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Case report

Cutaneous sarcoidosis with concomitant pulmonary tuberculosis

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Abstract

Sarcoidosis is a systemic disease of unknown etiology. It is characterized by the formation in all or several affected organs of epitheliod cell tubercles without caseation. Lupus pernio is a cutaneous manifestation of sarcoidosis. Tuberculosis is an important differential diagnosis for sarcoidosis and they closely resemble each other. We are reporting a rare case with classical features of lupus pernio who had concomitant pulmonary tuberculosis. Our patient presented with erythematous, indurated, plaques with scaling on the malar area of the face, cheeks and ear lobules which was consistent with lupus pernio both clinically and histologically. There was a history of weight loss (around 15%) and lethargy since 8 years, which coincided with onset of lesions. He developed high grade fever with sweating at night which lasted for more than 2 months and cough with expectoration. Chest examination revealed bilateral basal crepitations and Mantoux test was positive and broncho alveolar lavage showed acid fast bacilli. The patient was treated with anti-tubercular treatment followed by oral prednisolone over 3 months. Cutaneous lesions were treated with topical mild potency steroid along with intralesional triamcinolone. The overall response of the patient to treatment was satisfactory.

Key words: Cutaneous, Epitheliod cell tubercle, Lupus pernio, Sarcoidosis, Tuberculosis

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Sarcoidosis is a systemic disease of unknown etiology. It is characterized by the formation of epithelioid cell tubercles without caseation and without many lymphocytes (naked granulomas) in all or several affected organs. The diagnosis is based on the consistent clinical, radiological and histopathological findings[1]. Lupus pernio is a cutaneous manifestation of sarcoidosis[1]. Tuberculosis is an important differential diagnosis for sarcoidosis[1]. There have been very few cases presenting with classical features of lupus pernio who had concomitant pulmonary tuberculosis in the same patient. We are reporting one such rare case.

Case report

A 45 year old male patient weighing 62 kgs, an accountant by occupation working in a gulf country, presented with around six 2x2 cm coin shaped red solid lesions associated with mild burning sensa-

tion on the face and ears since 8 years. The lesions were smaller in size and number at the onset but gradually increased in size and number to attain the present size. There was history of increase in the number of lesions on exposure to cold. Also, there was a history of weight loss (around 15%) and lethargy since 8 years, which coincided with onset of lesions. He developed high grade fever with sweating at night which lasted for more than 2 months and cough with expectoration 10 months back. There was no history of breathlessness and chest pain.

There was no history of insect bite, trauma, joint pains, eye complaints, nasal stuffiness, epistaxis or crusting. There is no past history of tuberculosis, atopy, allergies, eczema or contact dermatitis.

Family history and drug history were not significant.

General physical examination revealed anemia and cervical lymphadenopathy and the lymph nodes were discrete, firm in consistency and not matted.

Auscultation of lungs revealed bilateral basal crepitations and there was normal vesicular breathing breath sounds. The cardiovascular, nervous, per abdominal and ocular examinations were normal.

There was no nerve thickening, tingling and numbness of any part of the body.

Cutaneous examination revealed multiple (6), discrete, coin shaped, 2x2 cm, erythematous, indurated, plaques with scaling on the malar area of the face, cheeks and ear lobules (Figures 1 & 2). The borders were well defined. The lesions were mildly tender and were associated with mild local rise of temperature. There was no oozing/ crusting from the lesions.

For cutaneous lesions, a differential diagnosis of sarcoidosis, Hansen's, tuberculosis, discoid lupus erythematosus was considered as these conditions can also present with erythematous plaques with or without scaling in the same distribution as this patient. For systemic symptoms, a differential diagnosis of sarcoidosis and tuberculosis was made.

Sputum for acid fast bacilli (AFB) showed no bacilli. Mantoux test was positive. ESR was elevated. Bronchoalveolar lavage showed AFB positivity indicative of pulmonary tuberculosis. Chest X-ray showed hilar lymphadenopathy. CT scan chest showed multiple well defined nodular opacities in predominantly the lower lobes of lungs and multiple mediastinal nodes. Liver and renal function tests were normal. Histopathological examination of a plaque on the face showed epithelioid cell granulomas without caseation, with scanty lymphocytes, characteristic of sarcoidosis (Figure 3). Staining of biopsy specimen showed no acid fast bacilli. A slit skin smear was performed which showed no acid fast bacilli.

