International Journal of Research in Medical Sciences
Mukker P et al. Int J Res Med Sci. 2016 May;4(5):1735-1738
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012

DOI: http://dx.doi.org/10.18203/2320-6012.ijrms20161260

Case Report

A case report of extensive skin metastases from squamous cell carcinoma of lower esophagus and short review of literature

Payal Mukker*, Abhilash Haridas, Nishanth Kallinkeel, Ajith PG

Department of Internal Medicine, Azeezia Medical College, KUHS Kollam, Kerala, India
Sivagiri Sree Narayana Medical Mission Hospital, Varkala, Kerala, India

Received: 16 February 2016
Accepted: 22 March 2016

***Correspondence:**
Dr. Payal Mukker,
E-mail: drpaayali@gmail.com

ABSTRACT

Esophageal malignancy is the sixth most common cause of cancer-related mortality worldwide. Patients with esophageal malignancy usually present with locally advanced disease with presence of metastases at presentation. Squamous cell carcinoma is the predominant histological subtype, comprising about 70% of cases and is the most common histologic subtype in the proximal and middle thirds of the esophagus. The clinical manifestations can be attributed to the local and regional spread of the disease. Lymph nodes, lungs and liver are the main metastatic sites. Cutaneous metastases of abdominal malignancies are uncommon, with frequency ranging from 0.7 to 9%. Skin metastases from esophageal malignancy are even rarer, and affect less than 1% of cases. The overall survival rate is poor and varies from 4.3 to 4.7 months. We report the rare case of a 73-year-old patient who presented with extensive skin lesions due to metastasis of squamous cell carcinoma of the lower esophagus.

Keywords: Esophageal malignancy, Squamous cell carcinoma, Cutaneous

INTRODUCTION

Esophageal malignancy is the sixth most common cause of cancer-related mortality worldwide. Patients with esophageal malignancy usually present with locally advanced disease with presence of metastases at presentation.[1] Squamous cell carcinoma is the predominant histological subtype, comprising about 70% of cases and is the most common histologic subtype in the proximal and middle thirds of the esophagus.[2] The clinical manifestations can be attributed to the local and regional spread of the disease. Lymph nodes, lungs and liver are the main metastatic sites. Cutaneous metastases of abdominal malignancies are uncommon, with frequency ranging from 0.7 to 9%.[3] Skin metastases from esophageal malignancy are even rarer, and affect less than 1% of cases.[4] The overall survival rate is poor and varies from 4.3 to 4.7 months.[5]

We report the rare case of a 73-year-old patient who presented with extensive skin lesions due to metastasis of squamous cell carcinoma of the lower esophagus.

CASE REPORT

73 year old carpenter who is a chronic smoker, pan chewer and chronic alcoholic with history of chronic obstructive pulmonary disease and diabetes mellitus presented with skin lesions of four months duration, Lymphedema of left upper limb of three months duration, dysphagia of two months duration and 14 Kg weight loss. The skin lesions were multiple discrete and confluent erythematous papules and plaques distributed over left chest from left infraclavicular and left axillary area up to the left hypochondrium. Anteroposteriorly extending from near midsternal to posterior axillary line. Skin induration and hemorrhagic crusting was associated with a few lesions. Peau de orange appearance of left forearm

was seen. According to the patient skin lesions began as painless, mildly pruritic papules of 1-2cm size in left upper part of chest (Figure 1a). New similar lesions arose near the first and they started growing rapidly. In the next two months the lesions became more pruritic, painful and confluent (Figure 1b). Excision biopsy of one representative prominent cutaneous formation on the chest was performed (Figure 1c). Examination also revealed pallor, a 2 cm left axillary firm lymph node and hepatomegaly with hard nodular surface. (Figure 2). Histology of biopsy specimen showed infiltrating squamous cell carcinoma (Figure 3a) Computed tomography imaging (Figure 4) of chest and abdomen also showed lower esophageal neoplasm with craniocaudal extend of 7 cm with extension into proximal stomach, liver metastases, skin metastases. Enlarged regional lymphnodes and lymphnodes in left axillary and aorto caval region. Pathological examination of skin lesions revealed cutaneous metastatic infiltration by squamous-cell carcinoma (Figure 3b). Fine needle aspiration cytology of liver focal lesions and axillary lymphnode also revealed squamous cell carcinoma. Since the patient had Stage IV disease he was started on palliative chemotherapy and radiotherapy. He expired after 4 months.

Figure 1a: At initial presentation the skin lesions were multiple papules and plaques affecting left chest, axilla and abdomen.

