

ORAL TUBERCULOSIS: TWO CASES REPORTS

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SYNOPSIS

Two cases of tuberculosis of the oral cavity are presented. In both cases pulmonary tuberculosis was not diagnosed as the primary disease. The clue to the diagnosis was provided by biopsy of the oral lesion in both cases, although in retrospect the medical histories were suggestive of pulmonary tuberculosis.

INTRODUCTION

The incidence of infection with mycobacterium tuberculosis throughout the world started to show a dramatic fall in the 1930's coinciding with the introduction of specific chemotherapeutic agents. As a result clinicians are less familiar with the oral manifestation of the disease (1).

Tuberculous ulceration of the oral mucosa in the adults is usually secondary to pulmonary tuberculosis and the discovery by biopsy of the tuberculosis lesions in the mouth of an adult is usually indicative of underlying pulmonary disease (2).

The following two cases which were seen within a few months of the same year are both cases of oral tuberculosis secondary to pulmonary tuberculosis.

CASE REPORTS

CASE 1

T.T.L. A 53 year old ethnic Chinese fisherman was seen at the dental clinic in March 1985 for painful ulcer in the mouth of 3 to 4 months duration. Subsequent to the onset of the ulcer he had extraction of 4 teeth adjacent to the ulcer in December 1984. The socket was painful and was not healing. In retrospect he also gave the history of a cough productive of whitish sputum of one year duration. There was anorexia, weight loss and night sweats. Earlier he had seen a number of medical practitioners and he was treated symptomatically. He stays with a family of seven in a squatter house. There was no family history of tuberculosis. He smoked about 10 cigarettes a day for the past 30 years.

On examination he was found to be thin, afebrile and not pale. The right submandibular gland was enlarged. There was no BCG scar. Chest examination did not reveal anything remarkable. Oral examination

showed a fairly raw ulcerating lesion in 654 region which was deep and was without definite margins (fig 1). It was thought to be a malignant ulcer. Biopsy was taken. Histopathological examination revealed areas of tubercle follicles with Langerhan's Giant Cells and areas of caseation necrosis. He was referred to the medical department for further treatment. Subsequently the following investigations were done. Haemoglobin 9.2 gm/dl, total white cell count 8200/cmm, ESR 123 mm/Hr. Sputum was positive for acid fast bacilli microscopically and on culture subsequently. Chest X-ray (fig 3) showed bilateral active Koch's lesion. Liver function test, blood urea, electrolytes, urine examination were all normal.

He was commenced on Streptomycin, isoniazid, rifampicin and pyrazinamide daily for two months, followed by bi-weekly isoniazid, Streptomycin and rifampicin for four months.

Sputum became negative for acid fast bacilli after four weeks of treatment. Chest X-ray showed marked clearing. Oral lesion healed in three months (fig 2).



Fig 1: Clinical photograph of Case 1 showing tuberculous ulcer in 654 region of the oral cavity.

