Subcutaneous Sarcoidosis in a Melanoma Scar

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Cutaneous sarcoidosis often has been referred to as the great imitator because skin lesions can present with various morphologies. Skin lesions may be the only site of involvement or may accompany systemic disease. Occasionally, sarcoidosis also may infiltrate scars from prior trauma, tattoos, or surgery. We report a case of subcutaneous sarcoidosis limited to a melanoma scar without any other cutaneous or systemic involvement. Familiarity with and proper diagnosis of cutaneous sarcoidosis can allow for appropriate systemic screening and timely management of the disease.

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Sarcoidosis is an inflammatory condition with noncaseating granulomas that may affect multiple organ systems. Involvement of the skin is seen in approximately 25% of cases, either as the only site affected or accompanying systemic disease.[1] Cutaneous sarcoidosis often has been referred to as the great imitator because skin lesions may exhibit various morphologies.[2] Specific manifestations may include papules; nodules; plaques; and lichenoid, verrucous, ichthyosiform, and ulcerative lesions.[2-4] Skin lesions also may be the first signs of sarcoidosis, preceding systemic spread of the disease. Recognition of cutaneous sarcoidosis often can be challenging and may be overlooked until systemic involvement is apparent. Proper diagnosis can allow for appropriate systemic screening and timely treatment.

Case Report

A 49-year-old woman presented with 3 firm subcutaneous nodules at the border of a melanoma scar on her left upper arm. The lesions appeared over 5 months and were first noticed approximately 10 months after the melanoma excision. She denied any associated pain, pruritus, or irritation. The nodules were 3 to 5 mm in diameter and developed at the proximal margin of a linear scar; there was no visible epidermal change (Figure 1). On examination there was no lymphadenopathy or hepatosplenomegaly. Our initial differential diagnosis included suture granulomas versus recurrent melanoma. A punch biopsy of a nodule revealed naked noncaseating granulomas with multinucleated giant cells within the subcutaneous fat. A few asteroid bodies and a rim of lymphocytes also were noted around the granulomas. The overlying dermis and epidermis showed no histologic changes (Figure 2). The findings were most consistent with cutaneous sarcoidosis.

On review of systems, the patient reported occasional sharp chest pains and recurrent pneumonia with a history of chronic obstructive pulmonary disease. She also admitted to smoking 35 to 40 packs of

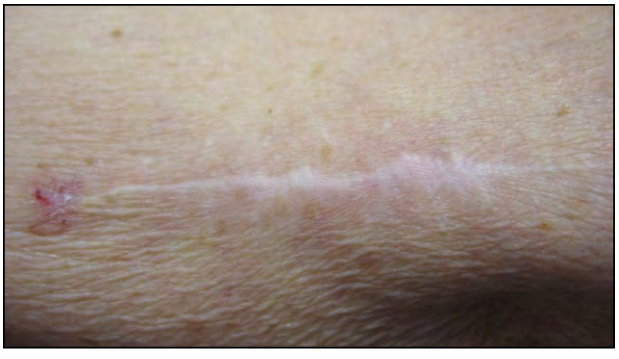

Figure 1. A healed scar from a melanoma excision on the left arm with no epidermal changes. There is mild crusting at the proximal margin of the scar at the biopsy site.

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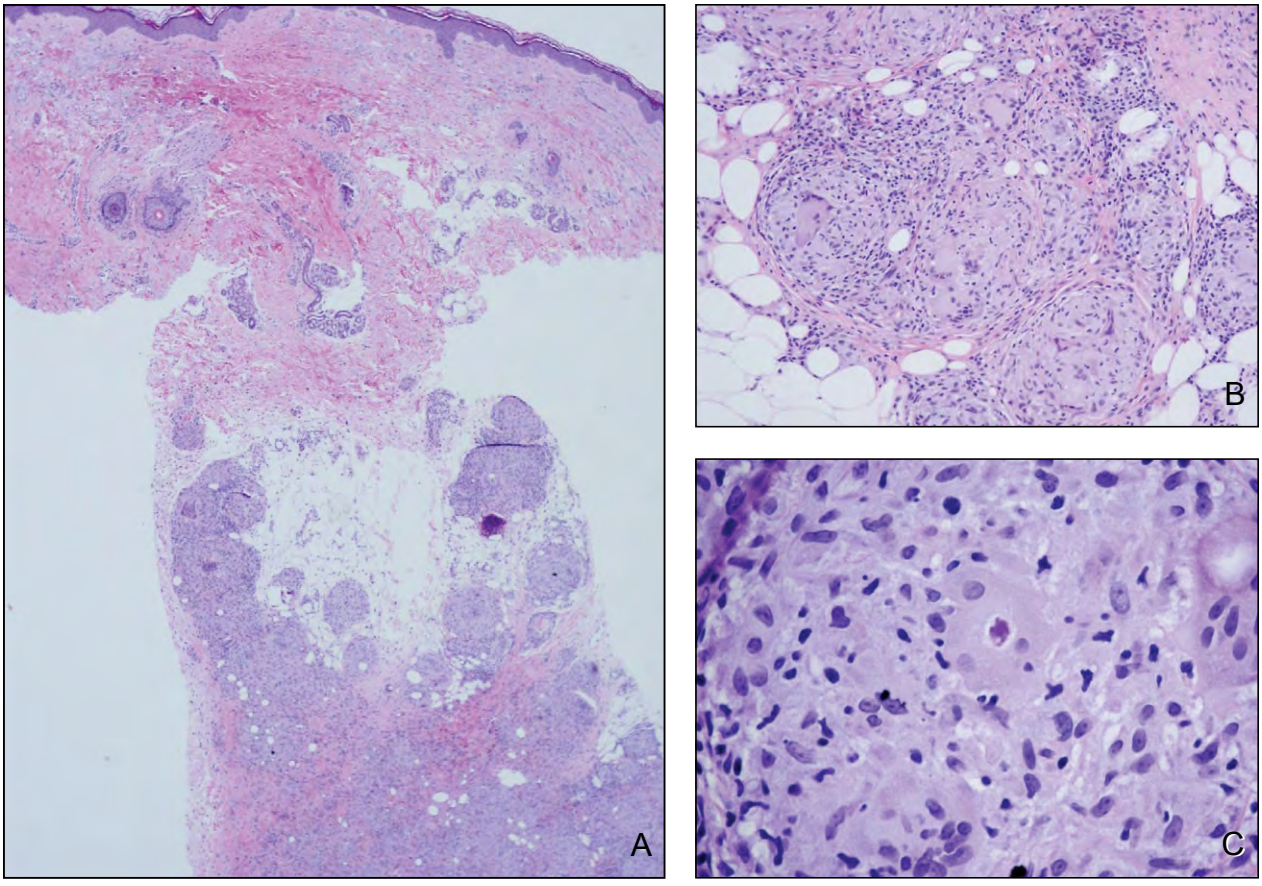

