Case Report

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Bilateral Large Squamous Cell Carcinoma on Both Groins with Metastasis to the Liver: A Case Report

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ABSTRACT

Cutaneous squamous cell carcinoma (cSCC), which is the second most common malignancy in humans, commonly occurs on sun-exposed skin such as face. Incidence rate of squamous cell carcinoma is found to be higher in old men. Metastatic rate of cutaneous squamous cell carcinoma is approximately 4-5%, and it is higher in men, especially those over the age of 75 years. Risk factors that increase the rate of metastatic SCC include immunosuppression like human immunodeficiency virus (HIV), solid organ transplantation, tumor thickness (> 2 mm), lesion diameter (> than 2 cm), poor differentiation, and perineural invasion. To our knowledge, our case is the first report of squamous cell carcinoma with large size with bilateral lesion extending from the groin to intergluteal region.

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Introduction

Non-melanoma skin cancers (NMSC) are of the most common malignancies. Cutaneous squamous cell carcinoma (cSCC), which is the second most common malignancy in humans, represents about only 20% of NMSCs (1). cSCC occurs commonly on sun-exposed skin (2).

Incidence rate of NMSC is higher in men and increases with age (2). The overall incidence rate of cSCC is estimated to be 15-35 per 100,000 people (1, 3).

cSCC that is superimposed on chronic skin lesions or SCCs located in invisible sites are usually larger at the time of presentation (4).

Metastatic rate of cSCC is approximately 4-5% (1, 3). Metastasis are more common in men (85%), and in patients over the age of 75 years (42%) (2).

To our knowledge, a few bilateral cutaneous SCCs have been reported in the literature (5), but our case is the first report of bilateral cSCC in the groins.

Case Report

A 55-year-old woman with extensive exophytic mass on her both groin areas with extension to intergluteal region was presented at our department in 2016. In her social history, she reported cigarette smoking, heroin use, intravenous (IV) drug abuse, and methadone treatment for the last year. Other medical history included chronic infection with hepatitis C. The ulcerative mass had initially begun from three months ago from the right side and after one month, another mass was noticed on the other side. Lesions had rapid progression in three months, and bleeding ulcers had developed in both masses. The skin masses had become painful and developed foul-smell.

Physical examination revealed bilateral fragile and ulcerative masses with spontaneous drainage on both groin areas with extension to the intergluteal area (Figure 1).

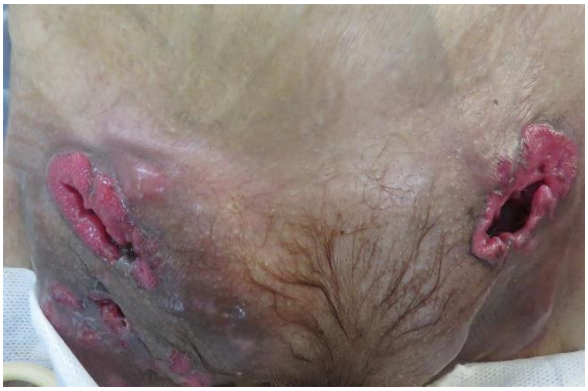

Figure 1. Bilateral fragile and ulcerative masses with spontaneous drainage on both groin areas with extension to the intergluteal area

The tumor was highly vascular, with a beefy erythematous appearance, and a tendency to bleed (Figure 2).

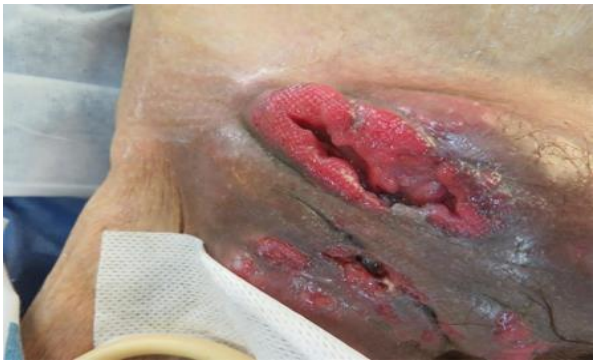

Figure 2. Highly vascular tumor, with a beefy erythematous appearance, and a tendency to bleed

She was ill and cachectic at the time of her visit. Her left leg showed 4-plus pitting edema, and caput medusa was noticed on her abdomen.

A deep incisional biopsy was taken from both masses. Differential diagnosis included lymphogranuloma venereum, scrofuloderma, SCC, lymphoma, and Kaposi sarcoma.

The histopathological examination revealed a highly dysplastic epidermis composed of atypical keratinocytes with focal keratinization, and involved adnexal structures extending into the dermis. The malignant cells were large with abundant eosinophilic cytoplasm, and a large, often vesicular, nucleus. Some atypical mitotic figures and keratinization of individual cells and horn pearls were seen (Figure 3).

In the laboratory examination, white blood cell count, hemoglobin, and platelet were 14100 cell/l, 7.6 g/dl, and 246000 cell/l, respectively. Lactic acid dehydrogenase (LDH) was higher than normal range (320 IU/l). Iron, total iron-binding capacity (TIBC), and ferritin were 62 µg/dl, 111 µg/dl, and 680 ng/ml, respectively. Liver function tests were within the normal limit [aspartate transaminase (AST) = 12 IU/l, alanine transaminase (ALT) = 11 IU/l, and total bilirubin = 0.3 mg/dl]; but, an alkaline phosphatase level was slightly elevated (348 IU/l). The erythrocyte sedimentation rate

was 75 mm/hour, and C-reactive protein (CRP) was 80 mg/l.

