

Primary Tuberculosis of the Nasopharynx

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Introduction

DESPITE THE VIGOROUS anti-tuberculosis campaign by the National Tuberculosis Centre with modern diagnostic procedure and chemotherapy, there still exists a large number of patients with active tuberculosis in Malaysia. It is estimated that there are approximately 14,000,000 active cases in the world (Chodosh et Willis 1970). While tuberculosis involves the whole system in the body, primary nasopharyngeal involvement is very rare. Hence this is a case study of a Malay patient presenting with primary tuberculosis of this region.

Case Report

History

Mohd. S. bin Md. Abdullah, a 38-year-old Malay male, works as a machine-switch operator. He was first seen in February, 1970 with a history of frequent sore throat and post-nasal discomfort for over five years. There were episodes of exacerbation and partial remissions of symptoms. Associated with this, he had stuffiness of nose with muco-purulent post-nasal discharge and irritative non-productive cough. For the six months prior to date of visit to the hospital, the symptoms became persistent. He saw many doctors and was given treatment with

little relief. There was no history of loss of weight, hoarseness of voice, evening fever, night sweats or loss of appetite.

Physical Examination

He was a well-built, healthy individual, active and alert, weighing 58 kgm. His general condition was satisfactory. The positive findings were confined to the following:—

Nose — Vestibule normal. No nasal discharge, septum central, nasal mucosa, hyperaemic and oedematous but no hypertrophy or ulceration of the mucosal surface. Nasal airway patent but reduced.

Pharynx — The tonsils were scarred and atrophic but no active lesion was seen clinically. The posterior oro-pharyngeal wall appeared red, granular, and covered with muco-pus. The pharyngeal mucosa showed areas of hypertrophy with ulceration.

The nasopharynx showed similar changes. The vello-pharyngeal space was reduced in size by the oedematous and hypertrophied mucosa which extended to the roof and lateral pharyngeal walls, including the Fossa of Rosenmuller. The surface was red, infected, granular and showed areas of ulceration. The hypopharynx was oedematous with pooling of saliva in the pyriform fossa.

PRIMARY TUBERCULOSIS OF NASOPHARYNX

Larynx—The mucosa of the supra-glottic region of the larynx was normal but oedematous. The vocal cords were normal.

Neck—The jugulo-digastric nodes on both sides were enlarged and non-tender.

Investigations

1. Blood

Total white count 13,800 ul
Differential count Neutrophil 65%
Eosinophils 8%
Lymphocytes 27%

Erythrocyte

Sedematation

Rate 75mm/hour

Kahns Test Negative

2. X-rays

Chest Heart and lungs—normal

Paranasal Sinuses appear clear

Nasopharynx There is minimal degree (Fig. 1)

of thickening of the pre-cervical soft tissue in the upper cervical region. The thickness of the posterior wall of the nasopharynx measures 5 mm. which is in the upper limits of normal. The surface appears irregular which is of significance.

Impression

Nasopharyngeal tuberculosis or nasopharyngeal



Fig. 1: Shows thickening of the nasopharyngeal mucosa with irregular surface (arrowed).

cancer of the infiltrative type could give this appearance (Dr. Soo—radiologist).

3. *Bacteriological Examination*: Smear and Culture of sputum, nasal discharge, nasopharyngeal swab and gastric lavage for Acid Fast Bascilli were all negative.

4. *Mantoux Test*: Intradermal injection of 1 Tuberculin unit was strongly positive — 20 mm.

5. Histopathology.

Biopsy. From posterior nasopharyngeal wall shows surface lined by normal nasopharyngeal epithelium, the stroma is collagenous with numerous mono-nuclear cells especially lymphocytes, with Langhans type of giant cells together with granulomata formation. Caseation is minimal. There is no evidence of malignancy. Lesions consistent with tuberculosis. (Fig. 2).

Biopsy. From Mucosa of Nasal septum and Inferior Turbinate shows non-specific inflammation. No evidence of tuberculous granulation.

Diagnosis

Primary Nasopharyngeal Tuberculosis.

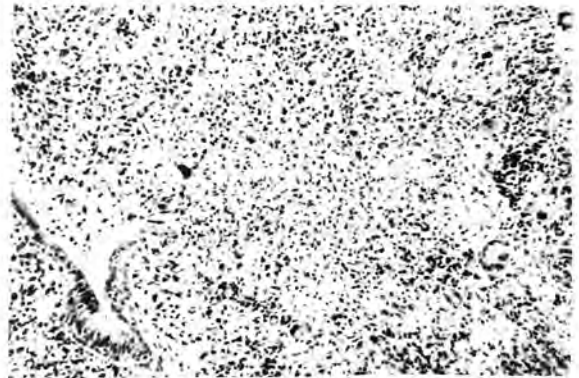


Fig. 2: Shows numerous epithelioid and Langhans type giant cells at the periphery of a tubercle. A fragment of respiratory epithelium is seen on the left of the picture (x 230).

