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Case Report

Sarcomatoid Squamous Cell Carcinoma of Uterine Cervix

Dr. Alisha Teresa Jose[1*], Dr. Sankar S[2]

[1]Junior Resident, Department of Pathology, Govt. Medical College Kottayam, Gandhi Nagar, Kottayam, Kerala 686008, India
[2]Professor and Hod, Department of Pathology, Govt. Medical College Kottayam, Gandhi Nagar, Kottayam, Kerala 686008, India

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Abstract: Squamous cell carcinoma is the most common malignant tumor of uterine cervix with a well documented risk to human papilloma virus infection. There are several morphological variants of squamous cell carcinoma but sarcomatoid squamous cell carcinoma is not included in the recent WHO classification although it is very well described in the literature. We describe an extremely rare case of sarcomatoid squamous cell carcinoma displaying biphasic histomorphology with an epithelioid and sarcomatoid part, an unequivocal HPV infection and an associated precancerous lesion in the cervical mucosa, sarcomatoid part being positive for both cytokeratin and vimentin.

Keywords: Sarcomatoid carcinoma, cervix.

INTRODUCTION

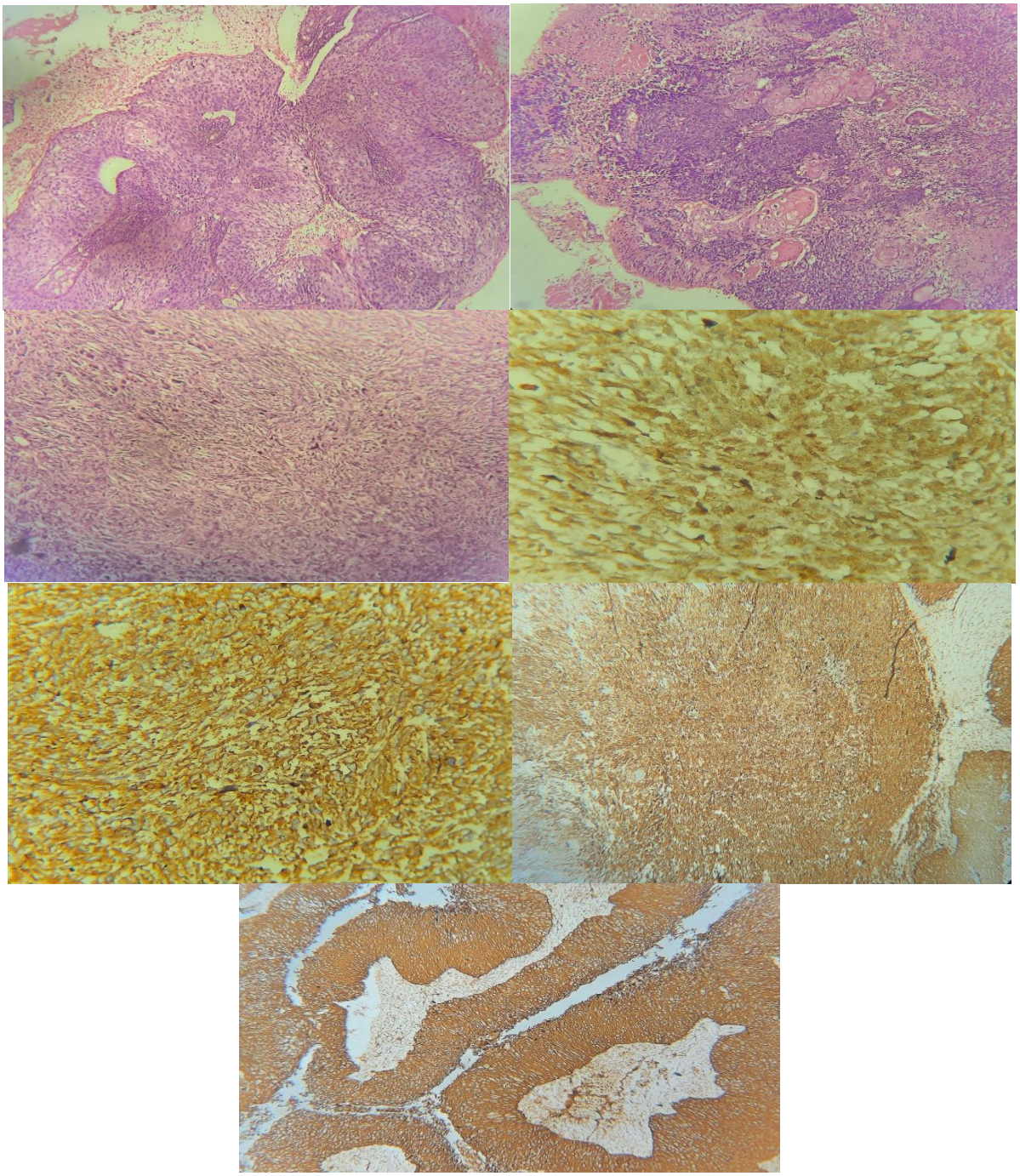
Sarcomatoid squamous cell carcinoma represents a rare entity with only a few cases reported in the literature. It is also known as spindle cell carcinoma of uterine cervix and has a very aggressive clinical behaviour [1]. Cervical cancer is the fourth most common malignancy in women worldwide with squamous cell carcinoma being the most common malignant tumor of the cervix. Sarcomatoid SCC differs from squamous cell carcinoma of cervix in terms of having a poorer prognosis. Several histomorphological variants of cervical SCC are described in the literature: keratinizing, nonkeratinizing, basaloid, verrucous, warty/condylomatous, papillary, squamotransitional, and lymphoepithelioma-like carcinoma [2]. However, only a few cases of sarcomatoid squamous cell carcinoma are reported. In this paper, we report a rare case of Sarcomatoid squamous cell Carcinoma of the uterine cervix with concurrent HPV infection.

