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A Case of Primary Nasal Tuberculosis in 40-Year-Old Man

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Abstract

Nasal tuberculosis is a rare clinical entity even in areas with high incidence of tuberculosis. Due to its rarity and no specific clinical presentation its timely diagnosis as well as proper management often gets delayed. Therefore here we report a case of primary nasal tuberculosis in a 40-year-old male presented with nasal obstruction, epistaxis and recurrent cold since past 2 years. This case report would further emphasize that Nasal tuberculosis should always be kept as one of the differential diagnosis in chronic nasal symptoms and in granulomatous lesions of the nose; so that patient may be given appropriate and timely treatment.

Keywords: Tuberculosis • Nose • Granulomatous

Introduction

Tuberculosis is one of the most ancient diseases of mankind, with molecular evidence going back to over 17000 years. According to WHO, TB is a worldwide pandemic [1]. Tuberculosis is caused by a group of closely related bacterial species termed Mycobacterium tuberculosis complex. It primarily affects lungs. Nasal Tuberculosis is rare and was first described by an Italian anatomist in 1761, while performing a young man's autopsy wherein he found an ulcerative lesion on nose [2]. Nasal tuberculosis had always been considered secondary to lung tuberculosis and it is rare that it will present as local disease as a primary nasal infection. Moreover it is confused with other granulomatous or neoplastic processes. Therefore it is important to have a diagnostic suspicion of nasal tuberculosis while dealing with a case of chronic nasal obstruction, recurrent nasal polyps, nasal discharge, epistaxis and ulceration [3].

Case Report

A 45-year-old man presented with nasal obstruction and epistaxis for past 4 months. There was no history of contact or family history of tuberculosis or any other illness. No history of fever, loss of weight, dysphagia, dyspnea or chest symptoms were present. There was no lymphadenopathy or any other organomegaly. Local examination showed polypoidal lesion in the bilateral nasal cavities almost obliterating it. Investigations were done. His Hb 12 gram, TLC 10,000, DLC P67L26M4E3, Platelet count 4.0 lac, ESR 70 mmHg at 1st hour, crp, ANCA negative, Monteux test was negative and ,Sputum examination for AFB was negative, Chest X-ray was normal. Thus a diagnosis of bilateral ethmoidal nasal polyposis was made. The patient had earlier received antibiotic courses but without any relief. Endoscopy with biopsy was done. It showed presence of bilateral edematous nasal mucosa with whitish patches. Punch biopsy was taken from pale granulomatous mucosa of nasal cavity and anterior ethmoids. Histopathology was done and showed partly ulcerated respiratory mucosa multiple discrete epithelia cell granulomas with Langham's giant cells along with occasional area showing necrosis with neutrophils were also seen in the stromal. Diagnosis was of chronic granulomatous inflammation probably of tuberculosis etiology. No fungus, malignancy or features of vacuities were seen. Fungal stain and AFB was negative. Gene expert was done and showed mycobacterium tuberculosis. The patient was put on Ant tubercular treatment and showed considerable improvement on follow up.

Discussion

Tuberculosis of Head and Neck area is rare and constitutes only 2-6% of extra-pulmonary tuberculosis and 0-0.1% of all forms of TB [4]. Nasal tuberculosis can present as spontaneous form, secondarily after pulmonary tuberculosis or in a primary form without prior pulmonary infection. Secondary nasal tuberculosis is reported to be more common than primary infection of nasal mucosa [5]. This is probably due to self-protective functions of nasal mucosa such as biliary movement, inherent resistance to bacterial growth and bactericidal actions of nasal secretion [6]. Trauma as well as atrophic changes in nasal mucosa facilitates lodging of bacilli. Primary nasal tuberculosis occurs either by traumatic digital inoculation or inhalation of infected particles. In our case there was no focus of tuberculosis anywhere else in the body. Diagnosing nasal tuberculosis is difficult since presentation is variable and no specific symptoms are seen. Clinically patient may present nasal obstruction followed by nasal discharge, epistaxis, crusting, watering of eyes, crusting recurrent nasal polyps and ulceration and few may present with sepal perforation cleft of nasal ale or facial abscesses [7]. Diagnosis of nasal tuberculosis reveals a high index of suspicion as it may simulate other granulomatous diseases of nose and malignancy. Histopathology plays an important role in the diagnosis of tuberculosis. The differential diagnosis includes fungal infections, leprosy, sarcoidosis, rhinosclerema, syphilis, leishmaniasis, inhalation granuloma and natural killer T cell lymphoma [8]. Vadwai et al. study showed that expert test had good sensitivity (86-100%) for specimens like synovial, pericardial and peritoneal fluids; pus and fine needle aspirates moderate sensitivity (63-73%) for tissues lymph

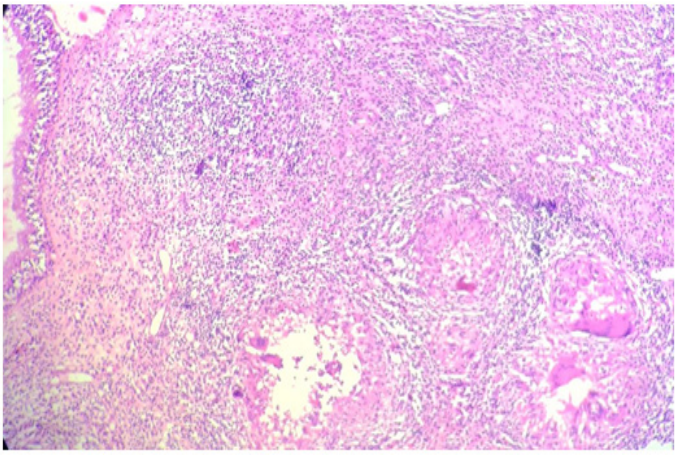

Figure 1. Photomicrograph showing respiratory epithelium with underlying multiple epitheloid cell granulomas (H and E 20x).

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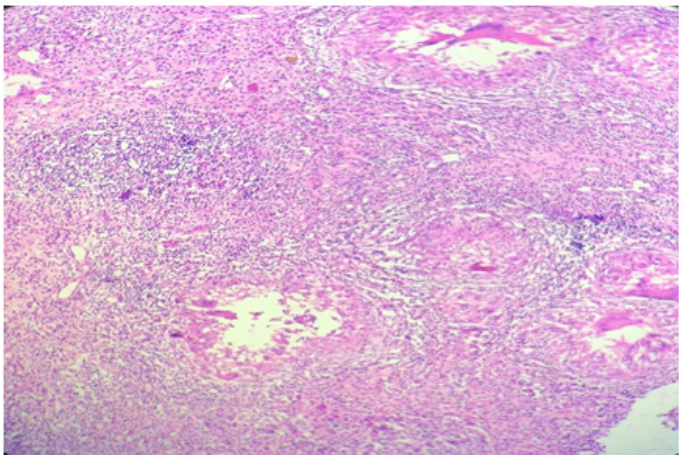

Figure 2. Photomicrograph showing numerous granulomas with langhans giant cells and dispersed epitheloid cells (H and E 40x).

nodes, pleural fluid but poor sensitivity in csf .Therefore this test has good sensitivity and specificity for diagnosing extra pulmonary tuberculosis and is well suited to Indian health care system [9]. Treatment of nasal tuberculosis should be done according to the established generalized guidelines for extra pulmonary tuberculosis (Figures 1 and 2).

Conclusion

Although nasal tuberculosis is rare but possibility should be kept in mind in cases of chronic nasal obstruction, recurrent nasal polyps as well as chronic inflammation of nose that does not respond to antibiotic.

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