CASE REPORT

TUBERCULOSIS OF THE TONGUE

N.K. SONI,* P. CHATTERJI** and S.K. NAHATA***

Summary: A series of ten patients of tuberculosis of the tongue is presented. It accounts for 0.8% of the total tongue diseases. Etiopathogenesis, symptomatology and treatment aspect of the condition are discussed in the light of available literature. The need for a high index of suspicion in diseases of the tongue is emphasized.

Tuberculosis of the tongue is not very common. Komet et al (1965) observed this in 1% of the patients with pulmonary tuberculosis. In a review of 843 patients with tuberculosis, 16 were found to have upper respiratory tract tuberculosis and one of these had involvement of the tongue (Rohwedder, 1974). In approximately 498 patients with pulmonary tuberculosis admitted since 1969, in the V.A. Hospital, Atlanta, only two (0.2%) had oral tuberculosis; one had pharyngeal and another had tongue tuberculosis (Weaver, 1976). Solitary case reports have been reported by Engleman and Putney (1972), Gupta et al (1975) and Weaver, (1976).

Material and Method

The study consisted of ten patients of tuberculosis of the tongue seen in a period of 6 years from May, 1973 to May, 1979. The case history of each patient was thoroughly assessed to detect the clinical presentation, course and behaviour of the lesion. An attempt was also made to correlate the tongue lesion with pulmonary pathology. Response of the local pathology to the various antitubercular drugs was evaluated.

Observation

Ten (0.8%) cases of tubercular lesion of the tongue were found out of 1,250 cases of total diseases of the tongue by the E.N.T. Unit. Of these 10 patients, 5 were diagnosed during a survey carried out to detect upper respiratory tract tuberculosis out of 600 patients of pulmonary tuberculosis in Tuberculosis and Chest Diseases’ Unit of the Hospital. Of the remaining 5 patients, 3 patients primarily attended the E.N.T. O.P.D. with complaints referable to the tongue and 2 patients were referred to us for associated tongue lesions with established diagnosis of pulmonary tuberculosis.

A majority of the patients (7 patients) with tongue tuberculosis belonged to the age group ranging from 20 to 40 years. The youngest patient was a male of 13 years and the oldest one was 69 years old. Males outnumbered females and male to female ratio was 4:1. Most of the patients were socio-economically poor and belonged to the labour class.

The commonest lingual symptom was pain on swallowing (80%) which ranged from slight discomfort to severe pain causing fear of food intake. Such patients had mainly multiple small superficial ulcerations and diffuse 'glossitis' type of lesion. Patients also complained of excessive salivation, development of ulcers and swelling (Table 1). Two patients had hoarseness of voice and laryngeal examination in these revealed lesions characteristic of tuberculous disease. Pulmonary symptoms were present in only 70% of the patients which were in the form of cough with or without expectoration, haemoptysis, fever, dyspnoea etc.

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lingual : Pain on swallowing</td>
<td>8</td>
</tr>
<tr>
<td>(a) Slight discomfort</td>
<td>2</td>
</tr>
<tr>
<td>(b) Moderate pain</td>
<td>3</td>
</tr>
<tr>
<td>(c) Severe</td>
<td>3</td>
</tr>
<tr>
<td>Plegia : Burning sensation</td>
<td>2</td>
</tr>
<tr>
<td>Otalgia</td>
<td>3</td>
</tr>
<tr>
<td>Others : Hoarseness of voice</td>
<td>2</td>
</tr>
</tbody>
</table>

Tuberculosis affected the various parts of the tongue and each site of the tongue was found to have different type of lesion as shown in Table I.

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Regarding the sputum bacteriology, seven patients (70%) out of 10, showed tubercle bacilli on direct smear examination. Lingual smear for A.F.B. was also done in all patients and was found positive in six, but one patient who was abacillary on routine sputum smear examination had tubercle bacilli in the lingual smear. This was subsequently confirmed by histological examination.

Nine patients had associated pulmonary pathology on radiological examination of chest (Table III). Out of these 9 patients, 7 had bilateral pulmonary tuberculosis. The character of the chest lesions also varied. The commonest lesion was cavitary; the others were massive infiltrative, pneumatic or broncho-pneumonic. In one patient, the disease was of the miliary type. In the remaining one patient, no evidence of tuberculosis elsewhere in the body could be detected.