CASE PRESENTATION

A 70-year-old woman presented with 1 year history of abnormal vaginal bleeding occurring 19 years after menopause. She also complained of pain in the lower abdomen. Ultrasonography and magnetic resonance imaging of the pelvis revealed a hypoechogenic well-circumscribed tumor measuring 38 × 29 × 26 mm, almost filling the entire cervix with no significant regional lymph nodes. On local examination she was found to have a large ulceroproliferative growth replacing the cervix extending down to the vagina.

A biopsy excision from the tumor mass was performed. Microscopically, it was a neoplastic tissue composed of poorly differentiated squamous cell carcinoma blended imperceptibly with spindled cells, these tumour cells had moderate nuclear pleomorphism with eosinophilic cytoplasm. There was no evidence of any glandular differentiation. Immunohistochemistry was strongly positive for cytokeratin in the epithelioid-squamous part and weaker but still unequivocally positive in the polymorphous part. The entire tumor showed strong diffuse p16 positivity. The polymorphous component was vimentin positive while the epithelioid-squamous part was vimentin negative. The epithelial lining showed high-grade squamous intraepithelial lesion which showed strong diffuse p16 positivity. These findings lead to a diagnosis of sarcomatoid carcinoma.

***Corresponding Author:** Dr. Alisha Teresa Jose



Histological findings of the tumor.a) Epithelium showing features of HSIL b) tumor showing epitheliod component c) sarcomatous element shows spindle cell element with nuclear atypia d) membranuous staining of both epithelial and spindle cell components with cytokeratin e) vimentin positivity in spindle cell component f&g) positive p16 staining

DISCUSSION

Squamous cell carcinoma is the most common malignant tumor of the cervix accounting for over 85% while adenocarcinoma, lymphoma, and sarcoma account for the rest. SSCC is a well-described variant of SCC in the lungs, head and neck, urinary bladder and the skin, but rare in the uterine cervix . SSCC is a primarily epithelial tumor composed of a squamous cell carcinoma element and a polymorphous sarcomatoid element derived from the squamous cell carcinoma element. However, SSCC is not described in the recent WHO Classification of gynecological tumors [3].

The histogenesis of SSCC is controversial. Histological, immunohistochemical, ultrastructural and molecular evidence from various reports support the theory of divergent differentiation in these tumours, as the mesenchymal component develops from the epithelial component which support a monoclonal epithelial basis for the development of S SCC [4].

According to Kumar *et al*., (2008) , the term SSCC overlaps to a significant extent with carcinosarcoma or malignant mixed Müllerian tumor of the uterine cervix, which is described in WHO as a very rare malignancy. However immunostaining pattern (wide diffuse immunoreactivity of the sarcomatoid component for epithelial marker Cytokeratin) and morphologic analysis makes a strong argument for a sarcomatoid squamous cell carcinoma. Contrary to rare cervical carcinosarcoma, MMMT of the uterine corpus is more common and has similar molecular and epidemiological characteristics to endometrial carcinoma, i.e., obesity and menopause. Cervical MMMTs, compared to their counterparts in the corpus, are more commonly confined to the uterus at presentation, have a non-glandular epithelial component, and potentially have a better prognosis, whereas carcinosarcoma of the uterine corpus almost always has adenocarcinomatous component. All considerations mentioned above lead us to the opinion that tumors of the uterine cervix with a concomitant epithelial and sarcomatous component are usually HPV-related and differ epidemiologically and histopathologically from corporal MMMT [3]. Due to the lack of a large dataset, it remains unclear, if the distinction between SSCC and cervical MMMT would have a clinical impact. According to the literature, cervical SSCC is quite an aggressive tumor.

Because of the rarity of the disease, no standard diagnostic and treatment approach are available at present. It is difficult to draw conclusions from limited data, the patients have been treated according to the treatment guidelines set out for squamous cell carcinoma of the cervix. In the previous reports disease free interval is short after initial therapy, with rapid development of local and distant recurrence. Second-line therapy is ineffective. Radiation therapy may be preferred because adequate margins of resection are diffcult to achieve. All patients treated with surgery had spread of tumor beyond what could be removed by surgery alone, or had such aggressive disease that postoperative radiation therapy was given in addition to surgery. Patients who remain free of disease had limited disease at diagnosis, and were all treated with radiation therapy at early stage disease. It is therefore not appropriate to conclude that surgical therapy is not indicated in this disease, or that radiation therapy is superior to surgery, but more data are necessary to make specific treatment recommendations. Patients with advanced clinical stage at presentation and those who have recurrence invariably succumb to this malignancy [5]. Our patient is unfit for surgery and is planned for brachyradiotherapy.

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