A Novel Case Study of an Eccrine Porocarcinoma

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Statement of Purpose

To identify and bring recognition to a rare malignant soft tissue tumor that to our knowledge, has never been reported as a primary, isolated tumor within soft tissues of the foot/ankle. That was initially misdiagnosed and treated for several months. We We also aim to demonstrate the importance of appropriate workup, consultations, and management of lower extremity soft tissue masses.

Literature Review

Eccrine porocarcinoma is a rare malignant tumor of eccrine sweat glands. It represents 0.005% of cutaneous epithelial neoplasms [(1)]. When present they are aggressive tumors which are highly invasive. The tumor is most often found in elderly patients (60's) on the head and neck or lower extremity. In the foot the lesion can appear as a benign mass, ulceration, or other skin neoplasms [(3)]. The typical presentation is a solitary firm <2 cm, erythematous, violaceous or skin colored papule, plaque, or nodule that is slow growing and may sometimes be ulcerative [(5)]. They can be diagnosed using histologic and dermoscopic analysis. Wide local excision and Mohs micrographic surgery are the most common treatment options. There is a 20% chance of recurrence, 20% chance of metastases, and 60% chance of mortality with metastases [(2,4)].

Case Study

A fifty-seven-year-old female who initially presented to an outside podiatrist for a soft tissue lesion to the right 3rd digit. Patient has a history of quadriplegia, blindness, epilepsy, cerebral palsy, intellectual disabilities, and is non-verbal. The patients advocate denies any history of melanoma, cancer, malignancy, or B type symptoms. There is no family history of cancer. The lesion was first noticed 8 months prior and had been treated as a wart but continued to recur. After 6 months of unsuccessful treatments the patient was referred to dermatology for further evaluation.

Case Study

Physical examination was limited due to the medical comorbidities of the patient. On clinical examination the was a solitary papule to the lateral aspect of the right 3rd digit. The mass was a 5mm solitary, sessile, friable, red papule. Digital contractures and spasticity of the lower extremities was noted. No palpable inguinal or popliteal lymph nodes were appreciated. A tangential shave biopsy was preformed and sent to pathology. Pathology analysis determined that the diagnosis was an eccrine porocarcinoma. The patient was then referred to oncology. It was determined that while PET CT for further workup of metastasis could be done at this time the most conservative treatment option would be wide local excision. The decision was made for partial toe amputation and long term skin checks.

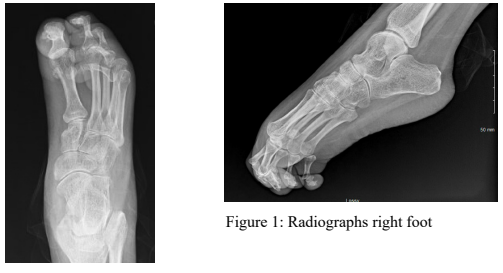

Figure 1: Radiographs right foot

Surgical Procedure

A lesion was identified at the distal lateral aspect of the nail border. Due to the localized lesion the decision was made to disarticulate the distal aspect of the digit and allow for wide margins of the lesion. Dissection was performed down to bone and the distal phalanx was disarticulated form the toe. Care was taken to ensure a wide margin was created to fully excise the lesion with a margin of adjacent normal appearing tissues. The entire specimen was sent to pathology for analysis.

Clinical Images

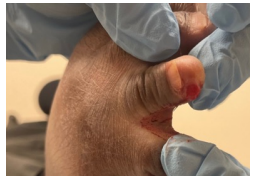

Figure 2:

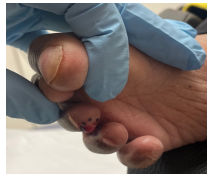

Figure 3:

Pathology

Dermpathology was positive for an eccrine porocarcinoma with positive peripheral margins. The patient was referred to surgical oncology and decided on surgical treatment. A wide local excision was performed, which was negative for residual malignancy. No evidence of recurrence at 12 month follow up.

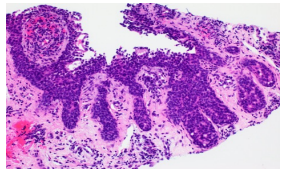

Figure 4: High power view. Focal parakeratosis with irregular epidermal hyperplasia that extends to the deep margin. Morphologic evidence of rudimentary sweat duct formation within the sharply demarcated epithelial hyperplasia characteristic of porocarcinomas.

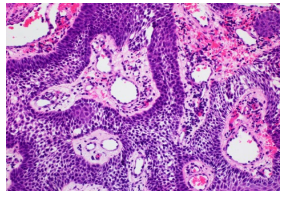

Figure 5: High power view. Pleomorphic epithelial cells with several atypical mitotic figures.

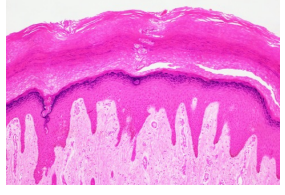

Figure 6: Clean surgical margins from wide local excision.

Analysis and Discussion

Skin lesions of the foot and ankle are not always what they appear to be. Benign lesions should always be treated as potentially malignant to minimize morbidity and mortality. If initial treatment options are not successful it is important to consider a broad workup to evaluate for other possible diagnoses and management. Differential diagnosis for skin lesions can include benign verruca vulgaris, pyogenic granuloma, eccrine poroma, or seborrheic keratosis and can include malignant squamous cell carcinoma, basal cell carcinoma, Paget's disease, and amelanotic melanoma[(6)]. Eccrine porocarcinomas commonly arise as a result of benign eccrine poroma malignant transformation. Prognosis is variable based on the histologic features. Once an eccrine porocarcinoma is identified it is suggested that wide local excision often in conjunction with Mohs micrographic surgery be performed [(5)]. Early identification and excision gives the best chance of cure, with curative rates of 70-80% in cases [(2,4)]. This case shows a rare skin lesion and the importance of differential diagnosis, performing a complete workup, and early intervention.

References

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