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Case Report

Primary cutaneous tuberculosis associated with reactive cervical lymphadenopathy: a case report

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ABSTRACT

Tuberculosis (TB) is a mycobacterial infection that most frequently occurs due to infection with *Mycobacterium tuberculosis*, an acid-fast bacillus. Cutaneous lesions are relatively uncommon manifestations of TB, occurring in only 1 to 2 percent of all infected patients. Cutaneous tuberculosis can be acquired either exogenously or endogenously .We present here a case of primary cutaneous tuberculosis with reactive cervical lymphadenopathy. A high index of suspicion is necessary for prompt diagnosis and treatment.

Keywords: Cutaneous tuberculosis, Cervical lymphadenopathy, *Mycobacterium tuberculosis*

INTRODUCTION

Tuberculosis (TB) is one of the oldest diseases known to affect mankind and still continues to be a worldwide major health problem in low and middle income countries. TB frequently occurs due to *Mycobacterium tuberculosis*, an acid-fast bacillus. Extra-pulmonary TB constitutes 10% of all cases of TB, and is now on the rise due to insurgence of increased use of immunosuppressive therapy, emergence of metabolic diseases and acquired immunodeficiency syndrome (AIDS) epidemic.[1,2]

Presently cutaneous TB is rare and makes up only 0.1 to 1.5% of all new cases worldwide, but in high prevalent settings can be up to 2.5 percent.[3,4] Cutaneous TB was first documented in 1826 by Laennec, who reported his own prosector's wart, a variant of TB that resulted from direct entry of the organism into the skin.[5]

Mycobacterium tuberculosis, *Mycobacterrium bovis*, and the Bacille Calmette-Guérin vaccine can cause tuberculosis involving the skin. The clinical features of cutaneous TB are diverse, and result from exogenous and endogenous spread of M. tuberculosis and from immune-mediated mechanisms. We present here a case of primary cutaneous tuberculosis with rare co-existence of reactive cervical lymphadenopathy.

CASE REPORT

A 70 year old female, presented in the outpatient department of ear, nose, throat and head and neck surgery with the complaint of right sided neck swelling for a duration of two months associated with an ulcer on the lower part of the neck.

She was a non-smoker but occasionally chews betel nut. There was no associated history of fever and cough. There was no past history of tuberculosis and contact history. On general examination, the patient was well built. On local examination, there were multiple palpable cervical nodes at level IV and V on the right side, the

largest measuring 3cm x 2.5 cm. The nodes were firm, mobile and tender on palpation. Overlying the lower part of the cervical nodes there was an ulcer with inflammation of surrounding skin (Figure 1). The ulcer was 3.5cm x 1.5 cm in size with indurated margins and it was discharging scanty serous fluids. Fibre-optic video laryngo-pharyngoscopic examination findings were normal.

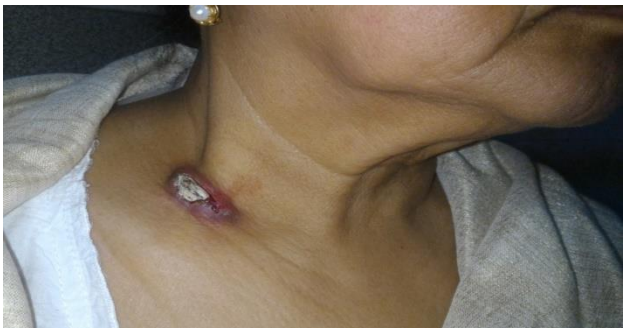

Figure 1: Ulcer on the lower neck.

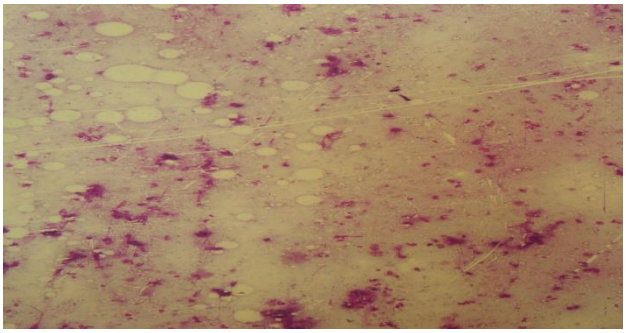

Figure 2: MGG stain (10x), inflammatory cells composed of neutrophils, lymphocytes against a proteinaeceous background.