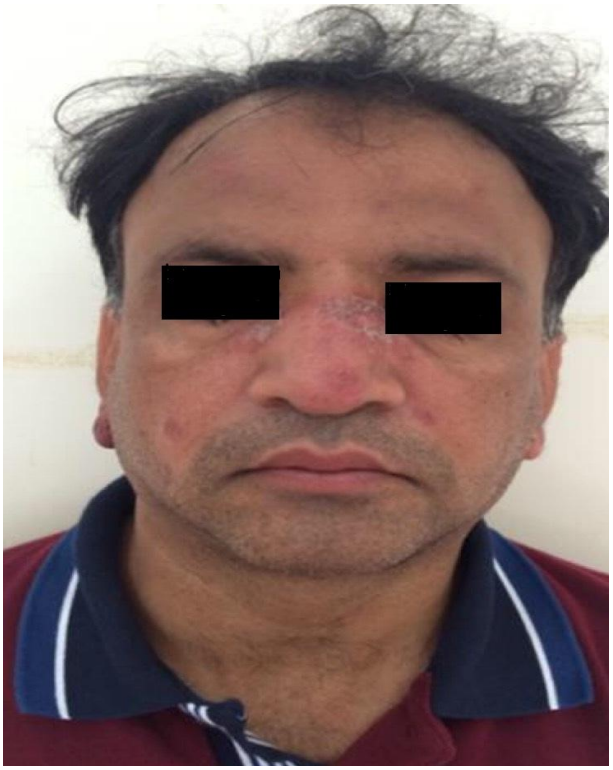

Fig 1. Lupus pernio

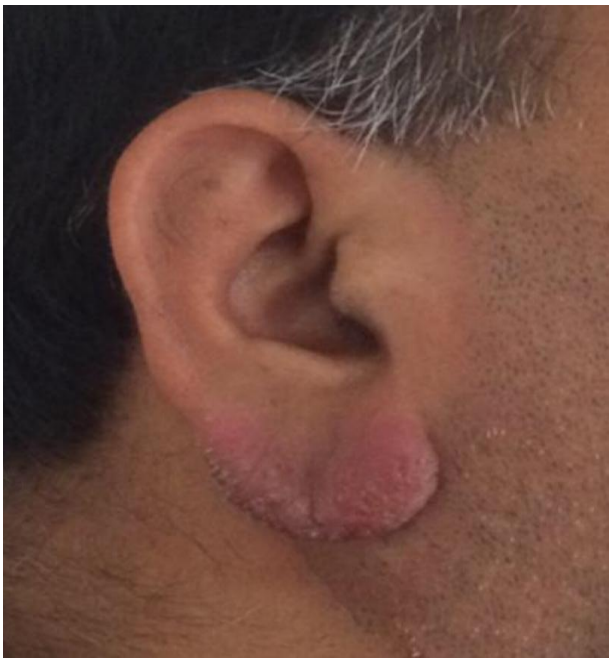

Fig 2. Involvement of the ear in cutaneous sarcoidosis

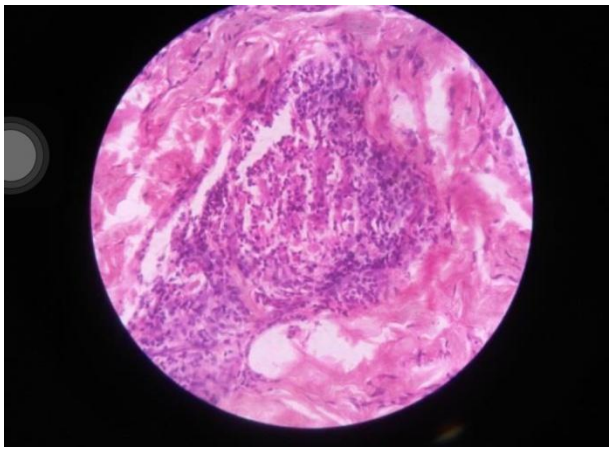

Fig 3. Histopathology

Based on the characteristic clinical features and investigations, a diagnosis of sarcoidosis (lupus pernio) coexisting with pulmonary tuberculosis was made.

