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Paraphayngeal Primary Tuberculosis Manifesting as Submucosal Oropharyngeal Tumor: A Case Presentation and Litterature Review

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Abstract **Case Report**

Although tuberculosis is a major cause of morbidity and mortality, primary tuberculosis of the oropharynx is rare, accounting for only 0.05% to 5% of all tuberculosis cases. The upper respiratory tract is resistant to tuberculosis, mainly due to the presence of saliva which, in addition to its cleansing action, has an inhibitory effect on tubercle bacilli. The symptoms of oropharyngeal tuberculosis may resemble a malignant tumour, particularly in elderly patients. Confirmation of primary parapharyngeal tuberculosis requires histological examination and a search for negative koch's bacilli in negative bronchial secretions. Treatment is antituberculosis.

Keywords: Parapharyngeal Tumor, Biopsy, Tuberculosis.

INTRODUCTION

Primary tuberculosis of the oropharynx is rare, accounting for only 0.05% to 5% of all tuberculosis cases [1]. Tuberculosis mucosal involvement affects mainly the tonsils followed by the soft palate in this region [1]. Whereas, parapharyngeal primary tuberculosis, aside from cold abscess, presenting as a submucosal bulging are even rarer [2]. Tuberculosis of the pharyngeal wall, whether primary or secondary, can present a diagnostic challenge, especially in the elderly, as it may have similarities to a malignant tumor [2, 3]. Confirmation of pharyngeal tuberculosis requires histological examination, and treatment involves the use of anti-tuberculosis drugs [4]. We present the case of a 49-year-old woman who presented with a submucosal oropharyngeal bulge suggesting a parapharyngeal tumor. Further investigations revealed a parapharyngeal tuberculosis.

CASE REPORT

This is a 49-year-old woman who presented to the ORL outpatient clinic for odynophagia and left otalgia that had been progressively worsening for five months. The patient had a history of cervical lymph node tuberculosis treated and declared cured in 2014. She had no cough, fever, night sweats or haemoptysis, and no history of active or passive smoking or alcohol intake. On general examination, the patient was in good general condition, with no evidence of weight loss or palpable cervical adenopathy. Intra-oral examination revealed a bulge in the left posterolateral wall of the oropharynx with healthy mucosa, the tonsils were of normal size and morphology and the rest of the examination was normal (fig 1). Acid-fast bacilli smear and GeneXpert in the sputum were negative, the tuberculin Skin test (TST) was positive at 20 mm, and the chest X-ray was normal. A CT scan showed a lesion centred in the left oropharynx, hypodense, poorly limited, irregularly contoured and heterogeneously enhanced after injection of contrast, measuring 17 x 25 mm, infiltrating the parapharyngeal fat and bulging into the pharyngeal lumen, with no abnormalities in the rhinopharynx or bone lysis (fig 2). A submucosal biopsy was performed, followed by pathological analysis revealing features typical of a caseous granulomatous lesion, suggestive of tuberculosis. No signs of malignancy were detected on histopathological examination. GeneXpert was positive for rifampicin-susceptible Mycobacterium tuberculosis. With GeneXpert negative in the sputum, the diagnosis of primary parapharyngeal tuberculosis was accepted. The patient was subsequently put on anti-tuberculosis treatment for a period of 6 months, with a favorable outcome and resolution of symptoms after 2 months of treatment.

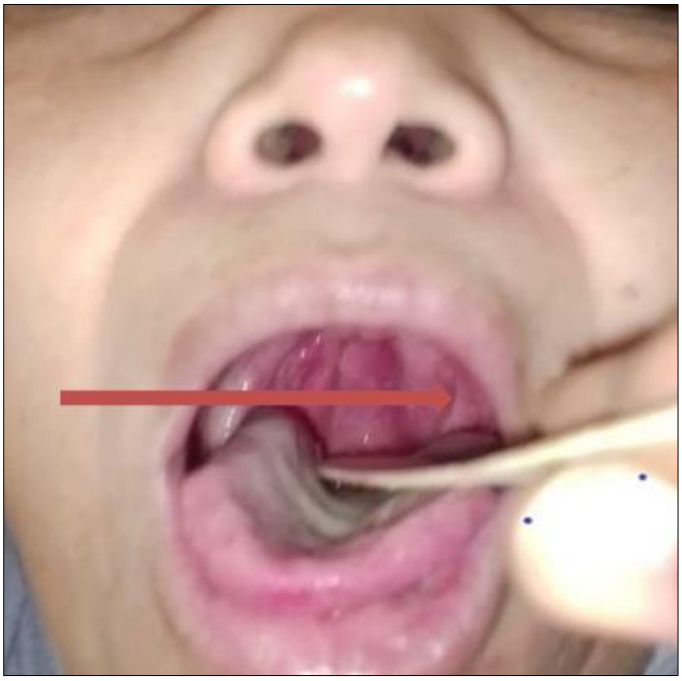

Figure 1: Image showing a swelling with healthy mucosa in the left lateral wall of the parapharyngeal (orange arrow)

