An Unusual Presentation of Metastatic Keratinocyte Squamous Cell Carcinoma: A Case Report

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Background: Keratinocyte carcinomas include both basal cell carcinomas (BCC) and cutaneous squamous cell carcinomas (cSCC), with cSCC being the second most common skin cancer in the United States. cSCC typically presents as a rough, red, scaly plaque with central ulceration in sun-exposed areas and is most common in fair-skinned populations. cSCC, which represents up to 20% of all skin cancers, is the result of a neoplastic transformation of keratinocytes. Approximately 60% of cSCC cases developed from known actinic keratoses, which are precursor lesions with malignant potential. While most cases have an excellent prognosis following complete excision, approximately 3% of cases result in metastasis, which has a poor prognosis and is responsible for approximately 3000 deaths a year. cSCC metastases are most commonly found in the regional lymph nodes, the lungs, the liver, the brain, the skin, and the bones; however, very rarely, metastases have been found in the surrounding soft tissue structures.

Case Presentation: A 79-year-old man with a past medical history of chronic kidney disease and keratinizing squamous cell carcinoma with regional metastases presents one week post an upper arm surgery with wide excision of a 10 x 8 x 3 cm mass in the left upper extremity and debridement. A CT with contrast of the left humerus reveals an intact humerus with no osseous lesions of fractures. The partially imaged glenohumeral and acromioclavicular joints exhibit mild degenerative changes. Additionally, the scan shows multiple masses. One large slightly lobulated, necrotic appearing mass in the left axilla measuring approximately 6.0 x 8.0 x 8.5 cm in the longitudinal, anteroposterior (AP), and transverse dimensions, with neighboring prominent axillary lymph nodes. Another similar but larger mass is noted posteriorly involving the distal left upper extremity measuring 8.4 x 7.2 x 9.3 in the longitudinal, AP, and transverse dimensions.

Conclusion: Soft tissue metastases from cSCC are rare and pose unique challenges. With most reported cases of soft tissue metastasis from cSCC occurring in the head and neck region. However, the unusual presentation of keratinizing squamous cell carcinoma in our patient with regional metastases presenting with multiple necrotic appearing masses in the left upper extremity highlights the aggressive and unique nature of this case. Current approaches for metastatic disease generally include systemic therapies like immunotherapy in the absence of curative surgical or radiation therapy, which have had encouraging outcomes. However, the optimal management strategy for soft tissue metastases remains unclear due to the limited number of reported cases and lack of extensive research. Further studies and case reports are needed to better understand the behavior of cSCC with soft tissue metastasis, and to establish more definitive treatment protocols.

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