Figure 1b: At third month the lesions were more confluent erythematous papules and plaques distributed over left chest from left infraclavicular and left axillary area up to the left hypochondrium. Anteroposteriorly extending from near midsternal to posterior axillary line.

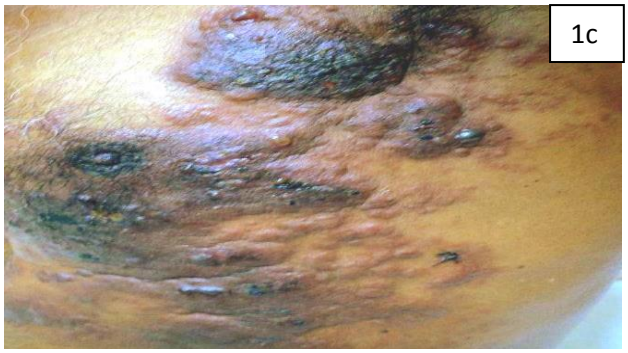

Figure 1C: Showing papules, plaques, confluent lesions with skin induration and hemorrhagic crusting. Black arrow indicates site of skin biopsy.

Figure 2: Esophagogastroduodenoscopy showed an ulcer proliferative neoplasm in lower esophagus at 36 cm from dental arch with complete luminal occlusion.

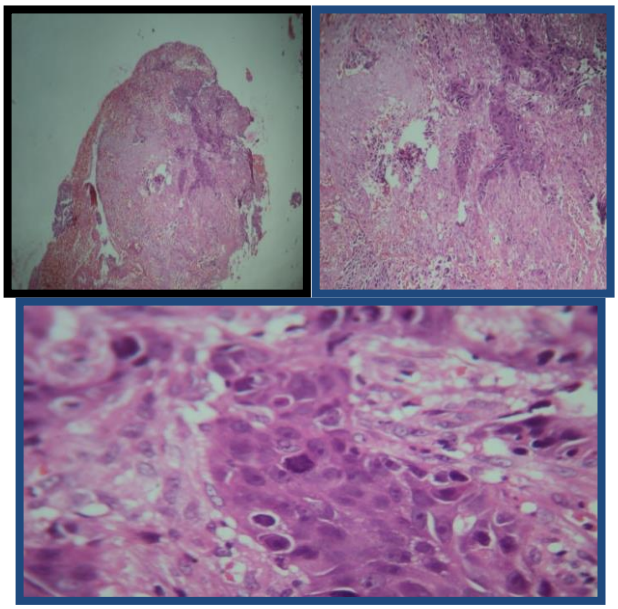

Figure 3a: Low power and high power views showing esophageal squamous cell carcinoma with intercellular bridges; few keratin pearl formation and fibrous stroma.

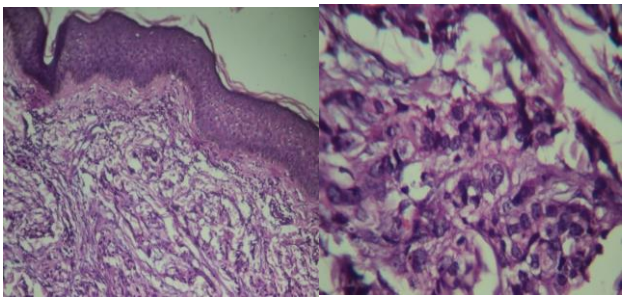

Figure 3b: Low power and high power views of histology of skin lesion biopsy showing an infiltrative squamous cell carcinoma.

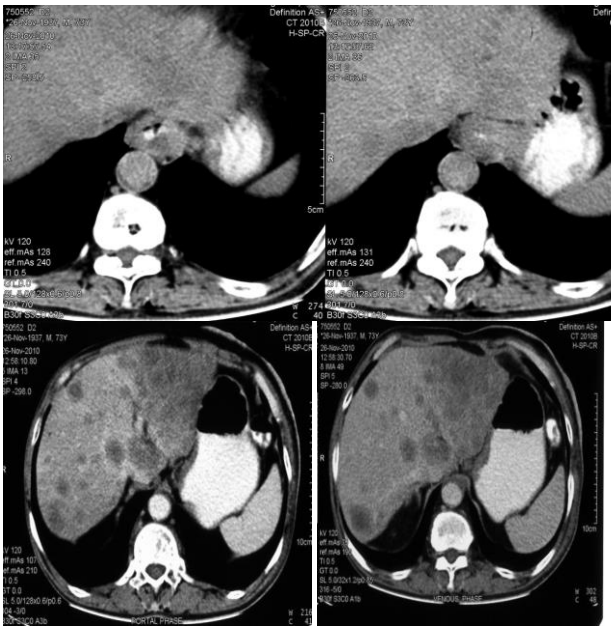

Figure 4: Contrast enhanced CT demonstrating neoplasm of lower esophagus extending into proximal stomach. Lower images demonstrate the liver metastases seen in triple phase CT.

