

PULMONARY TUBERCULOSIS CO-EXISTING WITH LUPUS VULGARIS AND CUTANEOUS MYIASIS- A RARE CASE REPORT**¹Dr. Navaneethan Manohar, Dr. Ilakkia Priya Sadasivam^{2*}, Dr. Lisa Jennifer D'souza³, Dr. Rajkiran Takharya⁴, Dr. Bhavana Sampadarao⁵ and Dr. Gayathri Jayabalan⁶**¹3rd Year Postgraduate, Department of Pulmonary Medicine, Mahatma Gandhi Medical College and Research Institute, Puducherry.²Senior Resident, Department of Dermatology, Venerology and Leprosy, Aarupadai Veedu Medical College and Hospital, Puducherry.^{3,4}Postgraduate, Department of Dermatology, Venerology and Leprosy, Aarupadai Veedu Medical College and Hospital, Puducherry.^{5,6}3rd year Postgraduate, Department of Dermatology, Venerology and Leprosy, Aarupadai Veedu Medical college and Hospital, Puducherry.***Corresponding Author: Dr. Ilakkia Priya Sadasivam**

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ABSTRACT

The lung is the most common primary organ in tuberculosis (TB) infection. Cutaneous tuberculosis is a rare extrapulmonary type that accounts for only 1%–2% of total TB cases, usually limited to the skin. But in immunocompromised patients, it can be multifocal. Lupus vulgaris is the common form of cutaneous tuberculosis in which eighty percent of this lesion is distributed over the head and neck with female predominance. Atrophic scarring of lesions and apple jelly colour on diascopy are characteristic. The route of infection of mycobacterium can either spread via hematogenous or via lymphatics. The management of all cutaneous tuberculosis is similar to pulmonary tuberculosis as well as extrapulmonary tuberculosis. Patients with HIV (Human Immunodeficiency Virus) infection is highly likely to present with disseminated disease. The detection of tuberculosis infection in other visceral organs, mainly pulmonary TB, should be worked up simultaneously to prevent further complications and spread. Here, we are going to discuss a rare case report of pulmonary tuberculosis co-existing with Lupus vulgaris and cutaneous myiasis.

KEYWORDS: Lupus Vulgaris, Cutaneous tuberculosis, Pulmonary tuberculosis, Disseminated tuberculosis, Cutaneous Myiasis, Extrapulmonary tuberculosis, Acid fast bacilli, anti-tubercular treatment(ATT), sputum AFB, granuloma, granulomatous lymphadenitis, Maggots.

INTRODUCTION

The lung is the most common primary organ in tuberculosis (TB) infection. In the immunocompetent host, the lung involvement with active tuberculosis of 79 to 87%. In patients with immunocompromised states like human immunodeficiency virus (HIV), the rates of pulmonary involvement were about 70 to 92%, and these individuals are more prone to extrapulmonary tuberculosis.^[1]

Cutaneous tuberculosis is a rare extrapulmonary type that accounts for only 1%–2% of total TB cases, usually limited to the skin.^[2] But in immunocompromised patients, it can be multifocal.

Cutaneous tuberculosis has been classified into primary and secondary forms, of which the primary infection in a previously uninfected host can present as a chancre or acute disseminated miliary tuberculosis. Secondary

cutaneous tuberculosis may either be due to reinfection or reactivation, and one such type of this is lupus vulgaris (LV).

Lupus vulgaris is the common form of cutaneous tuberculosis in which eighty percent of this lesion is distributed over the head and neck with female predominance. Skin lesions of lupus vulgaris are of five types - a) plaque, b) ulcerative or mutilating, c) vegetating, d) tumour-like, e) papulonodular. Atrophic scarring of lesions and apple jelly colour on diascopy are characteristic.^[3] The route of infection of mycobacterium can either spread via hematogenous or via lymphatics.

Here we are going to discuss a rare case of pulmonary tuberculosis co-existing with cutaneous myiasis.

CASE REPORT

A 75-year-old male presented with complaints of itchy,

raised skin lesions over the neck, back, shoulders and chest for the past three years. Complaints of cough with expectoration and breathlessness present on and off for the past three years. History of loss of appetite and history of loss of weight present. The patient had a history of a single ulcer over the back with insect crawling sensation for the past two weeks. Blood in sputum present for the past one week on and off. History of taking self and over the counter medications.

Not a known case of type II diabetes, hypertension, bronchial asthma, tuberculosis and allergic reactions. No history of similar complaints in the family. No contact history.

