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PAPILLARY SQUAMOTRANSITIONAL CELL CARCINOMA OF THE CERVIX: A RARE CASE WITH REVIEW OF LITERATURE

Radiation Oncology

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ABSTRACT

Background: Papillary squamotransitional cell carcinoma (PSTCC) of the cervix is a rare malignancy, a subtype of transitional carcinoma cervix. Here we are presenting a rare case of PSTCC of the cervix treated with surgery followed by adjuvant radiotherapy.

Case report : A 44 years old lady presented with chief complaints of irregular menstrual cycles since 8 months associated with lower abdominal pain. MRI-Pelvis showed a 2.1cm×1.5cm×2.8cm cervical lesion. She underwent radical hysterectomy with bilateral salpingo-oophorectomy. Post-operative histopathology was suggestive of infiltrating PSTCC of cervix with tumor size 3 cm × 2.5 cm involving the endocervical canal with lymphovascular invasion and cervical stromal invasion was more than 1/3rd ,0/10 lymph nodes were involved and margins were negative. She received external beam radiotherapy to whole pelvis to a dose of 50 Gray (Gy) in 25 fractions followed by 2 sessions of intravaginal brachytherapy to a dose of 8 Gy per fraction. ^{18}FDG PET-CT done subsequently at one year of follow up was suggestive of complete metabolic response.

Conclusion: PSTCC of cervix is rare entity and there is limited data available in the literature. Early stage PSTCC should be treated with surgery followed by adjuvant RT, as in our case, which yielded good local control and distant metastasis free survival.

KEYWORDS

Rare cervical cancer, Papillary squamotransitional cell carcinoma, Adjuvant Radiotherapy

INTRODUCTION:

Papillary squamotransitional cell carcinoma (PSTCC) of the cervix is a very rare malignancy, a subtype of transitional carcinoma cervix[1].It is difficult to differentiate PSTCC from other papillary lesions of the cervix because of its papillary, exophytic nature[2]. In advanced stage PSTCC, the chances of local recurrence and distant metastasis are presumed to be higher as compared to squamous cell carcinoma of cervix [3].Currently, there are no specific treatment guidelines for PSTCC [4] .Here we are presenting a rare case of papillary squamotransitional cell carcinoma of cervix treated with surgery followed by adjuvant radiotherapy.

CASE REPORT

A 44 years old lady without any medical comorbidities presented with the chief complaints of irregular menstrual cycles for 8 months. It was associated with lower abdominal pain. On examination there was no growth present in the cervix. However, MRI- abdomen and pelvis showed a 2.1cm×1.5cm×2.8cm cervical lesion involving the lower uterine segment, without parametrium involvement and no significant lymphadenopathy. There was no evidence of distant metastasis. She underwent radical hysterectomy with bilateral salpingo-oophorectomy. The post-operative period was uneventful. Post-operative histopathology was suggestive of infiltrating PSTCC of cervix with tumor size of 3 cm × 2.5 cm involving the endocervical canal with lymphovascular invasion and cervical stromal invasion was more than 1/3rd ,0/10 lymph nodes were involved , multiple follicle cyst noted in both ovaries and margins were negative. Immunohistochemistry (IHC) showed positive staining for CK7, p16, and p53 and negative staining for chromogranin and synaptophysin. Patient was referred to our department, After pre-radiation therapy work-up, she received external beam radiotherapy alone to the whole pelvis with dose of 50 Gray (Gy) in 25 fractions at 2 Gy per fraction over 5 weeks by Intensity modulated radiotherapy (IMRT) (Figure.1) followed by two sessions of intravaginal brachytherapy to a dose of 8 Gy per fraction prescribed at 0.5cm from the surface of vaginal cylinder. Afterward patient was kept on regular follow up and was asymptomatic till last date of follow up.^{18}FDG PET-CT done subsequently at one year of follow up was suggestive of complete metabolic response(Figure.2a and 2b).

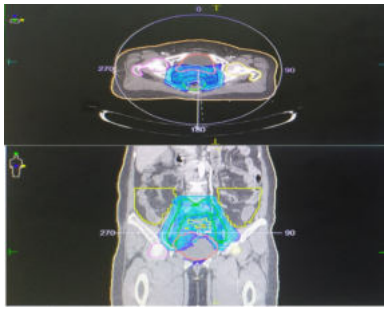

Figure 1. Showing the color wash isodose distribution by IMRT planning

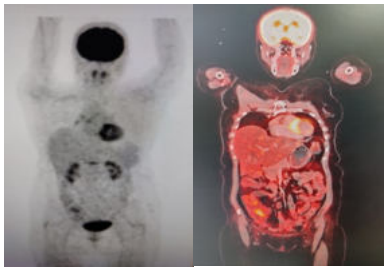

Figure 2a and 2b showing complete metabolic response in PET-CT.

DISCUSSION

Papillary squamotransitional cell carcinoma (PSTCC) of the cervix are very rare malignancy. There is no exact information about the incidence of this tumour. Since PSTCC presents a mixed spectrum of morphologies with a more transitional or more squamous histological appearance, thus it is named as such [1-3]. PSTCC can be expressed as an in situ tumor with or without an invasive part but usually presence of both components. Furthermore, it is very difficult to distinguish PSTCC from other papillary lesions of the cervix because of its papillary exophytic nature. There is a higher probability toward late metastasis at an advanced stage and local recurrence [3].

Gynecological transitional cell carcinomas were first reported in the ovaries and fallopian tubes and after many years these were observed in the cervix and endometrium [4]. Papilloma of the cervix as an entity were initially reported by Marsh in 1952[5] and characterized as papillary squamous cell carcinomas in 1986 by Randall et al [3]. Data regarding the clinical, histopathological, and immunohistochemical features of this malignancy are based on a few case reports and a small case series in the literature [6]. The sign and symptoms of these tumor are same as of squamous cell carcinoma (SCC) of cervix. Local and histopathological examination remains the cornerstone for the diagnosis of PSTCC. These tumors may exist in an in situ state with or without an invasive component, but usually it exhibits both [1]. Usually the invasive component is present without papillae, while the noninvasive component, more often presents as papillary. These tumor can be understaged because it may be difficult to illustrate histologically the invasion part, which can lead to incorrect staging, affecting the patient's treatment and prognosis [2,7].

Immunohistochemistry (IHC) features of PSTCC includes positive staining for CK7, CK19, and p53 and negative staining for CK20 and Uroplakin III[8,9].MRI pelvis is better modality of local imaging for appropriate staging of these patients. The clinical behavior of PSTCC is characterized as almost the same as that of SCC, except for the predisposition of PSTCC toward late metastasis and local recurrence [1, 3,10]. There are no specific management guidelines available for PSTCC of cervix [11]. The treatment part has not been discussed in majority of published literature of PSTCC of cervix [3, 12]. However, experts have suggested that it should be treated like SCC of cervix [1,3]. Early PSTCC of the cervix should be treated by surgery with or without adjuvant radiotherapy. Indications of adjuvant radiotherapy includes at least two of the following risk factors: tumour diameter >4cm, lymphovascular stromal invasion and >1/3rd stromal invasion (Sedlis criteria) [13]. For adjuvant concurrent chemo-radiotherapy indications are any one of the following: positive lymph nodes, presence of parametrial invasion or positive surgical margin, same as SCC of the cervix[14].

In our case patient has been treated with surgery followed by adjuvant radiotherapy and doing well at one year of follow-up.

CONCLUSION:

PSTCC of cervix is rare entity and there is limited data available in the literature. Early stage PSTCC should be treated with surgery followed by adjuvant RT, as in our case, which yielded good local control and distant metastasis free survival.

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