



A Case of Nasopharyngeal Tuberculosis

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Authors' contributions

This work was carried out in collaboration among all authors. Author TKC managed and wrote the journal manuscript, while authors ZHL and PAS actively co-managed the patient. All authors read and approved the final manuscript.

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Case Study

ABSTRACT

Introduction: Nasopharyngeal tuberculosis is rare even in endemic tuberculosis areas.

Presentation of Case: A 22 year old woman presented with right neck swelling for 3 weeks. She worked as a chest clinic nurse. Examination revealed a right level II and III cervical neck swellings. Rigid nasoendoscopy revealed a huge friable nasopharyngeal mass. Biopsy of the nasopharyngeal mass showed caseating granulomatous inflammation. Cytology of the lymph node revealed granulomatous lymphadenitis. Contrast CT showed fullness of the nasopharynx with cervical lymphadenopathy. No pulmonary lesions were found. Patient has been started on anti-Tuberculous drugs and after treatment the lesion disappeared. Nasopharyngeal tuberculosis is a rare and unique variation of tuberculosis. The most common presenting symptom is neck lymph node enlargement followed by nasal obstruction. Such a presentation together with the findings of a nasopharyngeal mass makes it indistinguishable from nasopharyngeal carcinoma especially in endemic areas. It is therefore of utmost importance that a nasopharyngeal biopsy is done which will show caseating granulomatous inflammation characteristic of tuberculosis. It is considered an extrapulmonary tuberculosis and responds well to a minimum of 6 months duration of treatment with anti-Tuberculous drugs.

Conclusion: Histological studies are important in patients presenting with cervical neck swelling and nasopharyngeal mass. This is especially important in places where nasopharyngeal carcinoma and tuberculosis is endemic such as Southeast Asia.

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Keywords: Nasopharyngeal tuberculosis; caseating granulomatous; cervical neck swelling.

1. INTRODUCTION

Tuberculosis is a prevalent infectious disease and one of the major causes of death worldwide. The emergence of multidrug resistance mycobacterium tuberculosis and the AIDS epidemic has led the World Health Organization in 1993 to declare a global tuberculosis emergency [1]. Tuberculosis is commonly found in the lungs and rarely in the upper respiratory tract. Nasopharyngeal tuberculosis is rare even in endemic tuberculosis areas [2]. A large series of 843 cases to tuberculosis revealed only 1.8% of upper respiratory tract involvement with only one case of nasopharyngeal involvement [3]. Another large series of 1315 tuberculosis cases in Bradford, UK revealed that only 128 cases presented with head and neck tuberculosis and only one case involved the nasopharynx [1].

2. PRESENTATION OF CASE

A 22-year-old woman presented with right neck swelling for 3 weeks associated with pain. She had no nasal or cough symptoms. General symptoms such as weight loss, night sweats and

evening rise fever were not present. She had worked as a nurse in a chest clinic and had contact with tuberculosis patients. Examination revealed a Level II and III cervical neck swelling that was firm in consistency measuring 2x2 cm respectively. Endoscopic examination of the nasopharynx revealed a friable mass with minimal slough. Cytological examination of the cervical lymph nodes revealed chronic granulomatous lymphadenitis. Histopathological examination of the nasopharyngeal mass showed caseating granulomatous inflammation. Staining done showed acid-fast bacilli. Contrasted enhanced computed tomography (CT) of the neck demonstrated an asymmetry of the fossa of Rosenmuller with fullness of the nasopharynx and right cervical lymphadenopathy. No pulmonary lesions were found. Base on the findings and investigations, patient was diagnosed with nasopharyngeal tuberculosis. Patient was started on anti-Tuberculous drugs for 6 months. Patient responded to the treatment and the cervical neck lymphadenopathy disappeared and the nasopharyngeal swelling regressed.

