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A Rare Presentation of Locally Advanced Squamous Cell Carcinoma Cervix with Cutaneous Metastasis: A Case Study

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Abstract: ***Background**: Cervical cancer is a major public health problem in developing countries. Cutaneous metastasis in cervical carcinoma is very rare accounting for only 0.1-2%, mostly associated with adenocarcinoma. Here is a rare presentation of squamous cell carcinoma of cervix with cutaneous metastasis. **Case Report**: 60 year old multipara female, diagnosed with Squamous cell carcinoma Cervix Stage IIIC from pathology and radiological examinations underwent extended field 3DCRT with concurrent Cisplatin. During reassessment for brachytherapy patient complained of right shoulder pain, on examination was found to be a hard cutaneous mass, excision biopsy reporting metastatic carcinoma. Patient was put on palliative chemotherapy. Within 1 month multiple papulo-nodular erythematous lesion erupted on the back and lower abdominal wall. PET CT done 2 months after diagnosis of metastatic disease revealed local progression. The patient deteriorated severely within the next month to ECOG PS 3 and was put on palliative care. **Conclusion**: Cutaneous metastasis in cervical carcinoma leads to very poor prognosis, so complain of a cutaneous lesion in a diagnosed cervical cancer patient should warrant immediate attention towards pathological diagnosis. Nuclear scans like PET CT may not be helpful in diagnosis of such lesions so stress should be put on clinical examinations and pathological diagnosis.*

Keywords: Carcinoma Cervix, cutaneous metastasis, skin nodules, pelvic lymphadenopathy

1. Introduction

Cervical cancer is the most common gynaecological malignancy in developing countries. It is a major public health problem in such nations like India, where it accounts for one-quarter of the worldwide burden of cervical cancers, accounting for 17% of all cancer deaths among women aged between 30 and 69 years [1]. Spread of cervical cancer by decreasing order of frequency is local, lymphatic followed by haematogenous spread. Distant metastasis occurs most frequently to lungs, liver and bones [3]. Cutaneous metastasis is extremely rare with an incidence of 0.1-2% and only presents in late stages [4].Cutaneous metastasis of cervical cancer can occur as late as 10 years after 1st diagnosis, histopathology most commonly associated being adenocarcinoma, being rarer association with squamous cell carcinoma [2]. This is a rare case of Squamous cell carcinoma of cervix with cutaneous metastasis.

2. Case Summary

A 60 year post-menopausal, multipara female attended our OPD with complains of bleeding and watery discharge per vagina for 6 months and pain in lower abdomen for the same duration. She had been referred from gynaecology OPD where she presented with the same complaints. She had no history of any chronic illness like DM, hypertension, no history of any tobacco and alcohol. Her ECOG PS (Performance Status) was 1 on presentation.

On examination an irregular growth approximately 4.5 cm was palpated covering the cervical external OS which bled on touch. There was involvement of upper vaginal wall and bilateral parametrium. A provisional diagnosis of Carcinoma Cervix was made and she was sent for cervical biopsy and routine metastatic workup, haematological tests and assessment of cardiac function.

Cervical biopsy reported moderately differentiated squamous cell carcinoma. CECT and MRI of pelvis reported bulky cervix with paracervical extension more on left side. Cervico-vesical and cervico rectal fat planes were obliterated with involvement of vault and upper 2/3rd of vagina and left sided pelvic lymphadenopathy(Figure 1) . The diagnosis was confirmed as Carcinoma cervix with upstaging to Stage IIIC (FIGO 18).

Figure 1: CECT scan of pelvis showing bulky cervix and pelvic lymphadenopathy

The patient was planned to receive concurrent chemo radiotherapy followed by brachytherapy to cervix. During CT simulation 2 para aortic nodes were identified incidentally and she was planned to receive extended field radiotherapy. Radiation was delivered by 3D CRT using mixed energy photon beams(6MV and 10MV) by Truebeam linear accelerator in 2 phases, 1st phase comprising of whole pelvis and paraaortic nodes to a total dose of 45 Gy in 25 fractions, 2nd phase was a boost to pelvic and para aortic nodes to 9 Gy in 5 fractions. Concurrent chemotherapy was planned with weekly cisplatin 35mg/m^2 BSA.

However, during the course of concurrent chemo radiotherapy the patient had severe Grade 3 haematological toxicity with blood Hb being reported < 9 gm/dl in two occasions and < 7.5 gm/dl on one occasion. The patient had multiple admissions during the course of CCRT for blood transfusion and poor general condition.Due to these unforeseen complications, only 3 cycles of concurrent chemotherapy could be delivered with interruptions in treatment twice for a total of six days duration. There was grade I rectal mucosal toxicity.

On completion of concurrent chemo radiation, the patient was reassessed for brachytherapy. The post CCRT contrast enhanced CT scan reported complete resolution of para aortic nodes and cervical mass but residual disease in left parametrium and residual pelvic lymphadenopathy. The patient was planned to receive interstitial radiotherapy to have extensive coverage of the residual disease.

However an incidental complain of right shoulder pain was made by the patient which has started 10 days back. On examination a hard lump 3×2 cm, tender, adherent to skin but free from underlying structure was palpated over the deltoid region. Excision biopsy from the mass reported metastatic deposit in a known case of cervical carcinoma(Figure 2, 3) .

