

Tubercular sinus over manubrium sterni: a rare presentation

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Abstract

Isolated sternal involvement in tuberculosis is rare. Very few case reports are available in literature even from the countries where tuberculosis is endemic. We are reporting a case of 32-year-old female who presented to us with a pus discharging sinus over manubrium sterni with no other systemic features of tuberculosis. Sinus tract was excised and biopsy confirmed tuberculosis. Patient received antitubercular therapy for 9 months.

Introduction

Tuberculosis still remains a formidable challenge for health care providers in developing countries. Isolated sternal tuberculosis is a rare presentation; very few case reports are there in literature.¹⁻⁵ We report an unusual case of tubercular sinus over manubrium sterni without any systemic feature.

Case Report

A 32-year-old female came to our surgical out patient department with a pus discharging sinus over manubrium sterni for 2 months (Figure 1). There was no history of cough, fever, weight loss or anorexia. There was no history of trauma or any surgery over sternum. On examination, she was afebrile, weighed 54 kg. There was no significant lymphadenopathy and systemic examination revealed no abnormalities. There was a pus-discharging sinus over the manubrium sterni and the surrounding skin was erythematous and indurated. Laboratory investigations revealed haemoglobin 12 g/dL, total leukocytes count 7800 mm³, differential leukocyte count- Polymorphs 74, lymphocytes 26, and erythrocyte sedimentation rate 30. Tuberculin skin test was positive with a 22-mm induration. Human immunodeficien-

cy virus test was negative. Chest X-ray was normal. Gram and Ziel Neilson staining of pus didn't reveal any organism. Computed Tomography of chest showed a sinus tract in subcutaneous tissue over manubrium sterni reaching up to the periosteum (Figure 2). Surgical excision of sinus tract was planned. Intraoperatively, it was found that tract was going upwards up to the manubrium sterni and there was erosion of the underlying periosteum. Tract was excised completely and bone was curetted thoroughly. Histopathological examination of the sinus tract showed caseating granulomas with acid fast bacilli (Figure 3). Culture revealed Mycobacterium Tuberculosis sensitive to standard anti-tubercular drugs. Patient received antitubercular therapy for 9 months. Patient is doing fine after 12 months of follow-up.

Discussion

Isolated sternal involvement is a very rare manifestation of tuberculosis. Around 28 cases of tubercular osteomyelitis have been reported in world literature, in the post anti-tubercular treatment era. Davies et al reported that, out of more than 4000 patients with tuberculosis, only 2 had sternal tuberculosis.⁶ Tuli and Sinha⁷ found that out of 980 cases of osteoarthritic tuberculosis, only 14 (1.5%) were having sternal osteomyelitis. Sternal tuberculosis



Figure 1. Sinus opening over manubrium.

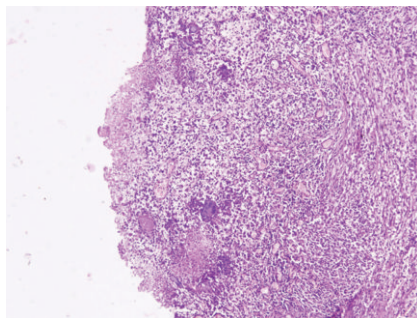


Figure 2. Sinus tract with acute on chronic inflammatory granulation tissue and caseating epithelioid cell granulomas (Haematoxylin & Eosin x 250).

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is often found to be associated with diabetes, disseminated tuberculosis and post coronary bypass surgery. Constitutional symptoms are relatively uncommon. Tubercular sternal involvement is usually caused by reactivation of latent foci formed during hematogenous or lymphatic dissemination of primary tuberculosis. Out of 20 cases of sternal tuberculosis reviewed by McLellan *et al.*,⁸ 8 had extra sternal involvement also which included mediastinal lymph nodes (5), paraspinal abscess (2), and lung involvement (1). We could not find any extra sternal source of infection in our patient. Definitive diagnosis rests largely with the histopathological examination of the involved tissue. According to Tuli and Sinha,⁷ radiological signs occur much later than the presenting clinical features, and abscesses or sinuses are present much before the focus is detected radiologically. Possible complications of sternal tuberculous osteomyelitis include secondary infection, fistula formation, sponta-



Figure 3. Computed tomography image showing sinus over manubrium sterni reaching up to periosteum.

neous fractures of the sternum, compression or erosion of the large blood vessels, compression of the trachea and migration of tuberculous abscess into the mediastinum, pleural cavity or subcutaneous tissues. Treatment of this pathology is also debatable. Majority of the authors believe that antitubercular therapy alone is sufficient but Sarlak,⁹ Hajjar¹⁰ and Ford¹¹ have done resection or debridement along with antitubercular therapy and have shown satisfactory results. In our case, we have performed excision of the tract followed by anti tubercular drugs and patient responded well to this approach.

Conclusions

Isolated tubercular sternal osteomyelitis is a rare entity. Debridement followed by antitubercular therapy may produce optimum results.

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