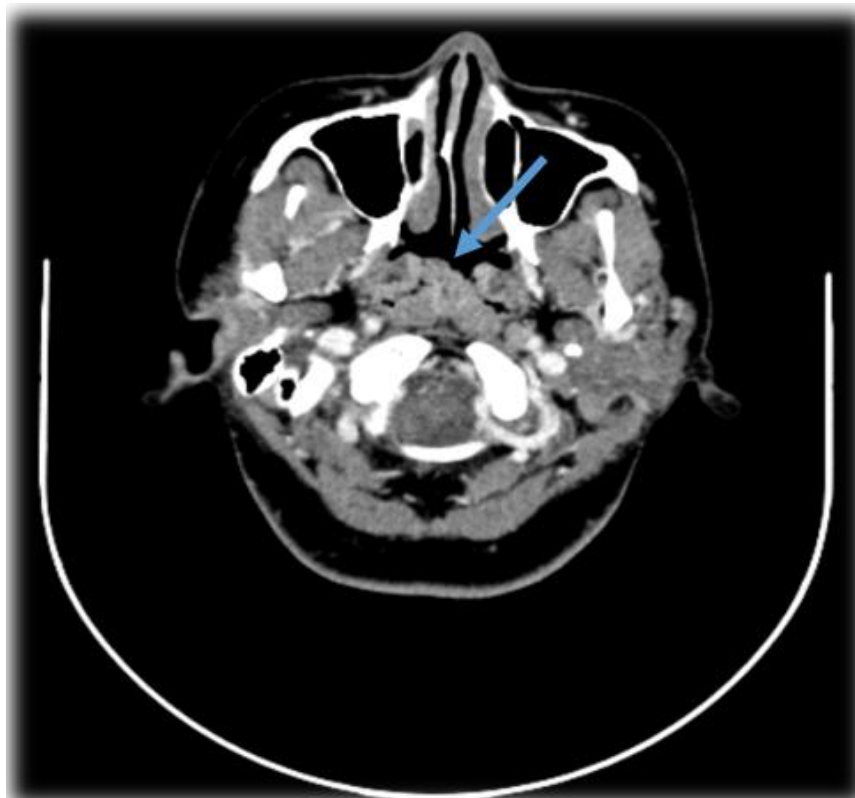


Fig. 1. Contrasted CT showing the postnasal space pre-treatment

3. DISCUSSION

Nasopharyngeal tuberculosis represents a rare and unique variation of tuberculosis [4]. It is therefore of utmost importance to discuss regarding the common clinical presentations of nasopharyngeal tuberculosis. Two modes of contamination have been described in nasopharyngeal tuberculosis [1,5,6]. The first is via airway either directly through the nasal ventilation or secondarily through canalized bacillary expectoration. The second is hematogenous or lymphatic from the primary site, usually pulmonary. This usually involves the rich lymphatic Waldeyer ring.

Based on the references regarding the disease, cervical neck lymph node enlargement represents the most common presenting symptom and is commonly found in the superior and middle cervical levels [1,7]. The 2nd most common presenting symptom is nasal obstruction. Other symptoms include tinnitus, postnasal drip, hearing loss, epistaxis and night sweats. Direct visualization of the nasopharynx reveals abnormalities consisting of a nasopharyngeal mass that may be ulcerated or have an irregular surface [6]. In this case, the patient presented with cervical lymphadenopathy and a nasopharyngeal mass. Such a presentation together with the findings of a nasopharyngeal mass makes it indistinguishable from nasopharyngeal carcinoma especially in endemic areas. A study done showed that 91.3% of nasopharyngeal cases was associated with cervical lymphadenopathy¹. The site of cervical lymphadenopathy in this case also correlates with the common site found in this study. However in cervical neck tuberculosis the posterior triangle of the neck was the commonest side of involvement at 76% [8].

Investigations to look for pulmonary involvement is important for all tuberculosis cases. A study done in Southeast Asia found pulmonary tuberculosis in 44.4% associated with nasopharyngeal tuberculosis [1] and this finding was similar to other studies done in the same region. CT scan of the nasopharyngeal mass will either show a large mass that is lobulated or irregular soft tissue thickening of the nasopharynx [9]. This finding is vague as it is similar to benign disorders like rhinosinusitis and even in early stages of nasopharyngeal carcinoma.

The most important aspect of investigation in such a case is to proceed with a histological

examination of the nasopharyngeal mass as well as the cervical lymphadenopathy. This is because the mass in the nasopharynx cannot be differentiated from nasopharyngeal carcinoma and other benign nasopharyngeal masses. A study showed that in 44% of cases with abnormal nasopharyngeal mass, the histological examination turned out to be normal [1]. Histological examination usually shows caseating granulomatous inflammation with epithelioid giant cells present [6]. For cervical lymphadenopathy, fine needle aspiration cytology (FNAC) is usually adequate. In one study, 70% of patients were diagnosed using FNAC while only 29% required a biopsy [8]. In this case, histological findings helped diagnose it as nasopharyngeal tuberculosis allowing treatment to be started.

4. CONCLUSION

Nasopharyngeal tuberculosis is a rare disease that is treatable if diagnosed properly. The sign and symptoms mimic nasopharyngeal carcinoma making it difficult to be diagnosed based on history and examination alone. Therefore, histological studies are important especially in any case presenting with cervical neck swelling and nasopharyngeal mass. Its importance cannot be overemphasized enough especially in places where nasopharyngeal carcinoma and tuberculosis is endemic such as Southeast Asia.

CONSENT AND ETHICAL APPROVAL

As per university standard guideline, participant consent and ethical approval have been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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