Five patients seen in the Tuberculosis & Chest Hospital showed a characteristic clinical picture of tongue tuberculosis and sputum was positive for A.F.B. No biopsy was done in these cases. Biopsy was done in 3 out of remaining five patients, who primarily attended the E.N.T. unit of this Hospital, because they had clinical picture of carcinomatous lesion of the tongue and histological examination revealed a characteristic picture of tuberculosis. Two cases had associated laryngeal lesion; biopsy was therefore taken from the larynx, not from the tongue.

All patients were treated with various antitubercular regimens and showed good response, both locally as well as for the lung lesions.

**Discussion**

There has been a reduction in oral and tongue tuberculosis in recent years (Table IV), but their unusual presentation has become relatively more common and this can lead to a delay in its correct diagnosis.

Most of the cases of lingual tuberculosis are due to the highly infectious sputum from cavitary disease in the lung, although lymphatic or haematogenous involvement of the tongue is also possible. Tongue lesions have been des-
Table IV
Incidence of lingual tuberculosis according to different reports

<table>
<thead>
<tr>
<th>Name of author</th>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morrow and Miller</td>
<td>(1924)</td>
<td>1.0</td>
</tr>
<tr>
<td>Myerson</td>
<td>(1944)</td>
<td>0.3</td>
</tr>
<tr>
<td>Titche</td>
<td>(1945)</td>
<td>0.3</td>
</tr>
<tr>
<td>Cawson</td>
<td>(1961)</td>
<td>0.2</td>
</tr>
<tr>
<td>Rohwedder</td>
<td>(1974)</td>
<td>0.1</td>
</tr>
<tr>
<td>Weaver</td>
<td>(1976)</td>
<td>0.1</td>
</tr>
</tbody>
</table>

scribed in miliary tuberculosis (Wilson and Stern, 1961). Involvement of the base of the tongue may be the result of direct spread from the epiglottis or larynx and was seen in one patient. ‘Primary lesions’ without any detectable evidence of tuberculosis in any other part of the body have been described by Kakar and Sood (1971). One of the ten patients in this series was supposed to have such lesion. Most of the patients reported in the literature are secondary to pulmonary tuberculosis, and a majority of them (80%) have been bacillary i.e. having bacilli in their sputum (Katz, 1941) thus favouring the direct implantation (or sputogenic) theory. On the contrary, some patients did not have bacilli in their sputum, but direct smears taken from the tongue lesion or histological examination, confirmed the tuberculosis pathology. This point is in agreement with the other two pathways of infection.

Although there are many patients with pulmonary tuberculosis, lingual tuberculosis is not frequently met with inspite of the fact that the tongue is so frequently exposed to tubercle bacilli (sometimes in very heavy concentrations) from the sputum of patients with pulmonary tuberculosis. This local resistance of the tongue to tubercular infection is rather difficult to explain. However, the local pH of the oral cavity, regular cleaning of the tongue by saliva (which prevents any settling of tubercle bacilli on the tongue), the resistance of striated muscle in the tongue to tubercle bacilli, and a relative paucity of lymphoid tissue in the anterior part of the tongue (for which tubercle bacilli have a great affinity) could perhaps be some of the factors responsible for the rare occurrence of tubercular lesions in the tongue.

No characteristic symptoms are ascribable to tuberculous disease of the tongue. These are common to many other diseases of the tongue. A tuberculous lesion may occur as an ulcer (Fig 1), a granuloma, fissure or glossitis (Fig.2). The diagnostic points for ulcerative form are superficial nature of the ulcers, the presence of multiple foci and the pin-head yellowish spots in the base of the tongue.
The ulcers are usually more irregular than those of carcinoma. Two of our patients showed clinical picture of malignant ulcer but on histological examination, they proved to be tuberculous. In addition, the tuberculous lesion should be differentiated from other chronic infective granulomatous conditions, such as syphilis, Vincent’s angina, lupus, Herpes etc. “Syphilis bites, tuberculosis nibbles”. Lupus lesions show superficial ulceration associated with healing and cicatrisation.

Prognosis of tuberculosis of the tongue is usually favourable with recent anti-tubercular drugs. Surgery is not required.

Though tuberculosis of the tongue is an uncommon disease but the present ten cases reveal that the possibility of tuberculosis must still be born in the mind.

REFERENCES