Treatment

The following antituberculosis treatment was instituted on 20.3.70.

Inj. Streptomycin 1 gm. thrice-weekly for 3 months.

Tab. Isobenzacyl iii four times/day (to be continued for 18-24 months).

Follow-up

Since institution of specific treatment, the patient

has made rapid recovery. Within the first 3 months, there was marked improvement. The mucopurulent discharge cleared, the mucosa was smooth, non-granular, non-hyperaemic and free of edema. The vello-pharyngeal space was more reduced than when first seen but there was no functional impairment.

Discussion

Judging from the world literature (Wille 1948; Savic et other 1961, Akaike 1964, Saito 1964, Martinson 1967) isolated tuberculosis of the nasopharynx is very rare. In the past two decades, with improved chemotherapy, and high standard of living in Malaya, one does not suspect such lesions in the upper respiratory tract. Diagnosis is often delayed.

Site of Lesion

On the whole, tuberculosis of the upper respiratory tract is rare. When it does occur, it is often secondary to active pulmonary tuberculosis. The larynx and hypopharynx are common sites. A less common site of origin is the nasal septum near the muco-cutaneous junction. The least common site is the nasopharynx (Martinson 1967). A review of world literature by Sevic et others (1961) could only find four cases in a period of ten years. This is surprising in view of the occasional finding of tuberculous foci in adenoid tissue of patients who have no clinical infection. Usually in tuberculous infection involving the upper respiratory epithelium, the normal secretory mucosa is destroyed and is replaced by non-secretory type leading to crusting and drying (Martinson 1967). In this patient, although the lesion has been present for over 4 years, there was no crusting of the nasal mucosa or helitosis. This lends strong evidence to the assumption that the lesion was solely, if not primarily in the nasopharynx and not nasal cavity. Other evidences to indicate this primary site are:—

1. Negative smear and culture for acid fast bacillus from sputum, nasal discharge and gastric lavage.
2. Non-involvement either clinically or radiologically of the larynx and lung parenchyma.
3. Negative histopathological finding from the nasal septum and inferior turbinate.

Aetiology

In the absence of evidence pointing to other primary sites in the patient, it is possible that the adenoid may have harboured the tuberculous bacilli for some time and for an unknown factor, pre-

cipitated the clinical disease. The enlarged jugular diagastric lymph nodes must have been secondarily involved. On the other hand, the organism could have gained direct entry through a break in the mucosa. A third possibility that it might have been blood-borne, from undetected focus elsewhere cannot be ruled out.

Diagnosis

The early diagnosis of tuberculosis of this region is apt to be missed if one does not keep this in mind. The frequent occurrence of nasopharyngeal carcinoma in adults in this part of the world invariably makes one to think of this as the main clinical diagnosis. However, the fact that the lesion has been present for 4-5 years and that he is a Malay in whose ethnic group in my experience, nasopharyngeal carcinoma is rare made me suspect other possible causes like tuberculosis, midline granuloma, Wegner's granuloma, Boeck's Sarcoid, leprosy and fungal diseases caused by actinomycosis, blastomycosis and coccidiomycosis. Although the diagnosis in this patient was not bacteriologically confirmed, yet the histopathological features (Fig. 2), the radiological finding (Fig. 1) and, most important, the satisfactory therapeutic response over the past year was conclusive proof.

Prognosis

With modern chemotherapy, the prognosis of tuberculous infection is excellent. Within three months of commencement of treatment, this patient felt almost complete symptomatic relief. After treatment for a year, the mucosa had clinically reverted to near normal except for reduction of the vello-pharyngeal space. This could be a sequel to normal healing by fibrosis, although Chodosh and Willis (1970) state that scarring of this region is minimal except in the Lupus form of the disease.

Summary

A case of primary tuberculosis of the nasopharynx is reported. The disease, from available statistics, is very rare. With the prevalence of nasopharyngeal carcinoma in Malaysia one tends to think of this as the first diagnosis. The diagnosis was made histopathologically and the response to antituberculous therapy was very satisfactory. In the absence of other primary sites, the follow-up and assessment of progress in this patient was made solely by the ENT surgeon. Although he had made good recovery in a short time, yet he would have to have a full two-year antituberculous treatment. This fact must be stressed to the patient to ensure complete cure.

PRIMARY TUBERCULOSIS OF NASOPHARYNX

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