Figure 2. No histologic changes were demonstrated in the epidermis; well-demarcated naked noncaseating granulomas were noted in the subcutaneous fat (A and B)(H&E; original magnifications ×40 and ×200, respectively). An asteroid body within a multinucleated giant cell was revealed (C)(H&E, original magnification ×400).

cigarettes yearly. A chest radiograph was obtained and showed a patchy right upper lobe infiltrate with no hilar lymphadenopathy. Laboratory testing revealed a slightly elevated angiotensin-converting enzyme level of 72 U/mL (reference range, 9–67 U/mL) and a serum total calcium level within reference range. Other hematologic tests including a complete blood cell count, liver function tests, and renal function were all within reference range. Although the patient declined treatment of the nodules, she was referred to her primary care provider for further systemic evaluation.

Comment

Cutaneous involvement is common in sarcoidosis, with lesions classified as either specific or nonspecific. Specific lesions contain the more characteristic sarcoidal granulomas on biopsy, while nonspecific lesions vary in their histologic appearance. Subcutaneous sarcoidosis is a rare subset of specific cutaneous lesions seen more frequently in females than males, with peak incidence in the fourth decade of life.[2,4] The lesions commonly present as firm, nontender, flesh-colored to violaceous nodules located mainly on the extremities or trunk. They generally are asymptomatic or mildly tender and are therefore thought to be underreported. Although uncommon, subcutaneous sarcoidosis is strongly associated with the presence of systemic disease and lesions often may be the first manifestations of sarcoidosis.[2] For this reason, thorough examination with appropriate systemic screening is warranted, even in the absence of other clinical symptoms. Subcutaneous sarcoidosis also is known as Darier-Roussy sarcoid; however, this term has fallen out of favor because it also has been used to refer to other forms of granulomatous diseases including tuberculosis.

Cases of sarcoidosis infiltrating preexisting scars from mechanical trauma, infection, and tattoos are well-documented in the literature.[5,6] Although the clinical presentation of cutaneous lesions can vary considerably, the majority feature some degree of epidermal involvement.[3] One study examining the histologic appearance of cutaneous lesions of

sarcoidosis noted epidermal changes in 79% of cases (49/62).[7] Lesions with scar sarcoidosis showed focal parakeratosis, acanthosis, and more commonly epidermal atrophy or hyperkeratosis. Scar sarcoidosis or cicatricial sarcoidosis also has been linked to interferon alfa treatment in some patients.[5] The appearance of cutaneous sarcoidosis in patients with melanoma following interferon alfa treatment has been described. However, the appearance of lesions of sarcoidosis remained discretely separate from the melanoma excision site.[6,8]

Subcutaneous sarcoidosis portends an excellent prognosis, with complete remission seen in 86% (12/14) of patients as demonstrated by one study.[1] Primary treatment consists of oral corticosteroids for systemic disease or intralesional triamcinolone for limited cutaneous lesions. Other reported therapies include hydroxychloroquine sulfate, methotrexate sodium, clofazimine, dapsone, or nonsteroidal anti-inflammatory drugs. These agents have been used alone or in combination to effectively treat subcutaneous sarcoidosis.[1]

Conclusion

Despite a good prognosis, subcutaneous lesions of sarcoidosis merit careful exploration and workup because of their strong correlation with systemic disease. Because these lesions often are the presenting symptoms of a multisystem disorder, recognition and timely treatment can slow or arrest progression of systemic spread.

The presentation of subcutaneous sarcoidosis in our patient is unique in that there were no epidermal changes, the lesions were limited to a preexisting melanoma scar, and there was no other cutaneous or systemic involvement. Additionally, our patient did not undergo interferon therapy.

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