

Cutaneous Tuberculosis in a Child-Scrofuloderma

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Abstract: *Cutaneous tuberculosis infection occurs worldwide particularly in association with HIV infection malnutrition and poor sanitary condition. Scrofuloderma is a common type of tuberculosis characterized by a bluish red nodule overlying an infected lymph gland bone or joint that breaks down to form an undermined ulcer with a granulomatous tissue at the base. Progression of the disease leads to irregular adherent masses, densely fibrous at some places while fluctant and discharging at others. It heals with a characteristic puckered scarring at the site of infection. The disease is caused by mycobacterium tuberculosis and common antituberculous drugs are recommended for treatment.*

Keywords: Scrofuloderma, tuberculosis, Mycobacterium, anti-tuberculous drugs

1. Introduction

Though, human disease with *Mycobacterium tuberculosis* and *M. bovis* usually spreads by droplets, and the portal of entry is often the respiratory tract, skin can also be involved primarily^{2,3}. Cutaneous tuberculosis has a worldwide distribution.¹ Many types of cutaneous tuberculosis like lupus vulgaris, scrofuloderma, tuberculosis verrucosa cutis, tuberculous gumma, orificial tuberculosis etc. are seen in our population.^{1,2,4} Initially, there are firm painless, subcutaneous nodules that gradually enlarge and suppurate.^{1,3,4} Scrofuloderma, also called 'tuberculosis colliquativa cutis' is a common form of cutaneous tuberculosis affecting children and young adults in which there is breakdown of skin overlying a tuberculous focus in the lymph node, bone or joint.^{1,4} These lead to ulcers and sinus tracts with undermined edges and ultimately puckered scars.¹ PCR has a low sensitivity but high specificity.^{5,6} Diagnosis is usually performed by needle aspiration biopsy or excisional biopsy of the mass and the microbiological demonstration of stainable acidfast bacteria.³ The best approach for treatment of this disorder is with conventional anti-tubercular drugs while people in close contact with the patient, such as family members, should undergo testing for tuberculosis. The affected nodes can be treated with electrosurgery, cryosurgery and curettage with electrodesiccation as an adjunct measure, with pharmacological therapy as the primary method of treatment.³ The role of surgery cannot be denied.²

2. Clinical Report

A 12-year old girl presented with a swelling in the right side of her axilla of 8months duration. There was no history of contact to tuberculosis.

On physical examination revealed multiple erythematous raised plaque lesion active raised border with central clearing with atrophic scarring margins are tender and multiple discrete lesion over upper chest and non tender lymph nodes in right axillary region (**fig.1b**, **fig.1c**). Complete blood count revealed lymphocytosis with raised ESR. Chest x-ray done was normal. Treated with oral amoxicillin with potassium clavulanate for one week duration. There was no regress in the size of the swelling.

Mantoux done was positive >20mm. Fine-needle aspiration revealed caseating granuloma (**fig.1a**). She was started on antituberculosis treatment for 6 months duration. Initially the swelling started regressing and the parents stopped the treatment after 2 months by themselves. Later after two months she presented with discharge from the right axillary region and skin lesions. The physical examination revealed a draining sinus from a suppurative node in the right axillary region and multiple bluish red nodular lesions over the skin in the right infraclavicular and mammary region (Scrofuloderma). Acid fast staining of the discharge revealed mycobacterium tuberculosis bacilli. Scrofuloderma arises due to direct extension of the tuberculous bacilli from an underlying focus into the skin. Currently patient is under observation with continued treatment on oral isoniazid rifampicin, etambutol, pyrazinamide, pyridoxine and injection streptomycin intramuscular daily for the last 6months with some improvement.

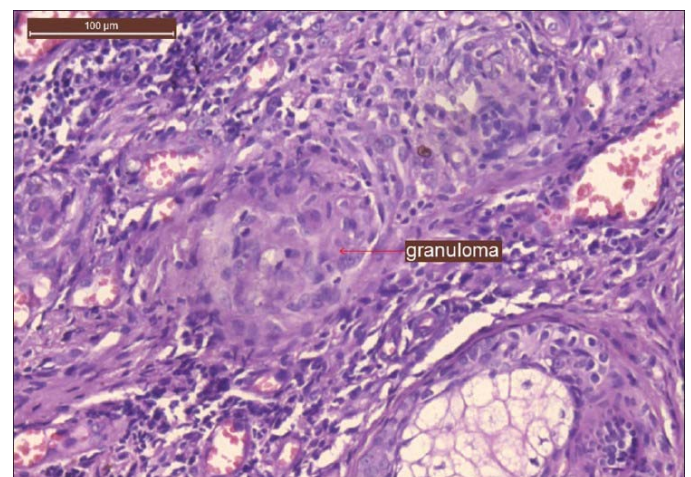


Figure 1 (a): histopathology report showing in granulomatous lesion



Figure 1 (b): Scrofuloderma with lupus vulgaris



Figure 1 (c): Scrofuloderma with lupus vulgaris

3. Discussion

One-third of the world's population is infected with *M. tuberculosis* and global burden of the disease continues to grow.^{1,5,7} The reasons may be malnutrition, low socioeconomic conditions and multidrug resistant strains of *M. tuberculosis*.^{3,9} The organism responsible for tuberculosis was identified more than 100 years ago while a tuberculosis vaccine has been in use for over 60 years and chemotherapy for over 30 years.⁸ Despite all these, the disease still remains a major international health problem.^{3,5,7}

In our case swelling with draining sinuses histopathology report positive result. Mantoux done was positive >20mm. Fine-needle aspiration revealed caseating granuloma.

The key elements in the diagnosis of this infection are a high index of suspicion, taking a history with an emphasis on exposure to any sufferer in the family or other potential sources and tissue biopsy for culture & histopathology.³ Therapeutic regimens include anti-tubercular treatment with four drugs for initial 2 months and then combination of two

drugs regularly for a sufficient period up to 12-18 months, depending upon the clinical picture and investigations.^{3,4,6}

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