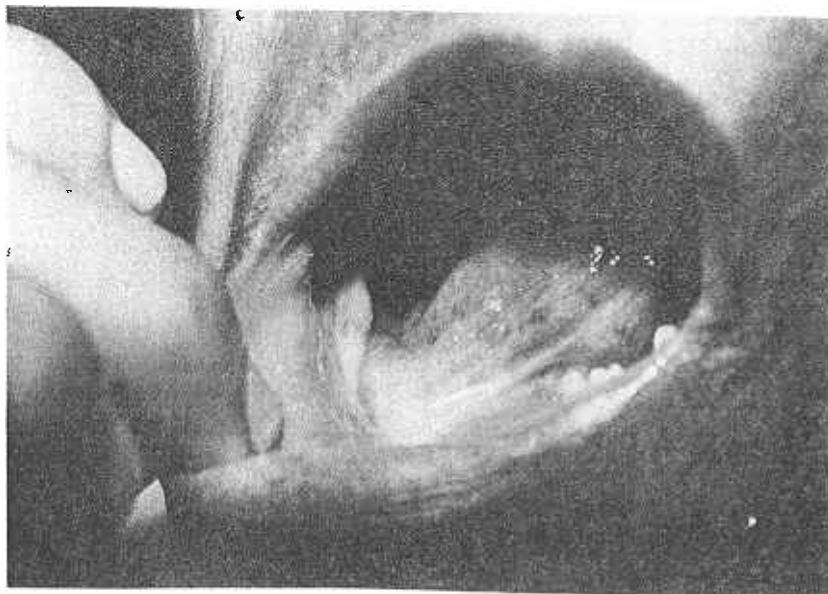


Fig 2: Healed lesion of Case 1 after treatment.

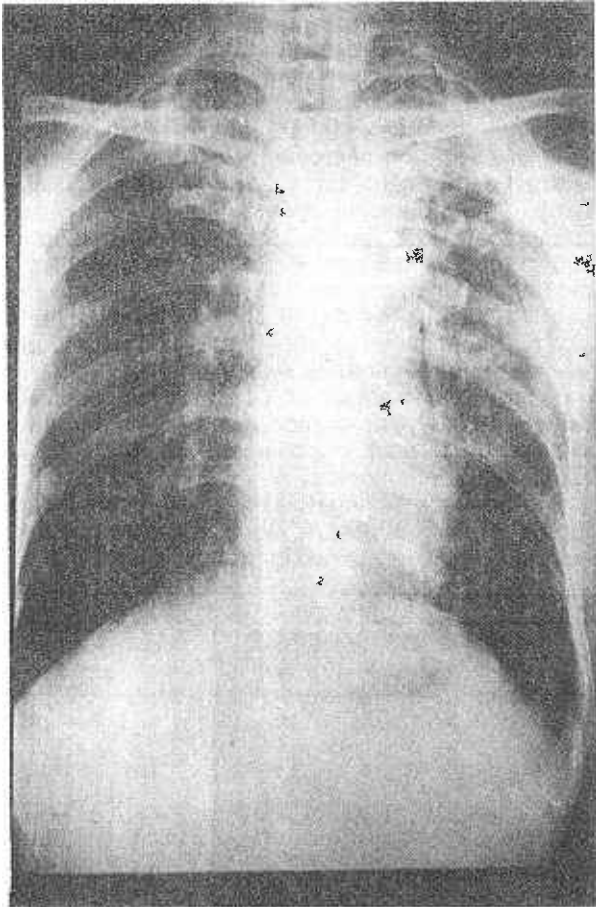


Fig 3: The Chest radiograph of Case 1 showing bilateral active Koch's lesion.

CASE 2

C.K.H. A 57 year old Chinese male presented at a peripheral hospital in May 1985 for irritation of the throat and hoarseness of voice of 5 months duration. In retrospect he also gave the history of cough productive of whitish yellow sputum, anorexia, lassitude and weight loss of about 30 pounds over the same period of time. He stays with his family of seven but there was no history of tuberculosis in the family. He smoked 20 cigarettes a day for the past 30 years.

On examination he was found to be thin, afebrile and not pale. Submandibular lymph nodes were enlarged. There was no BCG scar. His oral hygiene was very poor. He had only a few teeth left and they were in very poor condition and therefore extracted, and full upper and lower dentures fixed. A large warty ulcerated growth covering the oral surface of his soft palate was found (fig 4). The edge of the ulcer was undermined. It did not bleed on contact. Examination of the chest was unremarkable. He was referred to the Dental Clinic for biopsy of the lesion. Neoplasm was suspected clinically. Histopathological examination of the biopsy specimen subsequently revealed areas of tubercle formation with giant Langerhan Cells. Following this he was referred to the Medical Department. Subsequently the following investigations were done. Haemoglobin 15.2 gm/dl, total white cell count 4300/cmm, ESR 89 mm/Hr. Sputum was positive for acid fast bacilli microscopically but culture was negative subsequently. Chest X-ray (fig 6) showed bilateral active Koch's lesion. Mantoux was 8 mm. Blood urea, electrolytes and liver function test were all normal.