Pulse – 96/min, Respiratory rate – 16/min, Blood pressure – 110/70mm Hg.

General examination – the patient was thin built and poorly nourished. Pallor – present. Grade 1 clubbing – present. Bilateral axillary lymph nodes enlarged, non-matted, firm and non-tender of size ranging from 1X0.5cm to 1X1cms. No cyanosis, icterus and oedema. On the left deltoid region- a BCG vaccine scar was noted.

Dermatological examination showed multiple atrophic plaques with scarring and advancing infiltrated scaly edges studded with papules and pustules seen over the neck, shoulders, mid- back. Plaque over the mid-back showed draining sinus, infested with maggots. (Figure 1 & 2)

Respiratory examination revealed the trachea in a normal position. We could not demonstrate percussion due to the cutaneous lesions over the chest and back. Bronchial breath sounds heard.

Daily dressing of ulcer and removal of maggots manually using turpentine oil was performed.

Biopsy from skin lesion showed epidermis - focally ulcerated / thinned out and dermis showing granulomas composed of epithelioid cells, histiocytes, lymphocytes and occasional giant cells. Fine needle aspiration cytology (FNAC) from the axillary lymph nodes showed granulomatous lymphadenitis.

Acid-fast bacilli (AFB) staining for sputum was reported positive with tuberculous bacilli (2+). Chest X-ray PA view revealed bilateral cavitory lesions suggesting tuberculosis infection. (Figure 4).

The patient was diagnosed with pulmonary tuberculosis co-existing with lupus vulgaris and cutaneous myiasis and was referred to the local primary health care centre for anti-tubercular treatment (ATT). The patient was started on 4FDC (Fixed-dose combinations) according to the body weight. After two months during follow-up, the patient's cutaneous lesions resolved with scarring and the complaints of cough reduced. (Figure 1, 2 & 3) And sputum AFB turned out to be negative. And the patient was advised for regular follow-ups and proper treatment.

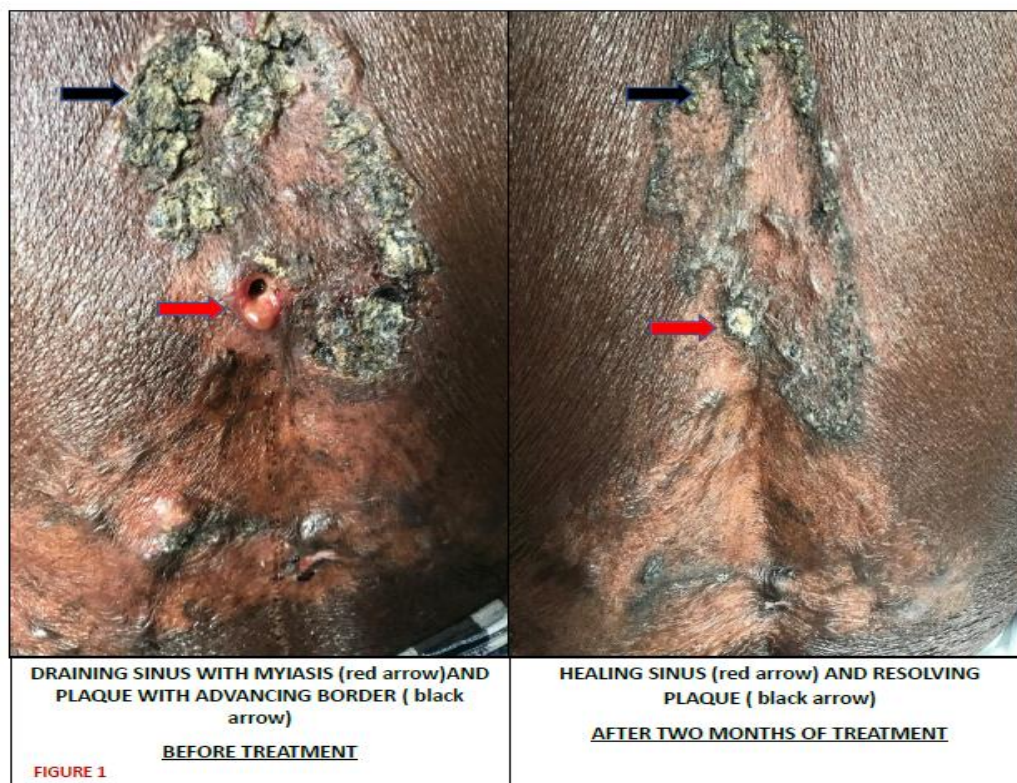


Figure 1: Lupus vulgaris plaque with advancing border, draining sinuses over mid back (before and after treatment with ATT).



