoma Cervix' was rendered.

The patient was advised radiation therapy, and is currently under follow up.



**FIGURE 1: Adenoid Basal Carcinoma of Uterine Cervix, Microphotograph shows tumor arranged in nests along with focal glandular differentiation. Ectocervix is shown with a black arrow. (H & E stain, 4X).**



**FIGURE 2: Microphotograph shows lack of stromal desmoplastic response. (H & E stain, 10X).**

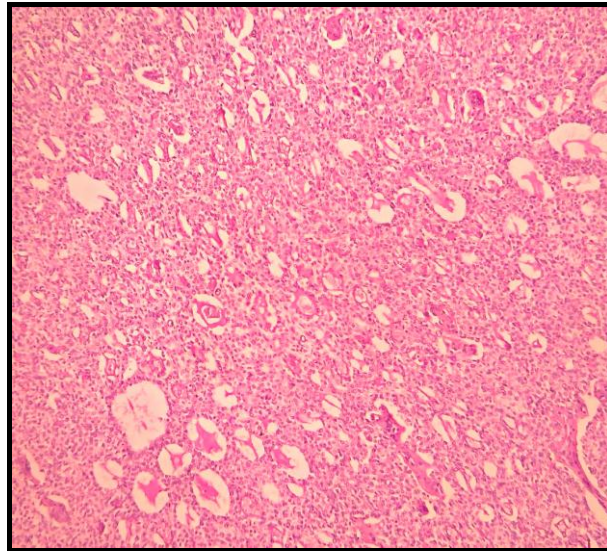


FIGURE 3: Microphotograph showing microcysts formation within the basaloid cells. (H & E stain, 10x).

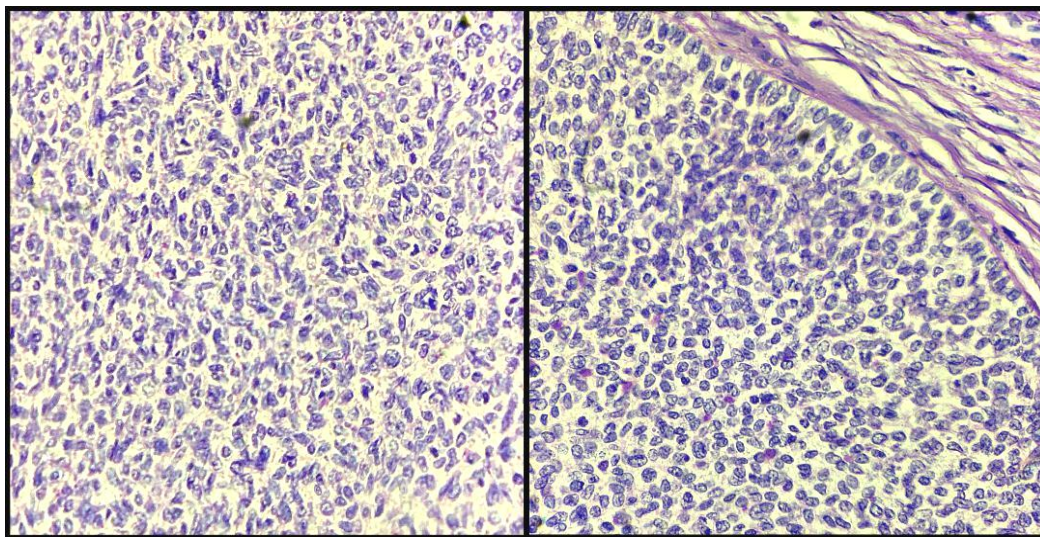


FIGURE 4: Photomicrograph shows Basaloid differentiation with Peripheral palisading. (H & E Stain, 40X).

