



## Cutaneous Metastasis : A Rare Clinical Entity

Gaurav Gandotra, Bhavana Gupta, Rakesh Kapoor, Ashutosh Gupta

### Abstract

An interesting and rare case of cutaneous metastasis in xiphisternal region is being reported. The patient presented with a fungating nodule in xiphisternal region of 3 months duration. The biopsy showed metastatic carcinomatous deposits (Keratinising Squamous cell carcinoma). Primary lesion was later localised in the right lung.

### Key Words

Cutaneous metastasis, Malignancy

### Introduction

Cutaneous metastasis from internal malignancies are rare, discovered in 0.2–9% of autopsies of cancer patients (1). Carcinomas of the breast and lung account for the vast majority of the cases; other likely possibilities include malignant melanoma and carcinoma of the oral cavity, stomach, colon, kidney or ovary (2). Skin metastasis usually occurs if the disease is widespread with metastasis to multiple sites. However, as in the present case, skin metastasis presenting as sole manifestation of internal malignancy is relatively a rare occurrence.

### Case Report

A 65 years old male patient who was a chronic smoker for last 40 years, presented with a small fungating nodule over xiphisternal region of 3 months duration (Fig. 1). It was red in colour, hard, tender and fixed to underlying structures. It gradually increased in size over couple of months. Patient also had generalised weakness, anorexia, vomiting, and 2 episodes of haemoptysis. However, there

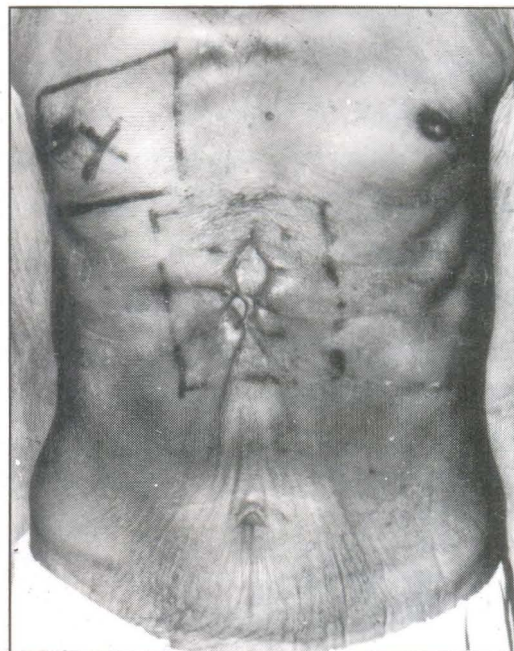


Fig. 1 : Showing fungating lesion over xiphisternal region. Also note the radiation portals marked to cover the nodule as well as the primary lesion in the lung.

was no history of cough, chest pain, breathlessness, constipation or pain abdomen. On examination, patient

From the Department of Radio Therapy, Government Medical College, Jammu, (J&K).

Correspondence to : Dr. Ashutosh Gupta, Head Department of Radiotherapy, Government Medical College, Jammu, (J&K).

showed marked pallor. Breath sounds were decreased on right side of chest. CVS and abdominal examination was normal. X-ray chest showed opacity in the mid zone of right lung. (Fig 2). Barium enema and ultrasonography of abdomen were normal.

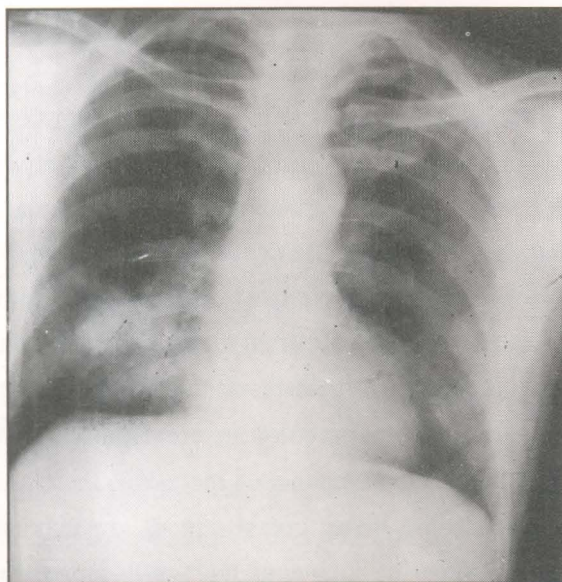


Fig. 2 : X-ray chest showing opacity in mid zone of right lung.

Excision biopsy of the nodule showed marked vascular proliferation and many clumps of malignant epithelial cells exhibiting prominent nuclei and frequent mitotic figures which indicated metastatic carcinomatous deposits (Keratinising squamous cell carcinoma).

CT scan of chest and abdomen revealed irregular hyperdense mass measuring 6.4 x 5.0 cm involving medial segment of right middle lobe extending anteriorly and involving parietal pleura as well as intercostal muscles (Fig.3). Small infiltrative lesion and nodular opacity in relation to pleura was observed in left side (metastatic deposits).

Patient received palliative radiotherapy.

