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Case Report

Adenosquamous Carcinoma of the Cervix - An Incidental Finding in the Hysterectomy Specimen of a Postmenopausal Female

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Abstract: Adenosquamous carcinoma of the cervix (ASCC) is a rare malignant histologic subtype that has well-defined malignant glandular and squamous components that can be recognized without special stains. Authors, hereby, describe a case of ASCC in a 68-year-old post-menopausal female who underwent hysterectomy for uterovaginal prolapse. A diffusely infiltrating growth involving both the lips of the cervix was seen on gross examination. Sections from the growth showed both malignant glandular and squamous components. ASCCs are rare and aggressive tumors; hence early detection and appropriate management is crucial for achieving favorable clinical outcomes.

Keywords: Adenosquamous carcinoma, cervix, malignant squamous, malignant glandular.

INTRODUCTION

Adenosquamous carcinoma of the cervix (ASCC) is a rare malignant epithelial neoplasm, accounting for approximately 3-10% of all cervical cancers [1-4]. It is characterized by the presence of both squamous cell and glandular differentiation [5]. ASCC has been reported to have similar clinical outcomes as HPV-associated adenocarcinomas, including mucinous endocervical adenocarcinomas [6]. The diagnosis of ASCC requires the identification of unequivocal malignant glandular and squamous differentiation in the tumor [6, 7]. This rare subtype of cervical carcinoma is an aggressive tumor and has a worse prognosis as compared to squamous cell carcinoma [8].

CASE REPORT

A 68-year-old post-menopausal female presented with uterovaginal prolapse and underwent vaginal hysterectomy followed by pelvic floor repair. She had no history of vaginal bleeding or abnormal Pap smear. Imaging findings revealed an atrophic uterus. No cervical abnormality was detected on ultrasonography. Intraoperatively, the uterus was found to be menopausal in size and boggy in consistency. The endocervical cavity was denuded.

On gross examination, the hysterectomy specimen measured 7.0x3.5x2.5cm. External surface was unremarkable. On cut section, endometrial cavity was identified and endo-myometrial thickness was 1.0 cm. Cervix measured 3.5 cm in length and appeared hypertrophied. The cut surface of the cervix showed a diffusely infiltrating growth measuring 3.5x2.0 cm and involving both the lips of the cervix.

Histopathological examination of the hysterectomy specimen revealed an atrophic endometrium with endometritis. Myometrium showed calcific sclerosis in the blood vessels. Sections from the cervical growth showed a biphasic pattern tumor comprising of malignant glandular and squamous components. Neoplastic endocervical glands showed cribriform, micropapillary, and papillary growth patterns. The neoplastic glands were lined by columnar epithelium showing stratification, anisonucleosis, increased nucleocytoplasmic ratio, and hyperchromasia (Figure 1A & 1B). Numerous mitotic figures and

apoptotic bodies were seen. The malignant squamous component was moderately differentiated and constituted approximately 20% of the tumor mass (Figure 2). Few bizarre tumor cells were also seen. The surrounding stroma showed a desmoplastic reaction, dense inflammation, and sheets of macrophages. The tumor was seen infiltrating most of the cervix. Part of the ectocervix appeared free which was lined by stratified squamous epithelium showing hyperkeratosis, parakeratosis and acanthosis with full-thickness dysplasia in the transformation zone. Parametrium and lower uterine segment showed presence of tumor cells. The upper uterine segment was free of tumor. Lymphovascular invasion was present (Figure 3). The patient's postoperative course was uneventful, and she was referred to a gynecologic oncologist for further management.