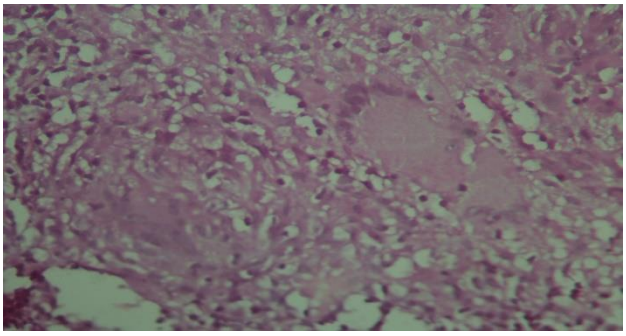

Figure 3: Photomicrograph with H and E stain (40X) shows a mass of inflamed tissue with plenty of foreign body and few langhans giant cells, lined by focally hyperplastic and ulcerated squamous epithelium.

Fine needle aspiration cytology (FNAC) from the cervical node showed reactive pathology (Figure 2). Chest X ray was normal. Serology test for HIV was non- reactive. Excision biopsy from the ulcer showed epithelioid granulomas (Figure 3). Morphology was suggestive of a Koch's lesion. The final diagnosis of primary cutaneous tuberculosis was hence made. Patient was put on anti-tubercular drugs under category I treatment. There was complete remission of the ulcer at the 6 months follow-up (Figure 4).

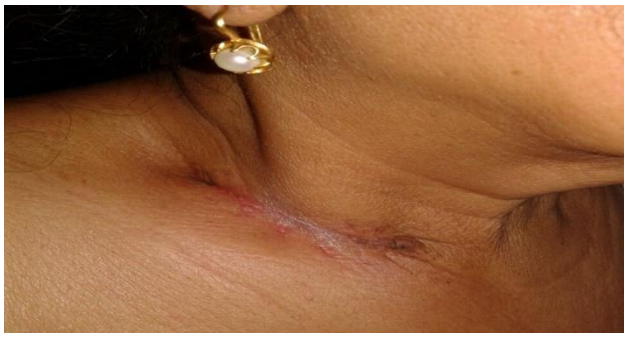

Figure 4: Follow-up image of the neck showing the healed ulcer.

DISCUSSION

Cutaneous tuberculosis occurs rarely, despite a high and increasing prevalence of tuberculosis worldwide. Cutaneous tuberculosis is usually seen in younger patients with a mean age of presentation at around 30 years.[6-8]

In the present case the patient was 70 years of age with presence of cervical lymphadenopathy, which should raise the suspicion of a co-existing head and neck malignancy or lymphomas. In our case, endoscopy and FNAC from the lymph nodes were done to rule out co-existing head and neck malignancy.

The clinical findings may be varied like inflammatory papules, verrucous plaques, suppurative nodules or chronic ulcers. In the present case the cutaneous tubercular lesion presented as chronic non-healing ulcer discharging serous fluids. Factors such as the pathway of bacterial entry into the skin, the host's immune status, and the presence or absence of host sensitization to M. *Tuberculosis* influence the morphologic presentation of TB in the skin. Diagnosis of these lesions can be difficult, as they resemble many other dermatological conditions that are often primarily considered. Different types of granulomatous skin lesions are identified according to cellular constituents and associated changes. They are namely tuberculoid, sarcoidal, necrobiotic, suppurative, foreign body and histoid type granuloma.[9]

In the present case, tubercular cutaneous lesion was suppurative type. Further, microbiological confirmation is poor, despite scientific advances. Primary tuberculosis in the head and neck region has been observed in immune competent individuals.[10,11] In the present case the patient was serologically negative for HIV and immune competent.

CONCLUSION

Although the incidence of cutaneous tuberculosis is rare, in elderly patients, when associated with cervical lymphadenopathies, co-existing malignancy must be clinically and cytologicaly ruled out. Prompt consideration leads to a swift diagnosis and proper treatment resulting in high patient satisfaction.

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Ethical approval: Not required

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