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CASE REPORT

CUTANEOUS TUBERCULOSIS-UNUSUAL PRESENTATION

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ABSTRACT

Lupus vulgaris (also known as Tuberculosis luposa) are painful cutaneous tuberculosis skin lesions with nodular appearance, most often on the face around the nose, eyelids, lips, cheeks, ears] and neck. Eighty percent of the lesions are on the head and neck. It is the most common *M. tuberculosis* skin infection. It is chronic, post primary, pauci bacillary cutaneous tuberculosis found in individuals with moderate immunity and high degree of tuberculin sensitivity.

We present a case of 45yr old diabetic and hypertensive female who presented with thickening of skin of feet with hyper pigmentation (since4-5 yrs),small hyper pigmented painful itchy areas on both breasts (since 1 yr) .Chest radiography showed honeycomb like cystic lesions in lower zone but no evidence of active tuberculosis . Skin biopsy revealed granulomas suggestive of tuberculosis. This case highlights the importance of cutaneous manifestations of systemic disease and is an example of the unusual presentation of lupus vulgaris in a patient.

INTRODUCTION

Lupus vulgaris is an extremely chronic, progressive form of cutaneous tuberculosis. Cutaneous tuberculosis makes up a small proportion of extra pulmonary tuberculosis. Studies from India report an incidence of 0.1% of all cases of extra pulmonary tuberculosis (Sehgal and Wagh, 1990). It usually occurs through contiguous extension of the disease from underlying affected tissue or haematogenous or lymphatic spread (Burns *et al*., 2010). It can also arise after exogenous inoculation or as a complication of BCG vaccination. (Kanwar, 1988) Lupus vulgaris is the most common type of cutaneous tuberculosis in India and commonly seen in the lower half of the body involving legs, thighs, buttocks, and feet (Kumar and Muralidhar, 1999). We present a case of 45yr old diabetic and hypertensive female who presented with thickening of skin of feet with hyper pigmentation, small hyper pigmented painful itchy areas on both breasts. This case highlights the importance of cutaneous manifestations of systemic disease and is an example of the unusual presentation of lupus vulgaris in a patient.

Case report

A 45yr old diabetic female presented with complaints of thickening of skin of feet with hyper pigmentation since4-5 yrs, small hyper pigmented brown colour painful itchy areas on both breasts for 1 yr. Deepening in brown colour of lesions was noted. These areas occasionally watery and sanguineous secretions oozed from the lesions.

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No Constitutional symptoms such as fever, weight loss, night sweats, or a failing of general health were encountered .A erythematous plaque with central atrophic area on left feet was noted (Fig.1). There were areas of ill defined brownish macules and plaques present on both the breast (Fig.2). Similar lesions were present on right cheek. There was no documented history of allergy or any similar complaint in family. Patient was admitted for biopsy. Upon admission she had a body temperature of 38°C, blood pressure of 110/70 mmHg, a pulse rate of 74/minute, and a respiratory rate of 16/minute. On examination we noted an erythematous plaque with central atrophic area on left feet (Fig.1).There were areas of ill defined brownish macules and plaques present on both the breast and abdomen (Fig.2). Similar lesions were present on right cheek. There was a palpable left apical axillary lymph node. Her blood test results showed the following: white blood cells a 6900, neutrophils 73%, lymphocytes 25% and an erythrocyte sedimentation rate (ESR) during the first hour of 40 mm/hour. PPD was strongly positive. Her autoimmune panel showed ANA <1 (normal=0-20 eu/ml), DNA=1 (0-6NOR), C3=134(90-180),C4=41(10-40) i.e. negative while her chest x-ray showed honeycomb like lesions in left lower zone (figure3). USG of her axilla revealed a sub centimetre lymph node whose biopsy was not possible. Biopsy of her foot and lower abdomen was also performed under local anaesthesia which revealed signs of granulomatous inflammation. Under the microscope, both the sections showed mild hyperkeratotic and flattened stratified squamous epithelium, underlying deep dermis shows granulomas composed of epitheloid cell and occasional multinucleate type giant cell. Few lymphocytes and plasma cell were present in perivascular location. No AFB,

Fungi, LD bodies seen on special stains. Our patient was then treated with anti-tuberculous medication.