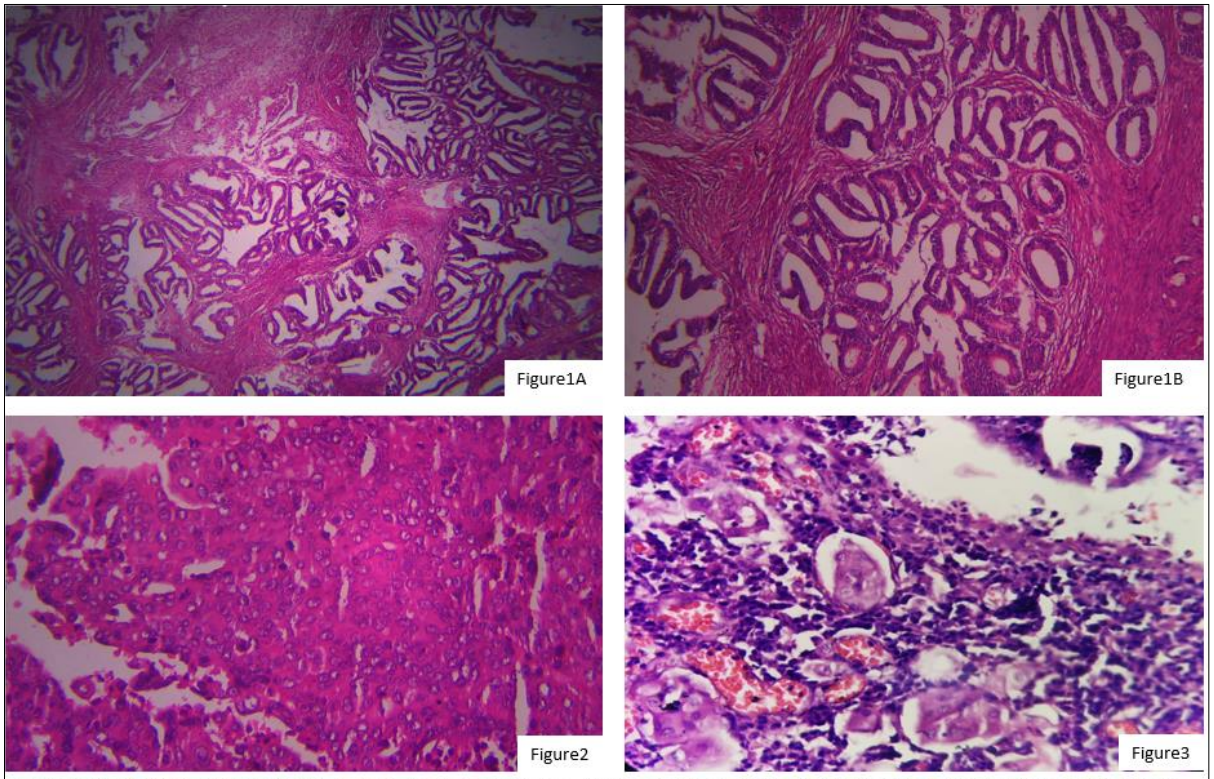

Figure 1A(H&Ex40) & 1B (H&Ex100) - Adenosquamous carcinoma- Neoplastic endocervical glands showing micropapillary, and papillary growth patterns. The neoplastic glands are lined by columnar epithelium showing anisonucleosis, increased nucleocytoplasmic ratio, and hyperchromasia.
Figure 2: Adenosquamous carcinoma- Moderately differentiated malignant squamous component (H&E x 400)
Figure 3: Lymphovascular invasion (H&E x 400)

DISCUSSION

Carcinoma of cervix accounted for 9.4% of all cancers and 18.3% of new cases in India in 2020 [9]. It is also the third most common cancer and the leading cause of cancer-related death in women in low and middle-income groups in the country [9]. As per WHO classification of the female genital tract 2020, cervical cancers are divided into squamous epithelial tumors and glandular tumors and precursors. Both the categories are further subdivided into HPV-associated and HPV-independent based on immunohistochemistry (IHC) for p16 and p53 [10].

Adenosquamous carcinoma is a rare subtype and is classified in the category of 'Other epithelial tumors' along with mucoepidermoid carcinoma, carcinosarcoma, and adenoid basal carcinoma of uterine cervix [10]. ASCC is a distinct biological entity and should be distinguished from both squamous cell carcinoma (SCC) and Adenocarcinoma of cervix (ACC). Its precursors are high-grade squamous intraepithelial lesion (HSIL) and adenocarcinoma in situ (ACIS). Association with Human Papilloma Virus types 16 and 18 is seen frequently [4-11]. A monoclonal origin of ASCC has been confirmed and is thought to arise from subcolumnar reserve cells in the basal layer of endocervix [12].

Age at presentation varies from 24 to 69 years, the mean age being 46 years [6, 8]. In our case, the patient was 68 years old and presented with diffusely infiltrating growth involving both the lips of the cervix. Histologically, adenosquamous carcinomas should consist of an admixture of malignant glandular and squamous elements that are recognizable on routine H&E-stained sections. IHC is not mandatory for establishing the diagnosis [7-14]. In our case, both malignant and squamous components were clearly identified, hence IHC was not required for diagnosis. The adenocarcinoma component is often endocervical type,

and squamous cell carcinoma may be notable for clear, glycogen-rich cytoplasm [13].

Adenosquamous carcinoma of the cervix is a rare and often incidental finding in histopathological examination of hysterectomy specimens. In this case, the patient underwent hysterectomy for pelvic organ prolapse, and the diagnosis of ASCC was made incidentally on histopathological examination. It should be distinguished from HPV-associated adenocarcinomas with benign squamous differentiation, HPV-associated adenocarcinomas with invasive stratified mucin-producing carcinoma components, and pure invasive stratified mucin-producing carcinomas as they lack a malignant squamous component [6].

The management of ASCC is similar to that of squamous cell carcinoma of the cervix, involving surgery, chemotherapy, and radiotherapy as appropriate based on the stage of the disease [8]. In this case, the patient had an early-stage disease with no lymph node metastasis, and close monitoring was deemed appropriate by the gynecologic oncologist.

ASCCs are aggressive tumors and have a worse prognosis than SCCs and adenocarcinoms [15–18]. In a study by Yordanov *et al*., [8], the clinical behavior of ASCC was found to be closer to SCC but ASCC has a worse prognosis and a higher propensity for lymphogenous spread. So, early and correct histological diagnosis of this rare subtype is important.

CONCLUSION

Adenosquamous carcinoma of the cervix is a rare but aggressive malignancy that requires a comprehensive diagnostic and treatment approach. This case report highlights the importance of thorough histopathological examination of hysterectomy specimens, as adenosquamous carcinoma of the cervix can be an incidental finding, especially in rural areas of developing countries where cervical screening coverage is still low. Early detection, accurate staging, and a multidisciplinary treatment plan can improve outcomes for patients with this challenging condition. Clinicians should be aware of this rare histological subtype of cervical cancer and consider it in the differential diagnosis when evaluating patients with cervical lesions.

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