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Case Report

Case report and review of literature: incisional site metastasis in patient with carcinoma cervix

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ABSTRACT

Metastasis to skin occurs rarely in gynaecological malignancies especially in carcinoma cervix. Cervical malignancy mainly metastasizes to the pelvis, lungs, bones, and liver. Metastasis to the skin is an unusual presentation during the course of carcinoma of the cervix, even in terminal stages of disease. The prognosis after skin metastasis is poor and often a terminal presentation. We report a case of a patient who underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy for postmenopausal bleeding without preoperative evaluation in a private enterprise in 2012 and carcinoma cervix (squamous cell carcinoma) was detected on histopathology. For the same, she received chemoradiation at an Oncocentre. Twenty two months after surgery she developed recurrence on abdominal scar site. At PGIMS Basaidarapur she underwent wide local excision of anterior abdominal wall with tensor fascia lata flap elevation. Presently she is under follow-up and planned for chemotherapy. To conclude, incisional cutaneous metastasis is a rarity with carcinoma cervix and is considered as an ominous prognostic sign with short survival after diagnosis.

Keywords: Carcinoma cervix, Metastasis, Radical hysterectomy

INTRODUCTION

Squamous cell carcinoma of cervix frequently metastasizes to pelvic lymph nodes. Distant metastasis is rare and usually observed in lung, liver and bone. Metastatic carcinoma to the skin is an uncommon occurrence, with incidence rate of 0.1-2%.^{1,2} Incidence of skin metastasis is 0.8% in stage I, 1.2% in stage II, 1.2% in stage III, 4.8% in stage IV. The incidence of cutaneous metastases in squamous cell carcinoma is 0.9% and adenocarcinoma 5.8%.² Incisional site skin metastasis is further rare with incidence of 0.1-1.3% among the cutaneous metastasis.³ Most common sites of skin metastasis reported are abdominal wall, vulva and chest wall.² Till date 42 cases have been reported including incisional, drain and port site metastasis. Out of these 33 were cases of squamous cell carcinoma, 8 adenocarcinoma, and 1 adenosquamous carcinoma. Mean interval between the diagnosis of cervical cancer and skin

metastasis reported is 14 months (range 0-69 months). Carlson et al reported occurrence of metastatic carcinoma to skin in 26 out of a study group of 2220 patients. They noted that with modern radiotherapy, cancer control in the pelvis is improved, and distant metastasis would become more clinically evident.⁴

CASE REPORT

Sixty years old female P₄L₄ had an episode of postmenopausal bleeding in January 2012 for which she underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy at private hospital within a week of presentation. Patient reported to ESI Basaidarapur Delhi in March 2012 with histopathology report showing squamous cell carcinoma of cervix. No abnormality was detected in general physical examination, blood and radiological investigations. Ultrasound and CT scan (whole abdomen and pelvis) showed no mass, no

lymphadenopathy or free fluid. Case was discussed with Oncologist and patient received 6 cycles of chemoradiation (cisplatin + external beam radiotherapy) in view of incomplete primary surgery. Patient was kept under follow up and annual vault smear, USG abdomen and Chest X ray were done. Twenty two months later, she noticed ≈ 1 cm painless, fluctuant nodule on abdominal scar area. She presented in August 2014 with a multinodular swelling grown over a period of 8 months. On local examination, there was an infra umbilical non-tender swelling of 8×10 cm on scar site with multiple sinuses over it draining purulent discharge (Figure 1).



Figure 1: Infraumbilical multinodular swelling on abdominal skin.



Figure 2: CT scan film showing mass in anterior abdominal wall.

CT Scan (Aug 2014) showed $8.1 \times 7.3 \times 6.1$ cm heterogeneously enhancing soft tissue with areas of necrosis in anterior abdominal wall involving skin, subcutaneous tissue, bilateral rectus abdominis muscle with intrabdominal extension of mass involving adjacent part of omentum, no lymphadenopathy, no free fluid, no bowel involvement. No evidence of metastasis elsewhere (Figure 2).

FNAC from the lump showed squamous cell carcinoma. Patient and relatives were counselled about the cutaneous metastasis of cervical cancer and treatment options. Wide local excision 15×15 cm of anterior abdominal wall including 2 cm of healthy margin along with infracolic omentectomy was done in sep 2014. Tensor fascia lata musculocutaneous flap elevated to cover the defect (Figure 3).



Figure 3: Wide local excision, defect covered with tensor fascia lata musculocutaneous flap.

Histopathology of the resected lesion showed squamous cell carcinoma with extensive necrosis, lymphovascular invasion and deep resected margins and skin margins were free. Wound healing took almost one month. Repeat CECT in May 2015 showed abdominal wall defect on left side with herniation of bowel loops, bilateral external iliac lymphadenopathy. FNAC from left external iliac lymph node reported as squamous cell carcinoma. She received Image guided radiotherapy (IGRT based external beam RT) using 6 MV photon beam on Clinac iX (LINAC) to a dose of 45 Gy in 25 fractions to residual disease and inguinal lymph nodes with concurrent weekly cisplatin chemotherapy.

November 2015, she presented with multiple nodular lesions on right gluteal area. Same nodules were biopsied and showed metastatic squamous cell carcinoma. PET-CT depicts mediastinal and right inguinal lymphadenopathy with lesions in liver likely metastatic. Then she was treated with paclitaxel carboplatin chemotherapy regime. Presently patient is alive and under follow up.