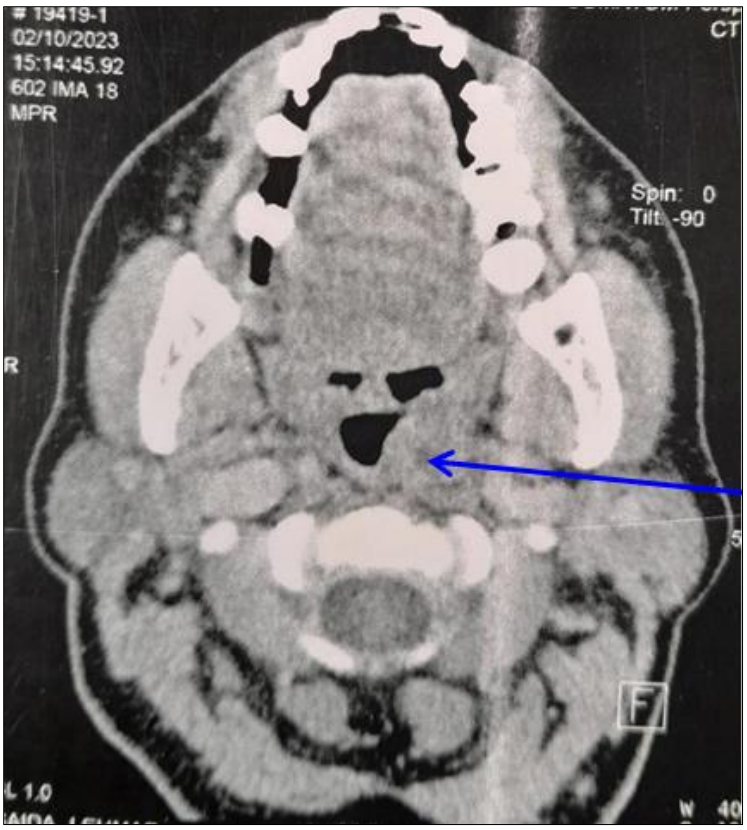

Figure 2: CT scan with contrast axial view showing submucosal tumor process in the left wall of the parapharyngeal, heterogeneously enhanced after injection of contrast medium

DISCUSSION

Extrapulmonary tuberculosis (EPTB) accounts for 15-20% of all tuberculosis cases in immunocompetent patients, while it can be as high as 50% in immunocompromised patients such as those infected with HIV [5]. Lymph nodes are the most common site of EPTB [2-4]. Although the upper respiratory tract is the entry point for Mycobacterium

tuberculosis, its involvement is rare (less than 2%) [6]. Primary tuberculosis of the oropharynx is rare, accounting for only 0.05% to 5% of all tuberculosis cases [1]. The tonsils are usually most affected in this region, followed by the soft palate [1]. Tuberculosis of the oropharynx is usually secondary to pulmonary tuberculosis due to the expectoration of infected sputum that is deposited in the oropharynx [7]. The upper respiratory tract is resistant to tuberculosis, mainly due to the presence of saliva which, in addition to its cleansing action, has an inhibitory effect on tuberculosis bacilli. Other factors have contributed to this immunity to tuberculosis in this region, including the presence of saprophytes, the resistance of the musculature to bacterial invasion and the thickness of the mucosa, which explains the low frequency of tuberculosis in the oropharynx [8, 9]. However, even in the absence of mucosal breach, Mycobacterium tuberculosis can cross mucosal barriers by endocytosis in sites such as the pharyngeal lymphoid tonsil, and phagocytes containing intracellular mycobacteria disseminate the infection [10]. On the other hand, parapharyngeal localization of pseudotumoral tuberculosis manifesting as oropharyngeal bulge is even rarer [2]. Patients may present with sore throat, globus sensation, dysphagia or odynophagia and otalgia. Examination of the oropharynx and posterior pharyngeal wall may show a proliferative ulcer process that may bleed on touch [10]. It may also present as a submucosal bulge with healthy mucosa, as in our patient. Hence, there is no pathognomonic endoscopic appearance [8]. Neither CT nor MRI scans show a typical appearance, but they may show signs of an inflammatory process [11]. Tuberculosis of the pharyngeal wall, whether primary or secondary, can pose a diagnostic challenge, especially in the elderly, as it may have similarities to malignancy [2, 3]. Our patient's lesion mimicked that of a parapharyngeal tumor. In this case, the diagnosis confirmation can only be made by biopsy and pathology examination, which shows caseous granulomas with epithelioid Langhans giant cells [10]. Moreover, GeneXpert can help identifiying Koch bacilli and study rifampicin resistance in case of primary tuberculosis or tuberculosis relapse [12]. In our case, GeneXpert was negative in the sputum while it was positive in biopsy material with no rifampicin resistance. Therefore, establishing the diagnosis of primary parapharyngeal tuberculosis. Treatment was solely based on antituberculosis therapy.

CONCLUSION

Paraphyngeal primary tuberculosis is an extremely rare entity. Its symptoms and clinical signs parapharyngeal tumor. Confirmation of pseudotumour parapharyngeal tuberculosis requires histological examination and a search for negative koch bacilli in bronchial secretions, and treatment is solely antituberculosis therapy.

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