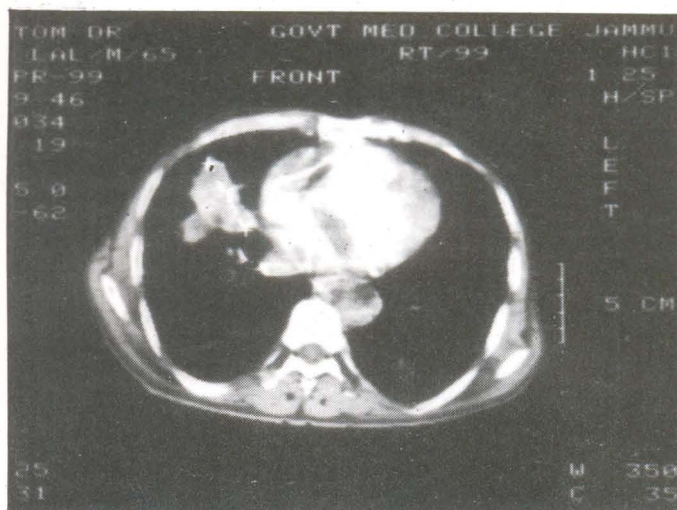


Fig. 3 : CT scan of chest (contrast) showing irregular hyperdense mass involving medial segment of right middle lobe.

### Discussion

The incidence of skin metastasis is associated with the type of the primary cancer and the sex of the patient. In a report of 7316 patients by Looking Bill *et. al.* (3), most common primary source of cutaneous metastasis in male population were: malignant melanoma (32%), carcinoma lung (12%), carcinoma of large intestine (11%), carcinoma of oral cavity (9%), carcinoma of larynx (5.5%) and renal cell carcinoma (5%). While in female patients the common primaries detected were: carcinoma breast (70%), malignant melanoma (12%), carcinoma ovary (3%), carcinoma of large intestine, lung and oral cavity (2.3%). Other studies by Strayer *et. al.* (4) and Brownstein *et. al.* (5) also studied the pattern of cutaneous metastasis in male and female patients and showed somewhat similar pattern in both the sexes. Brownstein *et. al.* (5) studied the pattern of metastasis in different age groups of patients in both the sexes. According to their study, the primary source of skin metastasis in women younger than 40 were (in descending order) carcinoma breast, melanoma, carcinoma colon, carcinoma ovary, while in women older

than 40, the primary source was carcinoma breast, carcinoma colon, carcinoma lung, carcinoma ovary. In men younger than 40, the primary source was malignant melanoma, carcinoma colon, carcinoma lung, while for men older than 40, carcinoma lung, carcinoma colon, oral squamous cell carcinoma, melanoma constituted the order.

Typically, metastatic cancers present as multiple, firm nonulcerated nodules. When solitary, they may be misdiagnosed as primary skin tumour. Sometimes, skin metastasis appears even before the symptoms of the primary disease. Many times the lesions ulcerate as is in the present case.

Most common primary sites for skin metastasis are chest and abdomen followed by head and neck. Metastasis to extremities is rare. Metastasis in scalp can be associated with alopecia and is known as Alopecia-neoplastica. Some skin metastasis have certain morphologic and clinical features that differentiate them from other lesions. Neuroblastomas may appear as multiple firm, nontender mobile, bluish, subcutaneous nodules described by the term blueberry muffin. In breast cancer, the metastasis may present as inflammatory carcinoma in 10% of cases and metastatic breast cancer may be confused with cellulitis. Hypernephroma may clinically resemble Kaposi's sarcoma and pyogenic granuloma. Umbilical nodules known as "Sister Mary Joseph's nodules", named after the Mayo clinic's first surgical assistant who emphasized their significance represent intra-abdominal carcinomatosis (6). In such presentations, adenocarcinoma of stomach, pancreas, colon or ovary should be suspected. The route of spread to umbilicus in such cases has been postulated to be contiguous extension, embolization, retrograde lymphatic flow, direct implantation or urachal extension (6).

Metastasis to skin may be hematogenous or via lymphatics. Cancers of breast and oral cavity spread via lymphatics where as rest of the cancers spread mainly via hematogenous route. Lymphatic dissemination may explain why skin metastasis tend to be close to primary site of tumour. i.e. chest in case of lung cancer, abdominal wall in case of gastrointestinal tumours and lower back in renal cell carcinoma.

If a patient presents with cutaneous metastasis, it usually indicates that the primary disease is widespread. Chances of lung cancer in elderly patients with cutaneous metastasis are maximum. However, if lesion is localised in abdomen, then patient should be thoroughly investigated for gastrointestinal malignancies. In young males with cutaneous metastasis, chances of malignant melanoma and carcinoma colon are more than carcinoma lung. In females with cutaneous metastasis, the chances of primary lesion being breast cancer are maximum (69%). Prognosis of cutaneous metastasis is extremely poor. Time duration between diagnosis of metastasis to death from primary tumour varies from 1- 34 months.

#### References

1. Raingold IM Cutaneous metastasis from internal carcinoma *Cancer* 1966 ; 19 : 162-168
2. Rosen ST, Aisner J, Makuch RW. Clinicopathological correlation of cutaneous metastasis. *Med Clin North Am* 1980 ; 64 : 885
3. Looking Bill DP, Spangler N, Helm KF. Cutaneous metastasis in patients with metastatic carcinoma. *J Acad Dermatol* 1993; 29 : 288
4. Strayer DS, Santa D.J. Carcinoma in situ of skin. A review of histopathology. *J Cutan Pathol* 1981, 7 ; 244-259
5. Brownstien MH, Helwing EB. Pattern of cutaneous metastasis. *Arch Dermatol* 1972 ; 105 : 862-868
6. Cullen TS : Embryology and diseases of the umbilicus together with diseases of the urachus. Philadelphia. WB Saunders Co., 1916 ; 907.