DISCUSSION

Although incisional site recurrences have been documented in the form of anecdotal reports in the

literature, it has never found a place in the list of recognized surgical complications. Owing to rarity of

such cases there have been no large series reported in literature.

Table 1: Reported cases of Incisional Site Metastasis of Cervical Carcinoma.5,9,13-15

Year/Age Author	Stage	Type of surgery	Type Histo	Postop radiotherapy(RT)	Time of recurrence	Treatment	Survival
63 yrs, Liro et al	II A	Radical Hysterectomy	SCC	Yes	6 months	Wide excision + Chemotherapy	3 months
35 yrs, Srivastava et al	II A	Radical Hysterectomy	SCC	Yes	3.5 years	Wide excision + Chemotherapy	Few months
Sachdev et al	-	Radical Hysterectomy	SCC	No	-	Surgery	-
45 yrs, Ding et al	I B	Radical Hysterectomy	SCC	No	2.5 years	Wide excision + Chemotherapy	-
2 cases, Deka et al	-	Radical Hysterectomy	SCC	-	-	Wide excision	-
52 yrs, Sugam et al	I B	Radical Hysterectomy	SCC	No	3 months	Chemotherapy	3 months
45 yrs, Singh et al	-	Simple Hysterectomy	SCC	No	6 months	RT	-
31 yrs, Selo-Ojeme et al	I A	Radical Hysterectomy	Adeno	No	5 years	Wide excision	-
Iavazzo et al	I B1	Radical Hysterectomy	Adeno	No	3 years	Wide excision + Chemotherapy	> 6 months
46 yrs, RSCH	I B1	Radical Hysterectomy	Adeno	No	3 years	Wide excision + Chemotherapy	-
Sil et al	-	Simple Hysterectomy	Adeno	No	4 months	Wide excision + Chemoradiation	Well at 5 months
60 yrs Sangeeta et al	-	Simple Hysterectomy	SCC	Yes, CTRT	22 months	Wide excision + Chemotherapy	Under follow up

The actual incidence of incisional site metastasis might be higher than identified in this paper due to lack of reporting them. There are 42 case reports of incisional, drain and port site metastasis. Thirty-three, eight, and one were squamous, adeno and adenosquamous carcinomas, respectively. Wide excision was performed in 30/37 cases of which we have information regarding the treatment option, while 11/37 and 13/37 underwent radiotherapy and chemotherapy, respectively.^{2, 5} Incisional site metastasis is commonly seen in adenocarcinoma of abdominal and pelvic organ malignancies but in case of carcinoma cervix, it is seen more common in squamous cell carcinoma as compared to adenocarcinoma.

Median time of recurrence is 14 months (range 1.5-45months). Risk factors include local immunoreactions, wound hypoxia, acidosis leading to angiogenesis and haematogenous spread, stage and type of carcinoma and surgical technique.

Macroscopically 3 common patterns of skin metastasis such as nodules, plaques and inflammatory telangiectatic

lesions have been recognized.⁶ In this case metastatic lesion developed as nodule and later turned into an ulceroproliferative lesion.

There are two possible mechanisms that could explain the development of metastatic recurrence in a surgical wound. First, it is possible for direct tumor seeding to occur at the time of surgery. Secondly, circulating tumor cells may become trapped by fibrin platelet deposits in the microcirculation of the wound. Copas et al⁷ and Behtash et al⁸ reported cases of carcinoma cervix where retroperitoneal drain was placed through separate incision after radical hysterectomy and patient developed drain site metastasis later on. Laparoscopic procedures are used infrequently in cervical carcinoma. Port site metastasis after laparoscopic lymphadenectomy is a new phenomenon.

In present case, time of recurrence was 22 months following simple hysterectomy done for benign cause and malignancy was detected on histopathology report; similar case was reported by Singh et al in 2012 with

recurrence time of 6 months and treated with radiotherapy.⁹ Others cases had underwent complete radical surgery for known case of carcinoma cervix, with recurrence time of 12 months. Most of them were treated with wide local excision followed by chemotherapy. In this case patient was treated with wide local excision showing negative margins on histopathology and defect was repaired with tensor fascia lata flap. Patient was discharged with a plan of chemotherapy.

No strict guidelines regarding treatment are available in literature owing to scanty number of cases reported. The management of these patients depends largely upon disease extent. Distant metastasis in organs such as lung, liver and bone render these patients unsuitable for curative treatment. Biopsy is necessary to prove the origin of the metastasis. Careful and close follow up including examination and imaging with special attention to incision, port, or drain sites is proposed to early identify such a recurrence. Treatment of such recurrences remains palliative and includes chemotherapy, radiotherapy or wide surgical excision. After wide local excision reconstruction of the abdominal wall with a latissimus dorsi musculocutaneous flap as well as mesh use are proposed in the literature.¹⁰ Platin-based chemotherapy is usually recommended, though fluorouracil or topotecan have also been used. Although treatment should be individualized, it seems that wide excision in combination with chemotherapy could be the best treatment option.

Prognosis associated with cutaneous metastasis of cervical carcinoma is poor. The mean survival of patients is 3 months.^{1,11} In this case, patient is alive and under regular follow up. It is difficult to clarify the prognosis of such a recurrence. Ramirez et al showed that in a median follow-up period of 12 months, 63% of patients died of disease.¹²

CONCLUSION

Cutaneous metastasis in a patient with carcinoma cervix is a rare entity; however follow-up and treatment should be further clarified. During follow-up, a close attention should to incision, port, or drain sites are proposed to early identify such a recurrence. A multicentric analysis should be proposed in order to clarify the prevention and management of such cases.

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