

A Rare Case of Scrofuloderma

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Abstract

Scrofuloderma is a common type of cutaneous tuberculosis characterized by a red nodule overlying an infected lymph gland that breaks down to form an undermined ulcer with a granulating tissue at the base. Progression of the disease leads to irregular adherent masses, densely fibrous at some places while fluctuant 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 anti-tubercular drugs are recommended for treatment.

I. INTRODUCTION

Cutaneous tuberculosis has a worldwide distribution.¹ 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} 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} 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.^{1,4} Initially, there are firm painless, subcutaneous nodules that gradually enlarge and suppurate.^{1,3,4} These lead to ulcers and sinus tracts with undermined edges and ultimately puckered scars.¹ Diagnosis is usually performed by needle aspiration biopsy or excisional biopsy of the mass and the microbiological demonstration of stainable acidfast bacteria.³ PCR has a low sensitivity but high specificity.^{5,6} 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.³ 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 We report a case of scrofuloderma, a commonly seen variety of cutaneous tuberculosis in our society.

II. CASE SCENARIO

A 66 year old male came with painful swelling right submandibular region since 7 to 8 months. There were discharging sinuses from the swelling. Patient also complained of difficulty in swallowing solid food and altered taste. The swelling was initially small and increased in size to present size of 6cm x 8cm over 6 months. No history of tuberculosis in past. On examination, swelling was seen on the right side of face with multiple well defined nodules with discharging sinuses, crusting and scaling. The local area was warm and erythematous. The lymph nodes were not palpable. His hemoglobin, total counts were normal. ESR was 80 and mantoux test was positive. CT Neck was suggestive multiple enlarged lymph nodes in cervical and prevertebral area suggestive of ? Infective etiology/ ? Neoplastic etiology. Myositis of right pterygoids and edematous false vocal cords. HRCT Chest was normal. FNAC of lymph node was done which was suggestive of chronic granulomatous lymphadenitis most like tubercular lymphadenitis. Skin biopsy showed pan dermal infiltrates composed mainly of lymphocytes-- scrofuloderma. He was started on antitubercular drugs. After few days the swelling started regressing in size, redness reduced. After few months swelling subsided leaving a very small scar. Dysphagia improved and so as the taste sensation.

III. 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 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} The reasons may be malnutrition, low socioeconomic conditions and multidrug resistant strains of *m. tuberculosis*.^{3,9} In our case, swellings with draining sinuses, histopathology report, positive result and good response to ATT favoured the diagnosis of scrofuloderma. The condition has to be differentiated from some other similar clinical

entities. Atypical mycobacterial infections clinically mimic scrofuloderma. Differential Diagnosis of discharging sinuses^[1-3,6,10] Atypical mycobacterial infection due to mycobacterium scrofulaceum and m.

Avium-intracellulare

- actinomycosis
- sporotrichosis
- botryomycosis
- nocardiosis
- syphiliticgumma

The infection is seen in children, mainly between the ages of 1 and 3 years. Submandibular and submaxillary nodes are typically involved and there are no constitutional symptoms. Primary skin disease caused by m. avium-intracellulare has been reported in rare instances, presenting as single or multiple, painless, scaly yellowish plaques or subcutaneous nodules with a tendency to ulceration and a slowly progressive, chronic course. This infection also causes lung disease or, less frequently, osteomyelitis and may produce a cervical lymphadenitis with sinus formation that is clinically indistinguishable from scrofuloderma. Both of these conditions were ruled out on the basis of histopathology report for M. Tuberculosis.^{2,5,6} Actinomycosis is characterized by granulomatous and fibrotic lesions, which tend to break down and form abscesses that drain through multiple sinuses.¹¹ Typical “sulphur granules” occur in these abscesses.¹¹ The disease is caused by actinomyces israelii, the anaerobic organism producing filamentous branching hyphae. The lesions occur primarily on the face and neck, especially on the lateral surfaces of neck beneath the jaw, less often on the chest wall or lower abdomen. The absence of sulphur granules and negative culture report for actinomycetes helped to delineate this condition. Where sporotrichosis is endemic, it must also be excluded.¹² The clinical features of this condition are similar to scrofuloderma but a negative report for fungal hyphae and histopathology led to exclusion of this condition. Botryomycosis is a chronic inflammatory condition due to a bacterial infection.¹³ The infection is more common in immunocompromised patients. The disease presents as nodules, sinuses, fistulae, abscesses and ulcers, leading to scarring. The lesion usually occurs on the extremities but less commonly affected sites are head, neck and buttocks. The granules (like sulphur granules) are formed and discharged from the lesions which on histologic examination are proven to be masses of cocci, mostly staphylococci. The condition can be ruled out on the basis of absence of bacteria from

pus or biopsy specimen. In nocardiosis, papulonodular lesions occur on the limbs and trunk leading to draining sinuses and the organisms are detected as gram-positive branched-filaments and branching at right angle is confirmatory.^{11,12} Syphilitic gumma is a typical granulomatous lesion of tertiary syphilis mainly found in the skin and bone.^{12,14} Cutaneous lesions are rounded, red to flesh-coloured nodules which can occur anywhere. The nodules may break down to form punched-out ulcers leading to atrophic scars or can heal with no residue.^{12,14} In our case, there was no neurological or cardiovascular involvement and serological tests for syphilis were also negative. 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 1st two months and then inh and rifampicin for 8 to 12 months.

IV. CONCLUSION

1. Skin tuberculosis can present atypically without obvious features of tuberculosis like fever, cough, weight loss, night sweats..
2. The high index of suspicion for tuberculosis is always required in TB endemic areas.

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