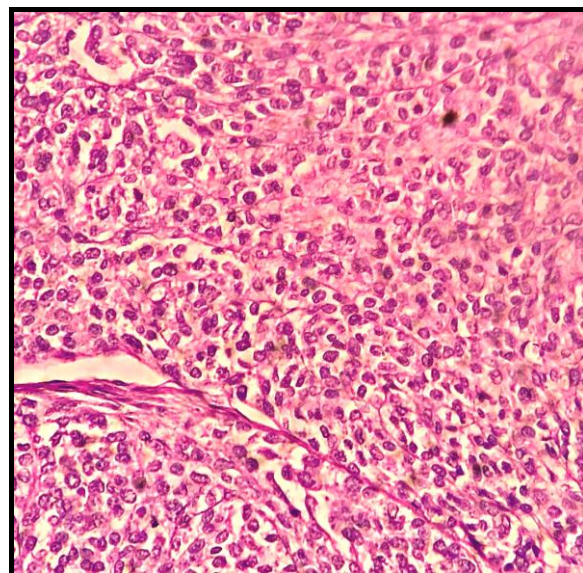


FIGURE 5: High power view shows central part of the tumor nest containing cells with nuclear atypia and abundant dense eosinophilic cytoplasm, indicating squamous differentiation. (H & E stain, 40X).

**DISCUSSION**

It is a rare type of cervical carcinoma, accounting for <5% of cervical carcinomas, with basaloid morphology, an association with HPV infection and is associated with squamous metaplasia, usually High grade squamous insitu lesion. It is most often an incidental finding. It usually occurs in post-menopausal women with a mean age of 63 years.<sup>[9]</sup>

The youngest case reported by De Pond et al was 20 year old. Our patient was a 48 year old female who presented with post-menopausal bleeding.

Cellular origin is still unknown. Two hypothesis have been suggested that the tumor develops from the multipotent reserve cell layer of the cervical epithelium that can show squamous or glandular differentiation. The second hypothesis is that it develops from heterotopic ectodermal components in the cervix.<sup>[10]</sup>

According to studies,<sup>[11]</sup> tumor cells of Adenoid basal carcinoma contain a notched, round to ovoid nucleus, widespread organelles and intracytoplasmic filaments similar to cervical reserve cells.

It consists of rounded nests and islands of basaloid cells with peripheral palisading of basaloid cells that invade the cervical stroma with minimal or absent desmoplastic reaction. There may be focal cystic change, columnar or squamous differentiation.

It has many similar features with Adenoid cystic carcinoma. The absence of basement membrane material, necrosis, vascular or lymphatic invasion and a low mitotic count helps in differentiation.

The basaloid cells vary in degree of atypia. Often they show mild nuclear atypia, but in few cases, a higher mitotic index with nuclear pleomorphism is noted.

On immunohistochemistry, basaloid cells are positive for CK7, 8, 14,17,18 and foci of squamous differentiation is positive for CK10 and CK13.<sup>[9]</sup>

As per reports,<sup>[12,13]</sup> an association with P53 mutations has been proposed with a worse prognosis.

Differential diagnosis includes Endocervical adenocarcinoma, Endometrial adenocarcinoma, Small cell neuroendocrine carcinoma in which there is severe dyskaryosis, increased mitotic activity and nuclear moulding.

Adenoid basal carcinoma (ABC) has a favorable prognosis when it occurs as a pure lesion. Atypia in the basaloid cells does not alter the outcome. It does not metastasize and has low potential for recurrence. On the other hand, Adenoid cystic carcinoma<sup>[14]</sup> (ACC) has a poor prognosis and is associated with lymph node metastasis. PAS diastase stain and alcian blue stain

without pre- treatment with hyaluronidase can help in detecting extracellular basement membrane in Adenoid cystic carcinoma. Immunohistochemistry has a limited role in differentiating the tumors.

However, in a study done by Chen TD et al, CD117 plays an important role. It is a type III receptor kinase protein, which is a product of C-Kit proto-oncogene.

**CONCLUSION**

It is very important in distinguishing ABC from ACC as the latter has an unfavorable prognosis and hence a correct pre-operative diagnosis plays a vital role in the management.

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