DISCUSSION

Globally the incidence of esophageal cancer is sixth and ninth among cancers in men and women, respectively, and is the fifth and ninth leading causes of cancer deaths.[6] The majority of esophageal cancers are mainly squamous cell type. As in our patient squamous cell carcinoma mainly occurs in the setting of smoking and alcohol consumption. Barrett's esophagus, which is a complication of gastroesophageal reflux disease (GERD), is one of the strongest risk factors for esophageal adenocarcinoma6. Approximately 50% to 60% of squamous cell esophageal cancers occur in the middle third of the esophagus, 33% involve the distal esophagus, and 10% occur in the proximal esophagus.[6] Esophageal Squamous cell cancers are aggressive and local lymph nodal metastasis occurs early, partly related to the presence of lymphatic channels in the esophageal lamina propria. Invasion of local structures, such as mediastinal pleura, the trachea, the bronchi, and the aorta as well as distant metastases to liver, lung, bone, and other sites may be present in more than a third of these patients at presentation and signifies a poor prognosis.[6]

Cutaneous metastases from malignant tumors of internal organs account for 0.7-9% cases.[3] Schoenlaub and colleagues reviewed the clinical findings and overall survival of 200 patients with cutaneous metastases of various cancers. The incidence of cutaneous metastases from esophageal squamous cell carcinoma was 2 out of the 200 cases studied. The cancers most frequently causing cutaneous metastases were breast cancers (n = 64), pulmonary cancers (n = 36) and melanomas (n = 31).[5] Reingold reported clinical and necropsy findings of 32 cases of cutaneous metastases out of 2,300 internal carcinomas. The most common primary site was the lungs (50%). The esophagus was the primary tumour site in just one case and this was an adenocarcinoma. The most common sites of skin metastases were on the chest and abdomen.[7] Lookingbill et al reviewed 420 patients with cutaneous metastases from melanoma and carcinoma. In this study, tumour registry data from 7,608 patients was evaluated; 4,020 of these patients had metastatic disease and 420(10.4%) had cutaneous metastases. The most common primary tumours causing cutaneous metastases were melanoma (n = 77) and breast cancer (n = 212). The esophagus was the primary site in only three cases, spreading mainly to the chest and abdomen.[8] Thus an association between esophageal squamous cell carcinoma and cutaneous metastases, as in the present case, has only been exceptionally described. Cutaneous involvement occurs due to hematologic or lymphatic spread and presents as nodules or papules of various sizes. Rajiv Baijal et al. reported a 34 year old male with significant weight loss; two episodes of scanty hematemesis and a subcutaneous nodule. Evaluation revealed poorly differentiated esophageal squamous cell carcinoma with skin metastases.[9] Diffuse lesions as with our patient are associated with highly aggressive disease. Similar to our patient Iwanski et al. reported a 51-year old man with extensive disseminated skin nodules which turned out to be metastatic squamous cell carcinoma from the esophagus. Similar to our patient skin lesions developed even before symptoms such as dysphagia or weight loss became apparent.[10] Paulo Roberto Ott Fontes reported another 51-year old male with multiple skin metastases from squamous cell carcinoma of the esophagus. In their own case, metastatic nodules were mainly on the scalp, limbs, abdominal wall and trunk.[11]Fereidooni and colleagues reported a solid facial skin metastasis of esophageal adenocarcinoma.[12] Tharakaram described five cases of skin metastases from esophageal squamous cell carcinoma in male patients.[13] In our patient skin metastases presented even before clinical dysphagia or signs of local invasion. This clinical presentation should be borne in mind and suspicious skin lesions should be biopsied. Histopathology and immunohistochemistry plays essential role in diagonosis.[14]The occurrence of cutaneous metastasis

from esophageal cancer and most gastrointestinal cancers is a sign of the aggressive nature of the disease and an advanced stage and generally have a poor prognosis and several authors have reported a survival time of 4-20 months after diagnosis.[8] Our patient expired in 4 months after diagnosis.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Mukker P, Haridas A, Kallinkeel N, Ajith PG. A case report of extensive skin metastases from squamous cell carcinoma of lower esophagus and short review of literature. Int J Res Med Sci. 2016;4:1735-8.