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Clinical Medicine Insights: Case Reports

Skin Squamous Cell Carcinoma Presenting as Cellulitis

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ABSTRACT: In general, skin squamous cell carcinoma (SCC) presents as papules or plaques with erythematous or pigmented appearance that may ulcerate the skin. Cellulitis caused by metastatic deposit from a known primary skin SCC has been reported once.[1] We describe a patient who presented with cellulitis on the face that did not respond well to full course of antibiotics treatment, and turned out to be a newly diagnosed SCC after biopsy. Other differential diagnoses, such as malignancy, should be suspected in all unusual presentations and biopsy should be taken if patients do not show an optimal and desired improvement after receiving a full-course of antibiotic therapy for cellulitis.

KEYWORDS: squamous cell carcinoma, presentation, cellulitis

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Background

In general, skin squamous cell carcinoma (SCC) presents as papules or plaques with erythematous or pigmented appearance that may ulcerate the skin. There is no report from literature that SCC presents as skin cellulitis. By knowing the unusual presentations of SCC and diagnosing SCC in the early stage, advanced metastasis of the disease can be prevented and good prognosis with modest mean survival rate can be achieved.

Case Report

An 89-year-old non-smoker woman with a significant past medical history of interstitial lung disease, congestive heart failure with 15% ejection fraction, non-ST-elevated myocardial infarction, hypertension, cerebral vascular accident 6 years ago with complete recovery, deep venous thrombosis (DVT) 4 years ago with s/p inferior vena cava filter, presented to the hospital with a chief complaint of painful right-sided facial swelling. Her facial swelling started 2 days prior to admission, accompanied by erythema around the cheek, which was painful. The erythema eventually progressively spread all over the right side of her face and involved the mucus membranes in the oral cavity. The patient denied any fever, cough, flu-like symptoms, injury to the area, headache, visual disturbances, or recent contacts with the sick. On physical examination, the right side of face was diffusely swollen, erythematous, and indurated. There was no softening or fluctuation, but it was tender with a 2.4 × 1.6 cm scab noticed on the right upper lip. The right side mucus membrane in the oral cavity was swollen and erythematous without any ulcers. Methicillin-resistant Staphylococcus aureus (MRSA) was identified from blood cultures. The patient was treated as an inpatient for cellulites with intravenous antibiotics as per sensitivities, which produced only partial improvement after 3 weeks. Oral cavity erythema was completely cleared. However, the right infra-orbital erythema and the mild swelling were persistent after 3 weeks of intravenous antibiotics treatment. Therefore, an underlying skin disease was suspected and punch biopsy was taken from the lesion covered by a scab on the right upper lip (Fig. 1) and sent for histopathological examination. Biopsy of the lesion confirmed grade 1 (well-differentiated) SCC, not

otherwise specified. CT of the neck with contrast did not reveal any lymph node metastasis. The patient was referred for elective surgical excision, which she refused to have.

Discussion

In the United States, SCC is the second most common skin cancer.[1] There are 200,000–300,000 new cases of SCC per year, and the incidence has been increasing.[1] SCC often develop in areas that have been most exposed to the Sun, of which the highest incidence is in the head. In general, SCC presents as papules or plaques with erythematous or pigmented appearance that may ulcerate the skin. The area of interest often shows poor signs of healing and bleeds easily. Patients will report tenderness or numbness if SCC extends and disrupts the nerves, particularly those present in the face/head area, which are cranial nerves V and VII. This disruption of nerves by SCC is otherwise known as perineural invasion. The clinical course of SCC depends on the initial time of diagnosis. According to National Comprehensive Cancer Network Practice Guidelines in Oncology: Basal Cell and Squamous Cell Skin Cancer, worse prognosis at the time of presentation are papules or plaques with size diameter ≥10 mm found on the cheeks, forehead, scalp, and neck or size diameter ≥6 mm^3 found on the central face, eyelids, nose, lips, and chin.[1,2] In addition, papules or plaques with poorly defined borders and/or showing rapid growth constitute a worse scenario. Patients presenting with neurological symptoms and/or immunosuppression at the time of diagnosis leads to a further worse prognosis. By far, SCC detected late in the course may already have metastasized involving the regional lymph nodes in the head region. Metastasis most likely occurs when the diameter is >2 cm, depth of thickness/invasion is >2 mm, and there is poor differentiation.

By diagnosing SCC in the early stage, advanced metastasis of the disease can be prevented and good prognosis with a modest mean survival rate can be achieved. Unfortunately, it is difficult to identify SCC at such an early stage, because it may initially present in varied ways. Our case is one of the very few to report SCC presenting with cellulitis.[1] Although chronic wounds transforming into malignant cells have been reported[3] for which the theorized mechanism is that chronic wounds continuously sustaining injuries/inflammation prompt the underlying cells to transform into neoplastic cells, we believe that our patient had cellulitis on her face of which the SCC on her right upper lip was the underlying disease.

Conclusion

We therefore recommend that other differential diagnoses such as malignancy, be suspected and biopsy be taken if patients do not show an optimal and desired improvement after receiving a full-course of antibiotic therapy for cellulitis.

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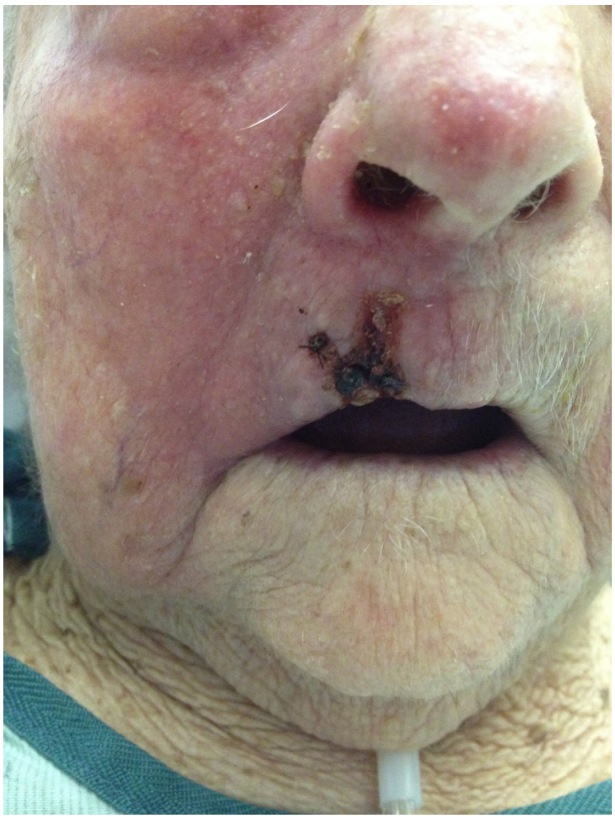

Figure 1. Cellulitis on right face with a punch biopsy lesion on upper lip.

Author Contributions

Conceived and designed the experiment: MZ, KS. Analyze the data: MZ. Write the first draft of the manuscript: MK, MZ. Contributed to writing the manuscript: MZ, MK, KS, MA, HA, DA, RP. Agree with manuscript result and conclusion: MZ, MK, KS, MA, HA, DA, RP. Jointly developed the structure and argument of the paper: KS, MA, HA. Made critical reversions and approved final version: DA, RP. All authors reviewed and approved the final version.

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