Figure 2: Lupus Vulgaris Plaque with Advancing Borders Over The Back (Before and After Treatment with ATT).



Figure 3: Atrophic Scars with Contractures Over Healed Areas of Neck and Chest After Treatment with Att.

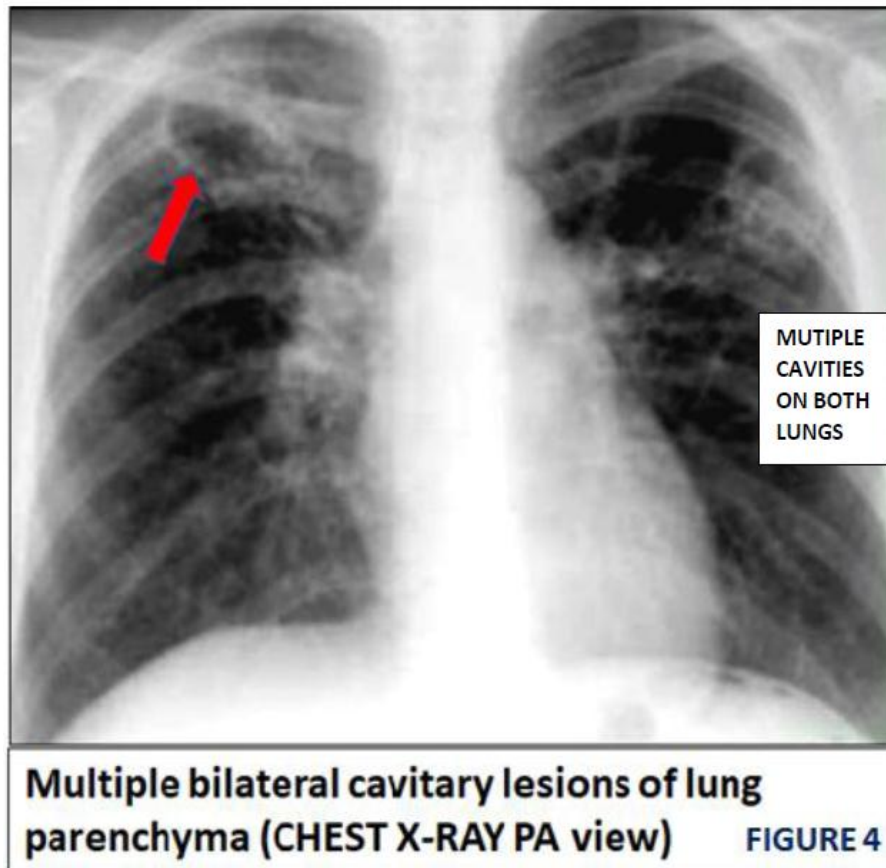


FIGURE 4: Multiple bilateral cavitory lesions of lung parenchyma.

DISCUSSION

Extrapulmonary tuberculosis occurs in 10% of all tuberculosis cases and is spreading from an adjacent focus, exogenous inoculation, or a hematogenous spread (from a distant focus).

Lupus vulgaris occurring in the skin is a chronic progressive form of tuberculosis occurring in patients with a moderate-to-high degree of immunity, originating from underlying tuberculosis (endogenous) focus or exogenous inoculation.^[2] This finding is similar to our study where the patient had underlying pulmonary tuberculosis.

Age is a risk factor for tuberculosis, and elderly patients are also at increased risk of comorbidities like diabetes mellitus and renal disease, increasing the risk of tuberculosis. Some studies have begun to suggest that increasing age is a risk factor for developing active tuberculosis. The disease itself may present differently in the elderly, making it harder to recognize and therefore diagnose.^[1]

The management of all cutaneous tuberculosis is similar to pulmonary tuberculosis as well as extrapulmonary tuberculosis.^[2] Patients with HIV infection is highly likely to present with disseminated disease, which should be tested in all patients with tuberculosis.

It should be noted that LV should be thought of as one of the differential diagnoses of any chronic skin lesions. The detection of tuberculosis infection in other visceral organs, mainly pulmonary TB, should be worked up simultaneously to prevent further complications and spread.

Consent and ethical clearance

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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