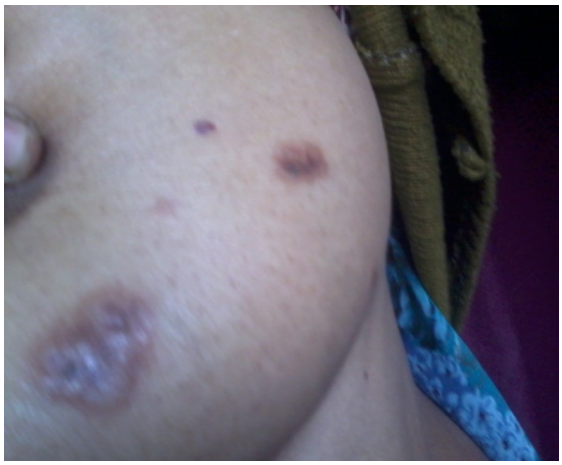

Figure 1.

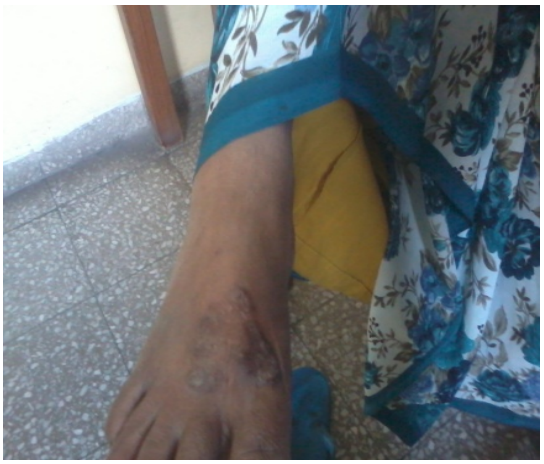

Figure 2.

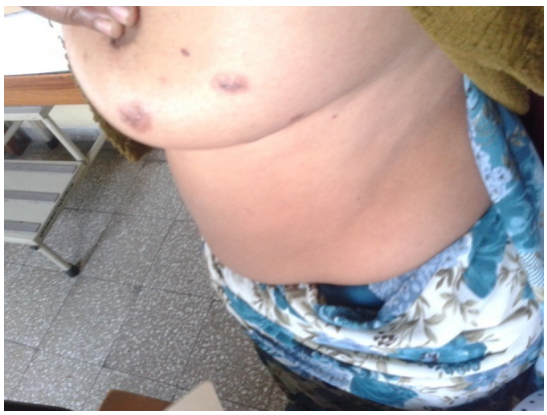

Figure 3.

After undergoing 9 months of anti-tuberculous treatment, her breast and abdomen lesions were gradually reduced. She was regularly followed up for another 1 year and no evidence of the recurrence of her disease was noted.

DISCUSSION

Tuberculosis remains one of the leading causes of death from infectious diseases worldwide. Skin tuberculosis has been classified into three main entities depending on the route of transmission and the state of host immunity The first is PCTB caused by M. tuberculosis complex (M. tuberculosis or Mycobacterium bovis), which can produce *tuberculosis verrucosa cutis* in immunocompetent hosts or the *tuberculous chancre* in immunosuppressed patients (Santos *et al*., 2014). The second and third entities are the secondary forms of skin TB resulting from *direct spread* to the skin from an underlying contiguous structure. In most cases TB spreads from lymph nodes and bone, known as *scrofuloderma*, or from an active focus from a deep tissue such as the lung in the case of oral TB, or the intestine or the genitourinary tract in perianal TB. This last entity is known as *periorificial tuberculosis*. In *haematogenous spread* cutaneous manifestations can occur in the form of miliary tuberculosis in relatively immune compromised hosts, *lupus vulgaris* in immunocompetent hosts, or *gummas*, which are cold abscesses that are initially latent, then reactivate under various immune suppressed conditions (Santos *et al*., 2014). Our patient's TB was presumed to be of a secondary form due to the presence of axillary lymph nodes and honey comb like bronchiectatic changes on chest radiography suggestive of post infective (?tubercular) bronchiectasis. Skin lesions and pattern of involvement was suggestive of lupus vulgaris. In Tropics Lupus Vulgaris is rare whereas scrofulloderma and verrucous lesions predominate. Lupus vulgaris is a chronic progressive painful cutaneous tuberculosis involves occurs in subjects with moderate immunity and high tuberculin sensitivity. It is three times more common in females (Jain *et al*., 2009). Lesions are usually solitary but 2 or more sites may be simultaneously involved. In patients with active pulmonary TB multiple foci will develop. Head and neck are the sites commonly affected in European countries. In India, the buttocks, thighs, and legs are the common sites of involvement as in our patient whose lesions started from feet (Sacchidanand *et al*., 2012). Progression occurs in form of elevation, deepening of brown colour and plaque formation.

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