Recent-onset bloody nodule

An antibiotic ointment failed to clear the lesion on the patient's back. A more detailed history revealed the nodule's troubling genesis.

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A 45-YEAR-OLD MAN presented to the Dermatology Clinic with a 4-month history of a bump on his left upper back. The lesion was tender and had been draining clear fluid and intermittent blood; he denied any preceding trauma. He had been seen both by his primary care physician and by a physician at an urgent care clinic, where he was told to use an antibiotic ointment and benzoyl peroxide daily on the area and advised to seek a dermatology consult should it not resolve. He did not see any improvement from these measures.

Physical exam revealed a 0.8-cm erythematous nodule with a peripheral collarette of scale at its base. The bandage used to cover the nodule was stained with hemorrhagic crust (**FIGURE 1A**). Superior and medial to the new lesion was a well-healed scar overlying much of the patient's thoracic spine (**FIGURE 1B**).

- WHAT IS YOUR DIAGNOSIS?
- HOW WOULD YOU TREAT THIS PATIENT?

FIGURE 1
Erythematous nodule on the back

PHOTOS COURTESY OF JAE JUNG, MD

The patient had an erythematous nodule with a peripheral collarette of scale at its base (**A**). Superior and medial to the new lesion was a well-healed scar overlying much of his thoracic spine (**B**).

Diagnosis: Metastatic renal cell carcinoma

The nodule initially appeared to be a benign pyogenic granuloma. In fact, a biopsy of the nodule showed a profile similar to that of a pyogenic granuloma and it exhibited granulation tissue. However, further questioning revealed that the patient had a history of metastatic clear cell renal carcinoma. (The scar was from a prior unrelated orthopedic surgery.) Immunohistochemical stains showed positive staining in the cells of interest for PAX8 and CK8, 2 markers for renal cell lineage.

Cutaneous metastasis to the skin is a rare event, representing roughly 2% of all skin tumors.[1] Anatomically, lesions tend to appear on the head and neck in men and anterior chest and abdomen in women.[2] Eruptions on the back, as seen in our patient, are relatively rare. The primary source of the metastasis also is gender dependent. Melanoma is the most common source overall; but in women, breast cancer represents the large majority of cutaneous metastases[3] while in men lung, large intestine, and oral cavity tumors are the most common origin.[3] Renal metastases are the fourth most common cause in men.[3]

The clinical morphology of cutaneous metastases is protean; the most common manifestations are nodules, papules, plaques, tumors, and ulcers.[2] Rare manifestations include alopecia plaques, erysipelas, herpes zoster–like eruptions,[4] and pyogenic granuloma–like manifestations, as in our case. Pyogenic granuloma–like manifestations have been described in renal cell carcinoma, breast carcinoma, acute myelogenous leukemia,[5] and hepatocellular carcinoma.[6]

Consider biopsy of a pyogenic granuloma–like lesion or one with a vascular pattern on dermoscopy in any patient with a history of malignancy.

Differential includes an array of erythematous nodules

The differential diagnosis of a lesion with the appearance of a pyogenic granuloma is variable.

Pyogenic granulomas tend to arise over a short period of time. They are more common in children and pregnant women. Pyogenic granulomas can manifest anywhere but often are reported on the digits and extremities. Clinical history is important to ensure no history of internal malignancy.

Bartonella henselae, known as "cat scratch disease," also can present as a friable, erythematous nodule reminiscent of a pyogenic granuloma. Patients with bartonella henselae usually are immunocompromised and/or have had close contact with a cat.[7]

Kaposi sarcoma is a vascular tumor that may manifest as erythematous papules or nodules. Erythematous or violaceous patches or plaques may be present before a nodule arises. Kaposi sarcoma may manifest on the legs of elderly patients or anywhere on immunocompromised patients. Immunohistochemical stains for human herpesvirus-8 can clinch the diagnosis.[8]

Amelanotic melanoma may be impossible to discern clinically from a pyogenic granuloma. It appears as erythematous, violaceous, or flesh-colored nodules. Histologic evaluation is paramount in the diagnosis.[9]

Clinical suspicion should prompt a biopsy

The diagnosis of metastatic renal cell carcinoma is made on clinical suspicion and skin biopsy. Dermoscopy is an important tool in the evaluation of primary cutaneous tumors. Due to the rarity of cutaneous metastases, studies on dermoscopic findings in cutaneous metastases are limited to case series. One series showed a vascular dermoscopy pattern in 15 of 17 cases (88%).[10]

In light of this nonspecific pattern, it's wise to consider biopsy of a pyogenic granuloma–like lesion or one with a vascular pattern on dermoscopy in any patient with a history of malignancy. Any lesion suspected of being a pyogenic granuloma that does not respond to conservative measures also would warrant a biopsy. Definitive diagnosis is made based upon histologic evaluation.

Surgery is the cornerstone of treatment

Upon diagnosis, immediate referral for further local and systemic control is recommended. Treatment may consist of any combination of surgery, chemotherapy, immunotherapy, or radiation.[11]

In this case, our patient was referred to Oncology for further treatment. Unfortunate-

ly, cutaneous metastases portend a very poor prognosis, with approximate survival times of 7.5 months.[12] JFP

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