

Unusual Presentation of Invasive Cutaneous Squamous Cell Carcinoma on Posterior Thigh

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Introduction:

Cutaneous squamous cell carcinoma (cSCC) is the second most common skin cancer in the United States, after basal cell carcinoma. Ultraviolet radiation through sun exposure is considered the greatest risk factor, which explains why cSCC most typically presents on the face, neck, scalp, extensor forearms, dorsal hands, and shins¹. Several other environmental exposures have also been associated with increased risk for cSCC including chemical agents, immunosuppressive medications, chronic inflammation of the skin such as with ulcers or sinus tracts, trauma, burns, and viruses, most notably HPV². cSCC is often characterized as slow progressing, with metastasis of the lesion being rare (3-9%)³. However, cSCC can emerge in “nontraditional” areas with aggressive characteristics, so clinical suspicion should remain high when examining open wounds and ulcers.

Case Description:

A 69-year old male with a past history of depression, not currently on medications, presented to the emergency department with an abscess on his left posterior thigh. The patient first noticed the wound about two weeks ago which was becoming painful and draining pus. The patient denies trauma to the area, prior burn, or history of immunosuppressive medications. On the physical exam, the patient was found to have a 6 x 8 cm open wound with necrotic tissue noted at borders. There was also surrounding erythema as well as a foul odor with drainage. Initial X Ray of the left thigh showed a 6 x 8 cm open wound with evidence of necrotic tissue with concern for necrotizing fasciitis or malignancy. CT left lower extremity showed superficial cellulitis vs skin neoplasm of the posterior left upper leg as well as partially necrotic reactive or metastatic left inguinal lymphadenopathy. Wound biopsy showed skin with keratinizing and well to moderately differentiated invasive squamous cell carcinoma. Wide local excision of the entire lesion with a 6 mm margin was completed six days after initial presentation. Plastic surgery was consulted on whether the patient would require skin grafting. Plan to follow up outpatient with dermatology and oncology due to MRI findings concerning for metastatic process.

Discussion:

Although the patient presented with an extensive 6 x 8 cm lesion on his posterior thigh, he believes that the wound only emerged a few weeks prior. Whether the patient had an initial actinic keratosis which underwent transformation, or a lesion which went undetected, is irrelevant and only serves to demonstrate the fact that cSCC can aggressively progress and involve a significant area of skin without causing significant pain. Because the lesion was not in a site associated with bedsores, such as the hips, tailbone, or heels, there was an immediate concern of malignancy which prompted biopsy. However, if the patient had been bedridden, a cSCC could be assumed to be a bedsore wound. It is imperative that clinicians keep cSCC as a potential diagnosis, even if the lesion is not in an area traditionally associated with ultraviolet light exposure. In this particular case, the patient has evidence of local lymphadenopathy, concerning for metastasis of the lesion. Additionally, the primary site invaded a significant depth of tissue, making excision of the entire neoplasm challenging. There are several characteristics associated with more aggressive subtypes of invasive cSCC such as: size over 4 cm, multiple tumors, histologic features with poor differentiation, as well as anatomic location. Tumors of the ears, lips, cheeks, and face are often characterized as high risk lesions due to their location⁴. This case presentation calls into

¹ Howell JY, Ramsey ML. Squamous Cell Skin Cancer. [Updated 2021 Aug 9]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK441939/>

² Asgari MM, Efird JT, Warton EM, Friedman GD. Potential risk factors for cutaneous squamous cell carcinoma include oral contraceptives: results of a nested case-control study. *Int J Environ Res Public Health*. 2010;7(2):427-442. doi:10.3390/ijerph7020427

³ Shreve C, Shropshire C, Cotter DG. Metastatic Squamous Cell Carcinoma: A Cautionary Tale. *Cureus*. 2020;12(10):e10879. Published 2020 Oct 10. doi:10.7759/cureus.10879

⁴ Prognostic factors for local recurrence, metastasis, and survival rates in squamous cell carcinoma of the skin, ear, and lip. Implications for treatment modality selection. Rowe DE, Carroll RJ, Day CL Jr. *J Am Acad Dermatol*. 1992;26(6):976.

question whether those anatomic risk factors should be broadened. Further research is needed to definitively extrapolate the correlation between anatomic location and malignant potential.



Left posterior thigh lesion 6 x 8 cm at patient presentation