

Case Report

Cutaneous metastases after radical chemoradiotherapy in carcinoma cervix: An unusual manifestation

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ABSTRACT

Cervical cancer is one of the most common malignancy affecting women in India; however, cutaneous metastasis arising from cervical cancer is particularly rare. Skin metastases are unusual even in the terminal stages of the disease with the incidence ranging from 0.1% to 4.4%. Mostly they occur as a sign of recurrent disease and are associated with poor prognosis. We report a case of carcinoma of the uterine cervix with cytology proven unusual extensive metastasis to the vulva, anterior abdominal wall and thigh developing within 1 month of external beam radiation therapy. Cutaneous metastasis usually presents in the form of the nodule, plaque and inflammatory telangiectasia. However, in our case presenting symptom was an ulcer which spread to completely destroy the vulva. Adenocarcinomas of the cervix have a higher propensity for cutaneous metastasis. Skin metastases from cervical carcinoma occur predominantly in cases of tumor recurrences, with metastases developing up to 10 years after initial diagnosis. No effective treatment has been identified till date. Palliation is the aim using chemotherapy, radiation and surgery alone or in combination.

Keywords: Carcinoma cervix, cutaneous metastasis, radical chemoradiotherapy

INTRODUCTION

Cervical cancer is one of the most common malignancy affecting women in India. It is the leading cause of cancer in Hospital based cancer registry in Bangalore, Chennai, Guwahati, Chandigarh, the 2nd most common in Mumbai and Dibrugarh and the 3rd leading site of cancer in Thiruvananthapuram.¹ It frequently metastasizes to lungs, para-aortic nodes, abdominal cavity, supraclavicular nodes, spine, gastrointestinal tract, liver and inguinal nodes.^{2,3} Cutaneous metastases arising from cervical cancer are particularly rare even in the advanced stages of the disease, with its incidence ranging from 0.1% to 4.4%.⁴ Mostly, they occur as a sign of disease recurrence and are associated with poor prognosis.⁵ We report a case of adenocarcinoma of the uterine cervix with cytology proven, unusual extensive cutaneous metastases to the vulva, anterior abdominal wall and left thigh, developing within 1 month after completion of external beam radiation therapy (EBRT).

CASE REPORT

A 42-year-old woman presented at the Department of Radiation Therapy and Oncology, Government Medical

College Nagpur in August 2009 with chief complaints of foul smelling white discharge per vaginum. Per vaginal examination revealed a friable growth arising from the cervix, proven to be adenocarcinoma on biopsy, clinically International Federation of Obstetrics and Gynecology (FIGO) Stage IIB. The patient defaulted and was lost to follow-up. She reported again in December 2013 with complaints of blood stained discharge per vaginum. Examination revealed that the disease had progressed to FIGO Stage IIIB. She received EBRT, 50 Gy in 25 fractions with concurrent weekly cisplatin, taken regularly and concluded on February 18, 2014. Fifteen days after completion of EBRT the patient reported for ICRT with complaints of itching and pain in vulva. Examination revealed multiple ulcerative lesions in vagina and vulva. Scrape cytology confirmed them to be adenocarcinoma (Figure 1).

The primary had responded partially to EBRT. She was started on platinum-based chemotherapy. Assessment after 3 cycles revealed that the ulcerative lesions had grown in size causing complete destruction of vulva (Figure 2a). Multiple nodules also developed on the anterior abdominal wall and left thigh

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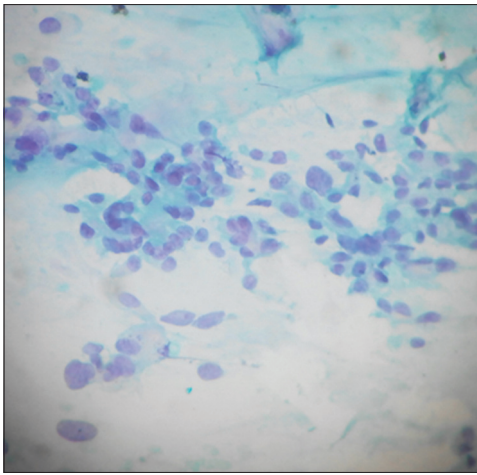


Figure 1: Scrape cytology specimen showing cells of adenocarcinoma

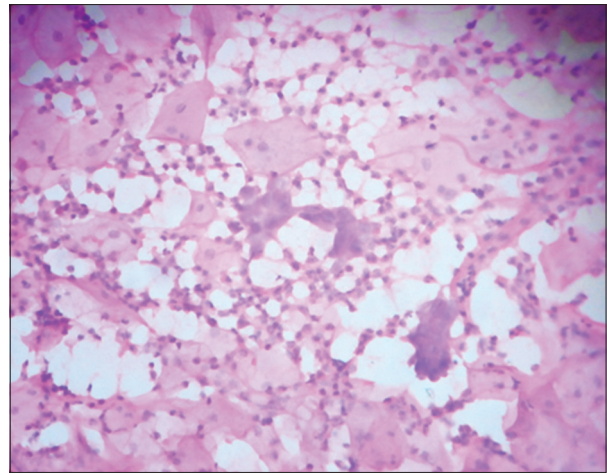


Figure 3: Fine-needle aspiration cytology done from nodules showing metastasis of adenocarcinoma