He was treated with rifampicin, isoniazid, pyrazinamide and streptomycin daily for three months followed by bi-weekly rifampicin, isoniazid and streptomycin for another three months.

Sputum became negative for acid fast bacillus after two weeks of treatment. Chest X-ray showed marked clearing. The oral lesion completely healed within six months of treatment (fig 5).



Fig 4: Clinical photograph of Case 2 showing a large warty ulcerated tuberculous lesion covering the oral surface of his soft palate.

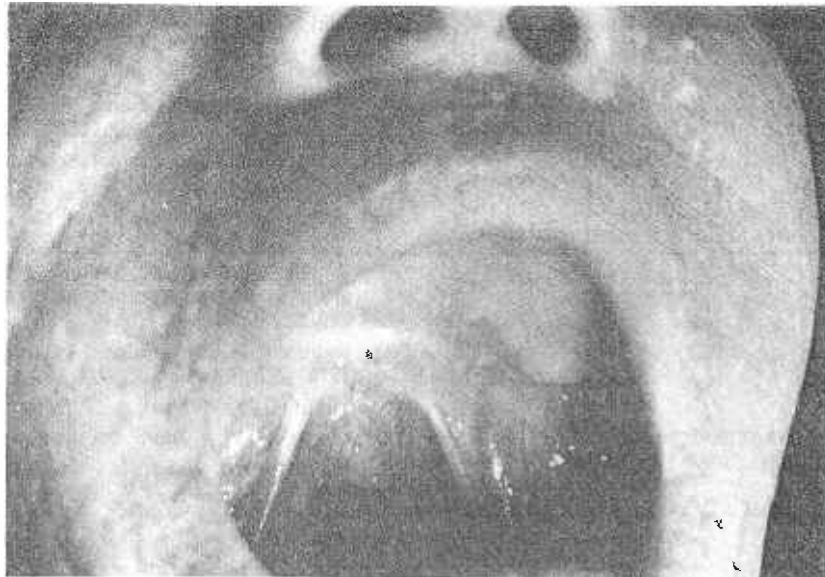


Fig 5: Photograph of Case 2 after treatment showing complete disappearance of the oral lesion.

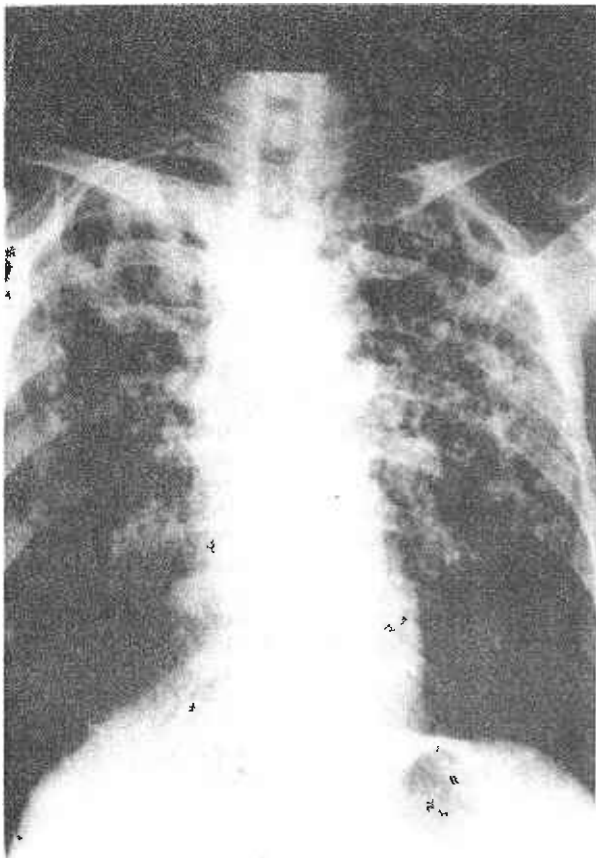


Fig 6: The Chest radiograph of Case 2 showing bilateral active Koch's lesion.

