Presentation of squamous cell carcinoma in pre-existing cutaneous sarcoidosis

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DESCRIPTION

A 66-year-old man was referred to dermatology department in view of a rapidly enlarging nodule at the right postauricular area presenting over several weeks. The nodule developed within a 2×2cm plaque of pre-existing cutaneous sarcoidosis (figures 1 and 2). He had been diagnosed with multisystem sarcoidosis in 2015, affecting both lungs and skin. Skin biopsy of the plaque at that time showed non-caseating granulomatous inflammation, in keeping with sarcoidosis. This was treated with topical clobetasol propionate, which reduced the plaque size. He had no significant past medical history and was not on any immunosuppressants. He had a history of moderate sun exposure and was Fitzpatrick skin type II.

Diagnostic biopsy of the new nodule showed appearances consistent with primary cutaneous squamous cell carcinoma (SCC). He subsequently underwent formal excision of the whole skin lesion. Histology revealed a poorly differentiated SCC with perineural invasion and infiltration to the subcutaneous tissue. A lymph node in the deep tissue was involved with an extracapsular spread. Further wider excision with neck dissection was subsequently performed, with additional involvement of a lymph node with no extracapsular spread. This was staged at UICC TNM8 pT3 PN3b. Staging CT neck, chest and abdomen did not reveal any overt metastases but confirmed persistent mediastinal and abdominal lymphadenopathy unchanged from previous imaging. This was discussed at regional multidisciplinary team and he subsequently underwent adjuvant radiotherapy to the site.

Sarcoidosis is a systemic disease of unknown aetiology characterised by non-caseating granulomas in multiple organs, most commonly the

Figure 2 Squamous cell carcinoma at right postauricular area with hypopigmented resolved area of cutaneous sarcoidosis inferiorly.

lungs. Cutaneous involvement occurs in up to 25% of patients, with isolated cutaneous sarcoidosis present in 9%–30%.¹ Cutaneous manifestations are highly variable, which can make initial diagnosis challenging.

Association between sarcoidosis and malignancy has previously been proposed. Several studies have reported higher rates of malignancy in sarcoidosis, most commonly lung and haematological malignancies, such as lymphoma.^{2–5} A systematic review involving over 25 000 patients concluded a significant association between sarcoidosis and skin malignancy.⁶ The relative risk was 1.64 (95% CI, 1.16 to 2.31) for melanoma and 2.29 (95% CI, 1.88 to 2.78) for non-melanoma skin cancer compared with the general population. This was reiterated by Ji *et al* in Sweden who concluded that the increased risk of skin malignancy, specifically SCC, persisted even after a year following sarcoidosis diagnosis.⁵

Reports of SCC occurring within areas of cutaneous sarcoidosis are limited to case series.⁷ It is postulated that sarcoidosis and malignancy may be related to immune dysfunction leading to abnormal cell-mediated responses to tumour antigens.⁸

Figure 1 Pre-existing cutaneous sarcoidosis with an annular area of hypopigmentation at right postauricular area.

Learning points

- ▶ There is a strong association between sarcoidosis and skin malignancy.
- ▶ Immunosuppression in the treatment of sarcoidosis may lead to the development of skin malignancy.
- ▶ Clinicians should have a low threshold for investigating for skin malignancy in the event of changing lesions in areas of cutaneous sarcoidosis.

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Immunosuppression in the treatment of sarcoidosis may play a role in the development of malignancy. One case reported that the patient was treated with (anti-Tumour Necrosis Factor) adalimumab prior to developing an SCC.⁷ Notably, our patient had applied super potent steroid to the affected site.

In conclusion, we present a case of squamous cell carcinoma developing within a plaque of chronic cutaneous sarcoidosis. Hence, it is vital for clinicians to have a suspicion for skin malignancy and perform early skin biopsy in new or changing lesions in areas of cutaneous sarcoidosis.

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