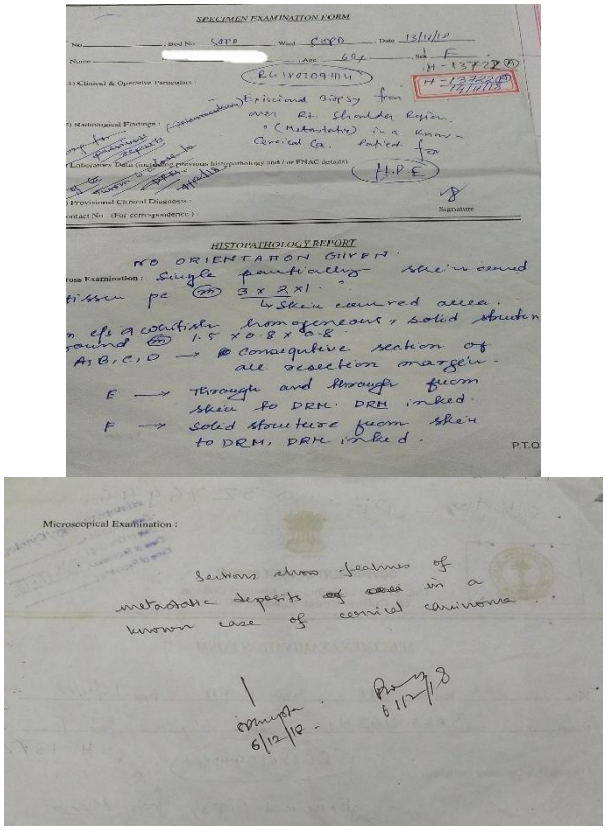

Figure 2, 3: Excision biopsy proving diagnosis of metastatic deposits

A PET CT was ordered and the patient was put on palliative chemotherapy with three weekly paclitaxel and carboplatin. Within next one month the patient developed several papulo nodular lesions in the back and lower abdomen(Figure 4).

Figure 4: Characteristic Skin lesion in the back of the patient

Due to logistic constraints, the PET CT was available after 2 months into diagnosis of metastatic disease which showed progression of local disease in cervix, vagina and uterus with bilateral hydronephrosis

Though new skin lesions did not appear after one month of institution of chemotherapy, the patient's condition deteriorated fast, with ECOG PFS of 3 little after 2 months of diagnosis of metastasis. Chemotherapy was stopped after

the 3rd cycle. Soon after bilateral pedal oedema and intractable local pain set in and the patient was put on palliative care.

3. Discussion

India, among most other developing countries faces a major burden of cancer. Lot of cases may remain unreported due to ignorance and poor accessibility to health care systems. Cervical cancer remains a major public health problem in India with GLOBOCAN 2018 reporting 8.4% new cases (3rd most common) in total and 16.5% (2nd most common) new cases among women in 2018. It is the most common cancer among Indian women [5].

Cervical cancer is mainly a localized disease, confined to the pelvis even in advanced stages. Although the cervix is adjacent to bladder and rectum, local spread to those organs occur in less than 5 % of cases [6]. Direct local extension and lymphatic embolization are the primary routes of spread of cervical carcinoma, haematogenous dissemination usually occurs rarely with more advanced disease or unusual cell types, such as adenosquamous or neuroendocrine tumours [3]. The most frequent sites of distant recurrences are lung, left supraclavicular and mediastinal nodes, liver and bone [6]. Cutaneous metastasis in cervical carcinoma occurs in less than 2% of cases with most common pathology being adenocarcinoma and undifferentiated carcinoma with squamous cell carcinoma being a rarity [7]. In this particular study by Imachi M, Tsukamoto N et al. [7], among 1190 patients of carcinoma cervix, only 15 (1.3%) developed skin metastasis, incidence increasing with advancing stage.

Cutaneous metastasis in visceral solid tumours are rare and are generally encountered in 0.7- 9% of all diagnosed solid tumours [8]. Most studies report commonest being lung cancer in males and breast carcinoma in females [8, 9], with cervical cancer being one of the rarest. Cutaneous lesions may present before the diagnosis of primary disease or may present late after diagnosis of primary disease. In the study conducted by Dinesh Sariya MD et al, skin lesions were primary presentation in 6 patients [9]. The pattern of invasion of skin and the characteristic lesions may vary with the primary lesion. Study by Hussein MR says," *The head and neck region and the anterior chest are the areas of greatest predilection in men. The anterior chest wall and the abdomen are the most commonly involved sites in women.*" [8]. Imachi M et al reported that most common sites of skin metastasis in the 1190 patients studied were anterior abdominal wall, vulva followed by anterior chest, though in our patient the first cutaneous lesion was observed on right shoulder followed by appearance of multiple papulo nodular erythematous lesion in the back and lower abdomen. Most of the cases of cutaneous metastasis in cervical cancer have reported very poor prognosis, which has been the case in our patient who had progressed even after prompt intervention with palliative chemotherapy and supportive care, with only 3 cycles of chemotherapy being delivered to the patient.

Other factors contributing to poor outcome in our patient could be serious haematological toxicity during therapy requiring multiple transfusions which could have led to aggravation of tumour hypoxia in this patient. Another reason may be inability to complete radiation treatment with brachytherapy as the patient had progressed to stage IV during treatment.

Another fact worth mentioning is the sensitivity of PET CT scan in the diagnosis of cutaneous metastasis incervical carcinoma. FDG PET is probably the most accurate modality in diagnosis of nodal metastasis in cervical cancer [10]. PET CT scan in this patient failed to diagnose metastatic disease which may point out the relative insensitivity of PET towards diagnosis of cutaneous metastasis.

4. Conclusion

Cutaneous metastasis in cervical carcinoma leads to very poor prognosis, so complain of a cutaneous lesion in a diagnosed cervical cancer patient should warrant immediate attention towards pathological diagnosis. Nuclear scans like PET CT may not be helpful in diagnosis of such lesions so stress should be put on clinical examinations and pathological diagnosis.

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