DISCUSSION

The incidence of tuberculosis has shown a steady decline over the years (3). The incidence of oral tuberculosis is consequently rarer and the cases which have been reported have been mostly secondary to pulmonary tuberculosis. Both the cases described here were those of secondary tuberculosis. Rubin (4) in 1927 after studying some 5000 cases of tuberculosis, found 72 with oral lesion giving an incidence of 1.44 per cent. He found that the male to female ratio was 3:1. Both the cases reported here were males. The tongue and palate are the common sites. The second case reported here had lesion of the palate. The predisposing factors are malnutrition, over crowded housing conditions and poor oral hygiene. A number of cases of primary tuberculosis have been reported (2,3,5). The majority of cases of oral tuberculosis have been secondary to pulmonary disease (1,6). The intact oral mucosa appears resistant to *Mycobacterium tuberculosis*. Despite the fact that many tubercle bacilli may be present in the sputum in advanced pulmonary tuberculosis, oral tissue infection is rare (7). Saliva exercises a bacteriostatic effect. Yusuf (7) reported that the mode of entry of the organism is through a break in the mucous membrane, local trauma being the initiating factor. However the general consensus of opinion is that secondary tuberculosis spreads by haematogenous route (8). In both cases reported here trauma was not implicated and therefore might have occurred through the haematogenous route.

Both patients had several features in common. They both presented with oral complaints. They were moderate smokers and both had chronic respiratory symptoms. They came from large families and both belong to the poor socio-economic class.

Although the diagnosis was made on histological grounds, in retrospect medical histories were suggestive of pulmonary tuberculosis. It is always advisable to screen a patient for pulmonary tuberculosis if he had cough of more than two weeks duration. Direct

smear microscopic examination of the sputum for acid fast bacilli is easy to perform and the facilities are widely available.

For lesions in the oral cavity, tuberculosis lesion should be considered as a factor, and biopsy should be taken in cases of long standing lesions. Once diagnosed outcome of treatment with presently available drugs is excellent. In both cases reported here the oral and pulmonary lesions healed very well.

ACKNOWLEDGEMENT

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ERRATUM LEPTOSPIROSIS AMONG ABATTOIR WORKERS — A SEROLOGICAL SURVEY

by O Y Chan
D R Paul
E H Sng

SMJ 1987; 28: 293-6

On page 293, Synopsis should read:

"The degree of leptospirosis risk was studied in two abattoirs processing pigs. A total of 150 abattoir workers, comprising 75 freelance and 46 registered butchers and 29 abattoir attendants, was investigated. They were interviewed and their serum samples were examined for the presence of leptospiral antibodies by the sensitised erythrocyte lysis (SEL) test. Serum samples of another 150 control subjects matched by sex, age and ethnic group were similarly tested. The seroprevalence of the abattoir workers were over 10 times those of the controls for SEL titres of $\geq 1:100$ and over seven times higher for titres of $\geq 1:25$. The highest seroprevalence was demonstrated in the butchers doing entrail cleaning. The abattoir attendants involved in bleeding and pancreas collection had the lowest seropositive rates. These findings were consistent with the degree of direct handling. No significant correlation was evident between the prevalence of positive titres and symptom prevalence or hospitalisation."

On page 294, right column, 3rd line should read:

"This was the case for titres of $\geq 1:25$ ($p < 0.001$) as well as for titres of $\geq 1:100$ ($0.01 > p > 0.001$)."

On page 295, left column, line 11 should read:

"Four of them were sero positive at the 1:100 titre level."

On page 296, left column, 5th line under **ACKNOWLEDGEMENT** should read:

"... Tan (Department of Pathology) and Ms Koh Poh Geok, RN."