The patient was treated with anti-tubercular treatment (ATT) for tuberculosis followed by oral prednisolone in a dosage of 40 mg which was tapered over 3 months. Cutaneous lesions were treated with topical mometasone 0.1% cream along with intralesional triamcinolone 10mg/ml. Both cutaneous lesions of sarcoidosis and pulmonary tuberculosis improved and patient showed satisfactory response.

Discussion

Sarcoidosis is a disease with worldwide distribution. It affects several organs. The formation of epithelioid cell tubercles without much lymphocytic infiltration and caseation are characteristic of the disease, although sometimes fibrinoid necrosis could be present. These epithelioid cell tubercles could either resolve or get converted to hyaline fibrous tissue. There is no known cause for sarcoidosis[1]. However, infective agents like mycobacterium tuberculosis, mycobacterium avium intercellulare, propionobacterium acne can cause it. Genetic factors are also implicated[2].

Cutaneous sarcoidosis is morphologically classified into 3 groups: Erythema nodosum, scar sarcoidosis and skin sarcoid. Skin sarcoid is characterized by specific cutaneous lesions and may present as nodules, plaque type lesions, angiolupioid lesions, lupus pernio, subcutaneous forms, maculopapular and papular forms. Lesions are usually asymptomatic and polymorphous[1].

Lupus pernio is relatively common compared to other skin manifestation of sarcoidosis. It commonly involves the nose and presents as infiltrated bluish red or violaceous symmetrical nodules or plaques. Less frequently, it presents as discrete nodules with a typical appearance on diascopy. The surface of the lesions is shiny and the epidermis is stretched with prominent pilosebaceous follicles. Ulceration can occur. Other skin lesions such as plaques and subcutaneous nodules may be present along with lupus pernio. Scalp may sometimes be involved with scarring alopecia[3,4]. Patients with nasal involvement could present with difficulty in breathing as there is swelling, ulceration or crusting of the nasal vestibule. There is also a risk of septal perforation and collapse of the nose[1].

Lupus pernio can occur together with other forms of fibrotic sarcoidosis, in particular with respiratory involvment[3]. There is a tendency for lupus pernio to persist, long standing lesions of more than 2 years rarely resolve.

Aggressive treatment modalities such as plastic surgery are often offered to combat the emotional scarring that is caused due to facial disfigurement. Topical camouflage plays an important role as an adjunct to this therapy[5,6,7,8].

Although in our case, there was no systemic involvement; sarcoidosis can affect almost all organs of the body[1]. Pulmonary involvement can begin with nasal stuffiness, crusting and a nasal discharge. There is progressive diminution of lung function[1].

Renal involvement can occur secondarily to granulomatous invasion or hypercalcemia and can result in renal failure[1]. Cardiac involvement can occur resulting in heart block, congestive heart failure, conduction abnormalities or sudden death could result from infiltration of the conducting system by granumolas[2].

Musculoskeletal involvement can occur causing myopathy and polymyositis. Acute polyarthralgia and chronic polyarthritis can also occur in the small bones of hands and feet[1,2].

Nervous system involvement can manifest as peripheral neuropathy, mononeuritis complex, cranial nerve palsies and psychiatric changes[2].

Optic involvement can present as uveitis, iris nodules, retinochoroiditis, conjunctivitis, papilloedema, retrobulbar neuritis, unilateral proptosis, keratoconjunctivitus sicca, etc[1,2].

Reticuloendothelial system involvement can be seen in around 50% of patients resulting in enlarged lymph nodes. The liver may be involved and may show granulomas. Serum alkaline phospha-

tase or bilirubin may be elevated[1,2]. Hypercalcemia and hypercalciuria can occur[1,2].

Wong et al and Esmaeil et al described two individual cases of sarcoidosis co-existing with tuberculosis but without cutaneous lesions of sarcoidosis[9,10].

Kornelija et al described a rare case of pulmonary tuberculosis with simultaneous pulmonary and skin sarcoidosis. Their patient was additionally put on colchicine apart from systemic steroids and antituberculous drugs and showed favorable response[11].

Sarcoidosis and tuberculosis closely resemble each other. It is not very common to find both the diseases occurring in the same patient, as in our case.

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Conflict of interest: None

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