QUIZ SECTION

Lung Nodule and Facial Erythematous Plaques: A Quiz

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A 50-year-old male smoker, with swelling of inguinal and axilla lymph nodes and recurrent facial skin lesions, was admitted to the Department of Thoracic Surgery due to dry coughing, wheezing and respiratory discomfort. Chest X-ray and a positron emission tomography-computed tomography (PET-CT) scan disclosed a spickled lesion, 1.5 cm in maximal diameter, within the apical segment of the upper lobe, suggestive of a neoplasm (Fig. 1A). Oncological markers and tuberculosis test were negative. The lesion was resected through a limited lateral thoracotomy. Histological examination of the lesion showed the presence of inflammation, but no tumour cells (Fig. 1B) and culture for micro-organisms was negative. Dermatological evaluation revealed the presence of several indolent facial papules and plaques with thick scaling and induration (Fig. 1C).

What is your diagnosis? See next page for answer.

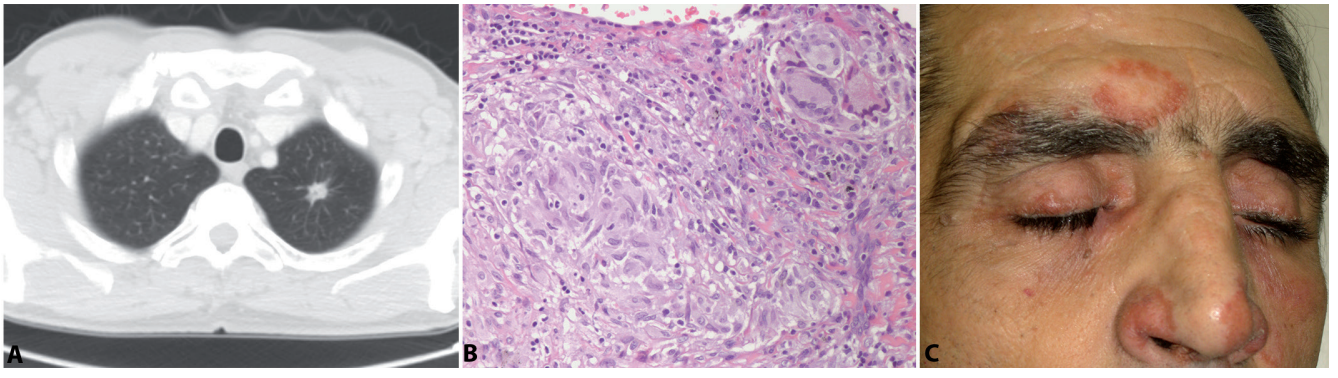

Fig. 1. (A) Chest computed tomography scan showing a lesion within the apical segment of the upper lobe. (B) Histological examination of the pulmonary lesion revealed granulomatous inflammation (H&E stain; original magnification ×200). (C) Facial reddish plaques with characterized annular aspect.

doi: 10.2340/00015555-1489

ANSWERS TO QUIZ

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Acta Derm Venereol 2013; 93: 379–381.

***Diagnosis*: Sarcoidosis**

Skin biopsy revealed naked granulomas of epithelioid histiocytes and giant multinucleated cells in the dermis (Fig. 2). The patient was treated with a therapy based on systemic steroid (prednisone 25 mg) for 3 months with partial remission of the cutaneous symptoms, halving the dose every 3 months until the minimum dose of 5 mg, which obtained total and persistent disappearance of clinical lesions with no sign of recurrence. During this period glycaemia, calcaemia and angiotensin-converting enzyme, as well as respiratory function remained normal. Follow-up at 2 years was successful for both cutaneous and respiratory conditions.

Sarcoidosis is a multisystemic granulomatous disease characterized by an undetermined aetiology (1, 2). Cutaneous involvement occurs in up to one-third of patients with sarcoidosis, and may be extremely heterogeneous in terms of morphology (1). It is relatively frequent in different ethnic groups, such as Afro-Americans living on the territory of the Caribbean region, Swedish, Irishmen and others; however, the reasons for its phenotypic manifestations are not fully understood (1, 3–5).

Sarcoidosis may involve various tissues and organs, mostly lung, lymph nodes, eyes and skin.

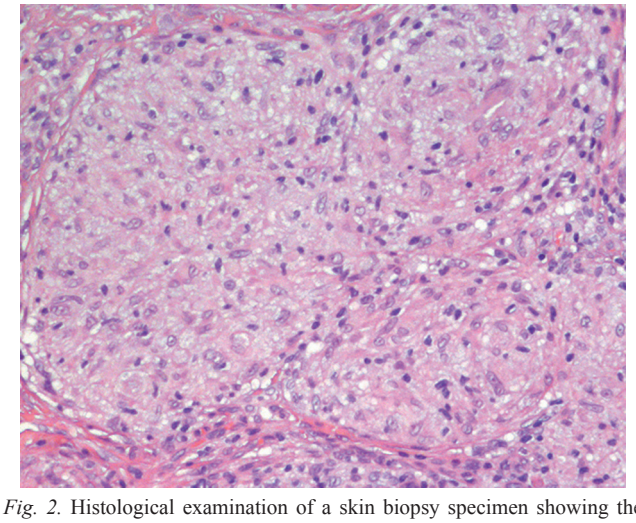

Fig. 2. Histological examination of a skin biopsy specimen showing the presence of dermal naked granulomas composed of epithelioid histiocytes surrounded by few or no inflammatory cells (H&E ×200).

Specific cutaneous manifestations of sarcoidosis are clinically polymorphous, including solitary to multiple, red, yellow-brown to purple macules, papules, plaques, infiltrations, annular lesions and subcutaneous nodules (1). In fact, sarcoidosis is capable of imitating a variety of diseases; so that, between dermatologists, it is often called "The Great Imitator" or a "clinical chameleon" (1, 6).

The clinical morphology of cutaneous sarcoidosis may vary within a wide range. Consequently, the diagnosis is not always easy; hence, in case of suspicion of some cutaneous forms of sarcoidosis, the histopathology should play an important role in the diagnosis itself. The microscopic findings in sarcoidosis include a characteristic, non-caseating naked granulomatous reaction (1, 7, 8). As mentioned previously, aetiopathogenetic factors in sarcoidosis are not completely clear. A key role has been attributed to different virological, bacterial and chemical agents (9). The importance of human herpesvirus 8 (HHV-8) in cutaneous sarcoidosis has yet to be clarified (10, 11) and a possible role for Epstein–Barr or Coxsackie B viruses has been discussed but not proven (9).

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