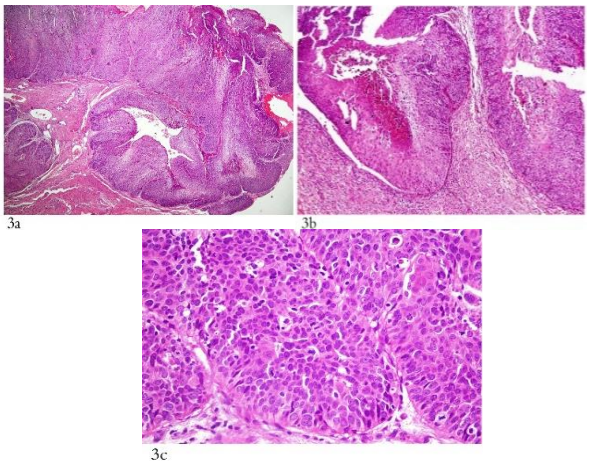

Figure 3. Microscopic histopathological examination of the regional biopsies (Hematoxylin and eosin staining); (a) Dysplastic epidermis with invasive nests extending to deep dermis with little keratinization (× 4), (b) Invasive nests with full-thickness atypia and keratinization (× 10), (c) Increased mitotic figures and individual keratinization (× 40).

Human immunodeficiency virus (HIV) antigen and antibody were negative. CD4+ T-cell count was 452 cells with a CD4 ⁄CD8 ratio of 1:34. Hepatitis B tests were negative.

Multiple axial computed tomography (CT) images of the chest, abdomen, and pelvic with IV and oral contrast media revealed mildly enhancing significant soft tissue thickening with superficial ulceration in bilateral inguinal regions and in perianal region.

The mentioned perianal soft tissue thickening was extended along anal canal and lower rectum associated with multiple hypodense rim enhancing lesions surround these soft tissue thickenings, which might be necrotic lymphadenopathy (LAP) or less likely abscess cavities. LAPs in proximal para-iliac region measured up to 18 mm. Three rim enhancing lesions were seen in the liver with possibility of metastases in lower dome of the segments 3 and 5 of liver. Mild to moderate ascites was seen. She had bilateral plural effusion at chest CT scan. Liver biopsy and plural effusion tap were performed. Plural effusion had no evidence of malignancy.

Liver biopsy showed infiltration of neoplastic tissue composed of sheets of polygonal cells containing pleomorphic hyperchromatic nuclei, some with nucleoli and small foci of necrosis (Figure 4). These findings were in favor of metastatic SCC.

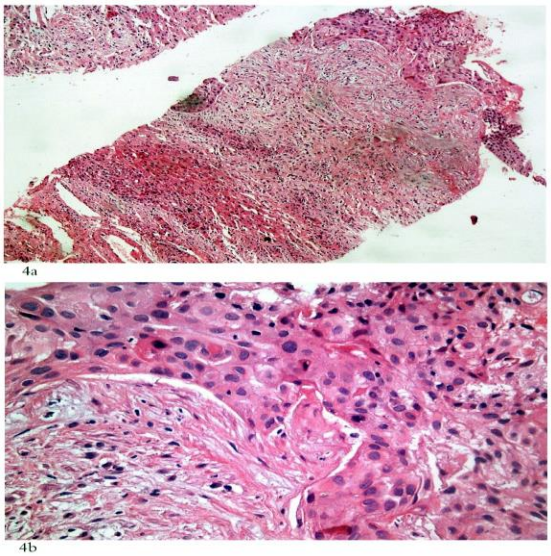

Figure 4. Microscopic histopathological examination of liver core needle biopsies (Hematoxylin and eosin staining); (a) Atypical squamous sheets in the liver parenchyma surrounded by desmoplastic stroma (× 10), (b) Highly dysplastic squamous sheets with large pleomorphic nuclei and individual keratinization (× 40)

Discussion

cSCC originates from the keratinocytes of the epidermis and may show varying degrees of differentiation and keratinization (6).

Risk factors for SCC include male gender, fair skin, immune suppression, mutagenic effects of excessive accumulation of ultraviolet damage, and solid organ transplantation (4, 6). Our subject was a woman with large SCC in non-exposed areas without any history of immune suppression.

The review of literature revealed reports of bilateral SCC in the external auditory canals, hands, and lacrimal sacs (5, 7-9), but our case is the first report of bilateral cSCC of groin.

Several factors increase the risk of metastasis, such as immunosuppression, solid organ transplantation, tumor thickness

(> 2 mm), lesion diameter (< 2 cm), poor differentiation, perineural invasion, multiple cSCC tumors, or increased proliferation ratio of tumor cells (1, 3, 4).

Location of cSCC can play an important role in prognosis of the disease. High risk areas such as face, ear, pre/postauricular regions, genitalia, lips, hands, and feet have a higher risk for metastasis (1).

Recurrent tumors are more aggressive compared to primary skin tumors. Incidence of metastasis is increased in radiation-induced SCCs and lesions arising in scars (6).

Metastatic rate of lesions larger than 2 cm are three times higher than tumors less than 2 cm in diameter (6). Tumor thickness (> 6 mm) and desmoplasia increase the risk of metastasis and local recurrence (4). Mortality rate of metastatic cSCC is more than 70% (1).

Local treatments such as Mohs surgery, excision, electro desiccation and curettage, and photodynamic therapy are sufficient to lower the risk of cSCC. Surgical excision, therapeutic lymph node dissection, and adjuvant radiation therapy and systemic chemotherapeutic agents like cisplatin and cetuximab have been used in metastatic SCC (10).

To our knowledge, this is the first report of SCC with a large size with bilateral lesions extending from the groin to intergluteal region. Interestingly, despite the large size and metastasis to liver tissue, our subject was a woman younger than 70 years without any history of immunosuppression or sun exposure.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

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