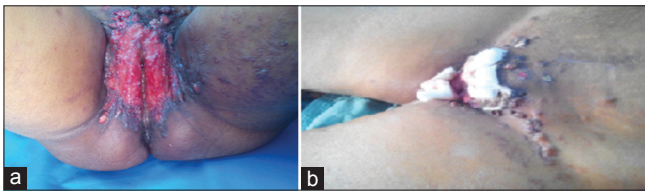


Figure 2: (a and b) Ulceration causing loss of normal anatomy of vulva, multiple nodules also developed on anterior abdominal wall and inner aspect of left thigh

(Figure 2b), proven to be adenocarcinoma on fine-needle aspiration cytology (Figure 3).

DISCUSSION

The frequency of metastatic skin disease corresponds roughly with the types of primary cancer. Women with skin metastasis had the following distribution of primary cancers: breast 69%; colon 9%; melanoma 5%; lung 4%; ovary 4%; sarcoma 2%; uterine cervix 2%; pancreas 2%; squamous cell carcinoma of oral cavity 2%; and bladder 1%.⁶ Adenocarcinoma accounts for only 15% of all cervical cancers.⁷ Eifel *et al.* reported that although there was no significant difference in the rate of pelvic disease recurrence for patients with adenocarcinoma or squamous cell carcinoma tumors, but the rate of distant metastases was greater for patients with adenocarcinoma.⁸ Cutaneous spread of primary cancer occurs by direct extension, or dissemination via bloodstream or by lymphatics. Abdominal wall, vulva, and anterior chest wall are the common sites of cutaneous metastasis in carcinoma cervix.^{9,10} The case reported here also had metastasis on the inner aspect of left thigh. Interestingly, development of cutaneous metastases within 15-20 days of EBRT, which were initially confined to the vagina and vulva and later on spread locally to involve the anterior abdominal wall and left thigh, may be attributed to injury (ionizing radiation) causing impaired lymph drainage, altered neuromediator signaling and dysregulation of cytokines resulting in the development of a radiation-induced "immunocompromised district" that is particularly susceptible to infections, tumors, or immune disorders.¹¹

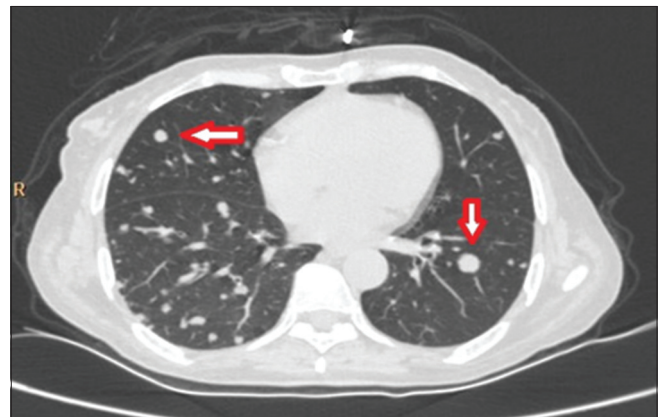


Figure 4: Computed tomography scan image showing metastases to lung

In addition, radiation-induced endothelial cell damage, causing tumor cell trapping leading to the development of cutaneous metastasis has also been implicated.^{5,12} This is usually confined to the irradiated fields. In addition our patient also had thigh involvement, we believe, a retrograde spread of tumor secondary to lymphatic obstruction is most likely to be the cause of the spread of disease to the thigh. Cutaneous metastases usually present as nodules, plaques or inflammatory telangiectasia.^{9,10,13,14} However in our case, it presented as an ulcer which progressed to completely destroy the vulva and was followed by the appearance of nodules on anterior abdominal wall and left thigh. The differential diagnosis of skin metastasis includes benign dermatitis, Kaposi's sarcoma, subcutaneous phycomyces and plaque-like mycosis fungoides.¹⁵ No effective treatment for cutaneous metastasis in carcinoma cervix has been identified till date. The prognosis is poor, previous studies report that the occurrence of metastases to the skin generally implies terminal disease, with the average survival following diagnosis ranging from 3 to 6 months, even in cases where palliative radiotherapy and chemotherapy are administered.^{5,16} In the present case, the patient developed cutaneous metastasis 4½ years after her initial diagnosis of carcinoma cervix, currently, she has also developed lung metastases (Figure 4).

At present, she continues to be on palliative care, 10 months after identification of cutaneous metastases.

CONCLUSION

Patients of carcinoma cervix who develop skin lesions like nodules, plaques, ulcers, etc., should be processed for pathological confirmation to rule out metastasis. Survival may be prolonged if diagnosis is established early with prompt initiation of treatment. Routine inspection of skin should be done in patients of carcinoma cervix on follow-up, and immediate pathological confirmation should be recommended in case of any suspicious skin lesions.

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PEER REVIEW

Double blind externally peer reviewed.

CONFLICTS OF INTEREST

Nil

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