Forgotten but not gone - Scrofuloderma in a migrant student from India

Mohammad Bagherirad, Eugene Athan, Owen C Harris

Geelong Hospital – Barwon Health, Department of Infectious Diseases and Microbiology

CASE REPORT

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Corresponding Author:
Mohammad Bagherirad
Barwon Health – The Geelong Hospital, Bellerine Street Geelong
Email: mbr_dr@yahoo.com

Abstract

A 34-year-old Indian student who immigrated to Australia five years ago presented with a four-week history of neck pain. Physical examination revealed two firm fixed cervical lymph nodes in the anterior triangle and midline region which were tender on palpation and erythematous on inspection. Cording phenomenon was found on ZN staining of FNA sample and mycobacterium tuberculosis (*M.tb*) PCR confirmed the diagnosis with incomplete resistance to isoniazid. Patient was treated with other three first line anti-tuberculosis medications for nine months with an excellent outcome. Prednisolone was also used as adjunctive therapy and tapered during the course of treatment.

Key Words
Scrofuloderma, Tuberculosis, Cording phenomenon

Implications for Practice

1. Scrofuloderma is the terminology mostly forgotten due to efficient control of mycobacterium tuberculosis (MTB) in developed countries.
2. Immigrants from developing or third world countries may be infected with *M.tb* and inexperience of doctors in developed countries may lead to a delay in diagnosis, treatment and eventually spread of disease in the community.

Background

Scrofuloderma, also known as "Tuberculosis colliquativa cutis",[1] is a type of tuberculous skin involvement in children and young adults. There is breakdown of skin overlying a tuberculosis focus in the lymph node, bone or joint. This condition begins as subcutaneous nodules which then suppurates and gradually causes sinuses, tracks and scars.[2]

Progression of the disease may lead to irregular fixed, dense and fibrotic masses; however it could be fluctuant and discharge.[3]

Other types of cutaneous tuberculosis such as tuberculosis verrucosa cutis, tuberculosis gumma and orificial tuberculosis are also defined in dermatology references.[2, 4]

Diagnosis of this condition is usually with needle aspiration or excisional biopsy of the mass and the demonstration of acid-fast bacilli by microbiological staining. Mycobacterium tuberculosis (MTB) PCR has high specificity for diagnosis.[5, 6] Cording phenomenon (Figure 2) is a typical finding in MTB infection but can also be seen in other mycobacterial infections.

Treatment of scrofuloderma is similar to pulmonary tuberculosis and the role of corticosteroids is still unclear. Corticosteroids are proven to be effective in tuberculous meningitis and tuberculous pericarditis with active constrictive pattern.[7-9] Use of corticosteroids in patients with compromised airway secondary to enlarged lymph nodes may be helpful.

Case details

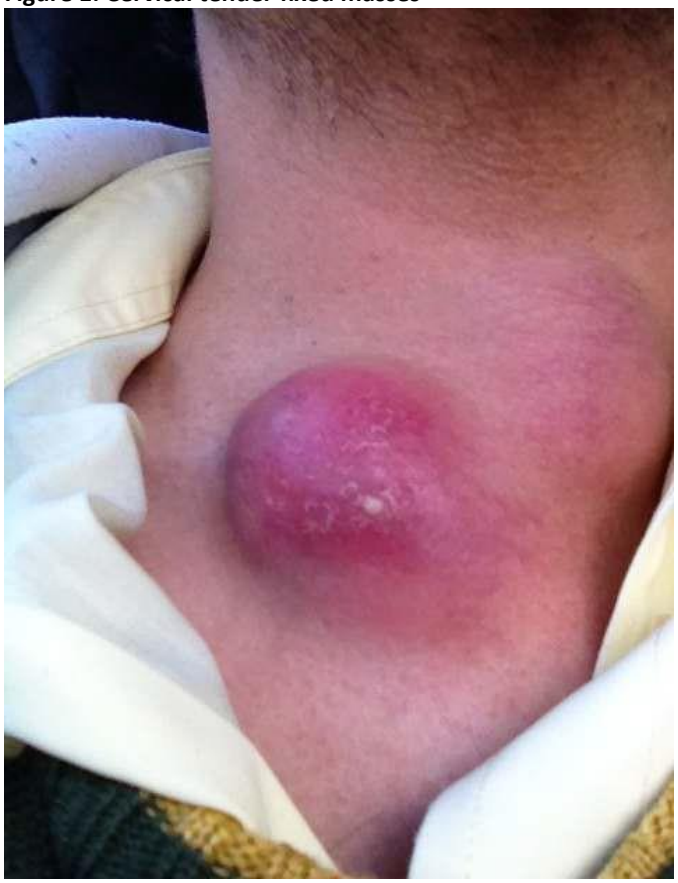
A 34-year-old male patient was referred to the infectious diseases outpatient clinic by his general practitioner with a four-week history of tender cervical lymphadenopathy.

He was a student from India who migrated to Australia five years ago. He denied previous contact with any patient diagnosed with tuberculosis (TB). He had no significant childhood history of lung diseases or TB and neither a family history of TB. He had his BCG vaccination as a child. Since his arrival in Australia, he had not travelled to other countries.

Physical examination revealed normal vital signs with no respiratory distress. Head and neck examination was consistent with two hard, tender and fixed masses in the

left anterior and mid cervical area (Figure 1). There was no evidence of generalised lymphadenopathy or abdominal organomegaly. His chest X-ray was also normal.

Figure 1: Cervical tender fixed masses



He underwent a fine needle aspiration (FNA) of his cervical lymph nodes sent for culture, microbiology and histopathology. Mycobacterial culture and PCR was also requested considering his background and recent travel from India.

Tuberculin Skin Test (TST) was performed which was positive at 48 hours. Ziehl-Neelsen stain performed on his FNA sample showed cording phenomenon (Figure 2) *M.tb* PCR confirmed the diagnosis of Tuberculosis. Mycobacterium culture results showed incomplete resistance to Isoniazid with minimum inhibitory concentration (MIC) of more than 1 but less than 4 microgr/ml. Full susceptibility was reported to Rifampicin, Ethambutol and Pyrazinamide. Considering the excellent outcome of treatment in Isoniazid resistant tuberculosis, he was treated with three other first line drugs Rifampicin, Ethambutol, and Pyrazinamide for nine months.

Figure 2: Microscopy of the culture.

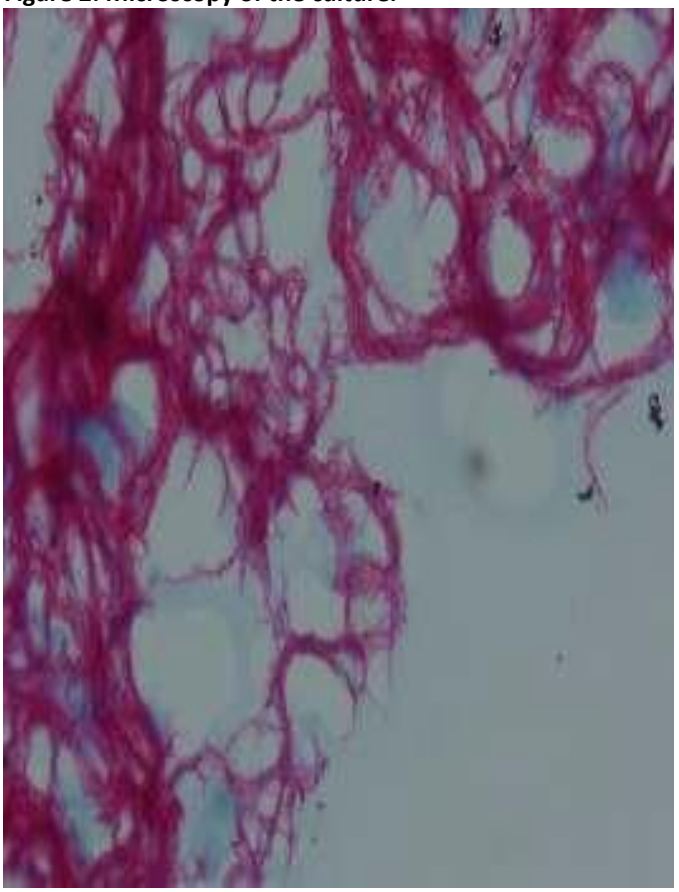
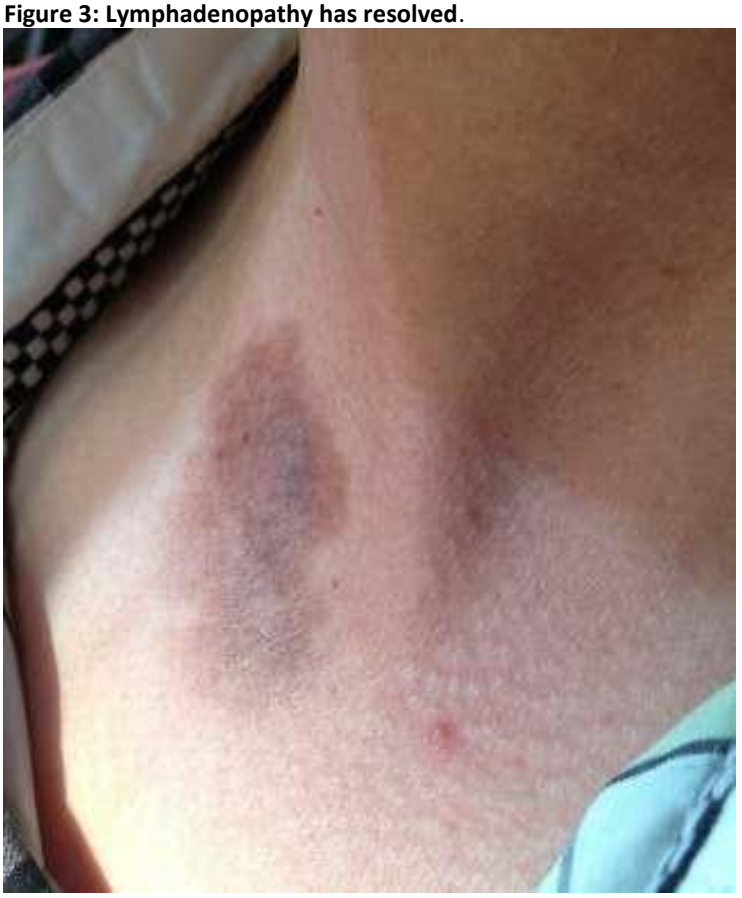


Figure 3: Lymphadenopathy has resolved.



After one month of treatment, his lymph nodes became more erythematous, tender and inflamed. High dose prednisolone was started with a diagnosis of paradoxical immune response. Prednisolone was later tapered off in term of treatment. After three months of treatment his lymph nodes disappeared with minor hyperpigmentation (Figure 3). He finished the total treatment course or nine months with no major complications and made a complete recovery.

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CONFLICTS OF INTEREST

The authors declare that they have no competing interests. We also declare that all the authors have approved the final version of this manuscript.