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Case Report

Coexistence of carcinoma cheek with tuberculosis: a rarity

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ABSTRACT

Coexistence of tuberculosis and cheek malignancy is a rare phenomenon and it has never been reported to the best of our knowledge. Here, we present a case of carcinoma cheek with tuberculosis in a 50 year old male patient who was successfully managed by multimodality approach by combining anti-tubercular therapy with chemotherapy and radiotherapy.

Keywords: Tuberculosis, Carcinoma, Cheek

INTRODUCTION

Tuberculosis of the cheek is very rare and is usually secondary to pulmonary tuberculosis. Incidence of primary tuberculosis of the oral cavity is about 1%.[1] Oral cavity malignancies are a commoner phenomenon in India with an incidence of about 20 per 100000 (30% of all malignancies). On extensive search of the literature only four cases with co-existing oral malignancy and oral TB, have been reported.[2-5] But coexisting lesions over the cheek have never been reported. Here, we present a pioneer case of hard carcinoma cheek with tuberculosis in a 50 year old male patient who was successfully managed by multimodality approach by combining anti-tubercular therapy with chemotherapy and radiotherapy.

CASE REPORT

A 50 year old non diabetic male presented with complaints of a progressive ulcerative fungating lesion over the right cheek leading to difficulty in swallowing and difficulty in opening mouth completely for 4 months, loss of appetite and minimally productive cough for 3 month. He was a chronic tobacco chewer and smoked an average of 10 beedis per day for a period of about 25 years. He was also having exertional dyspnoea for over last 5 years which has increased from last few months. There were no complaints of hemoptysis, fever or chest pain.

General examination including the blood pressure was within normal limits. His respiratory rate was slightly increased to about 20 per minute. Facial examination showed the presence of multiple ulcers over the right side of face with the largest measuring about 6x5 cm. Ulcers had irregular margins with necrotic base and fungating growth (Figure 1). Respiratory system examination showed the presence of scattered rhonchi. Rests of the systemic examinations were normal. Routine blood Investigations including the renal and liver functions were within acceptable range. Serology for human immunodeficiency virus was negative. Chest X-ray was within normal limits. Histopathological examination of a biopsy tissue taken from the ulcer margin showed hypertrophied stratified squamous epithelium with moderate to severe dysplasia along with breach in the basement membrane and sub epithelial zone showing few sheets of atypical squamous cells with keratin pearl

formation and intraepithelial keratinisation. Sub epithelial layer also showed chronic granulomatous inflammation comprising of epithelioid histiocytes, lymphocytes and Langhan's type of giant cells in the background of fibrocollagenous tissue and necrosis (Figure 2). Ziehl Neelsen stain was positive for acid fast bacilli. Thus the diagnosis of concomitant tuberculosis with squamouis cell carcinoma of the cheek was made.

In view of the tubercular etiology, patient was started first on ATT with Category I DOTS (directly observed treatment, short course) therapy under Revised National Tuberculosis Control Programme (RNTCP), followed by referral to the Department of Oncosurgery for treatment of carcinoma of hard palate with chemotherapy and radiation therapy.

Figure 1: Shows the presence of multiple fungating irregular ulcers with necrotic base over the right cheek.

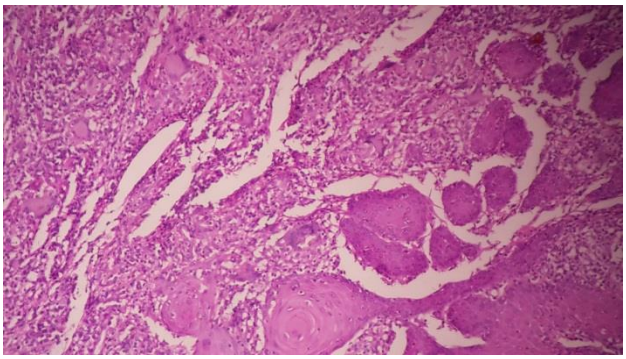

Figure 2: Shows the presence of invasive atypical squamous epithelium with keratin pearls and also the presence of Langhan's giant cells with granuloma in an inflammatory background.

DISCUSSION

Oral tuberculosis though per se is an uncommon form of tuberculosis, but it is known that tuberculosis can involve the head and neck region both in the primary as well as the secondary form. In secondary tuberculosis, the oral manifestations are accompanied by lesions in the lung, lymph nodes, or any other organ system of the body. This can be diagnosed by the usual clinical history and systemic examination. Amongst the oral lesions, tongue is the usual site for tubercular infection, upper lip and soft palate being the least affected. Other sites can be salivary glands, tonsils, uvula and mandibular ridge.[6] Primary tuberculosis of the cheek in the absence of the disease elsewhere in the body is very rare. Studies reporting extra-oral involvement of the cheek in the past have involved fistula,[7] sinus[8] or ulceration of the cheek.[9] But this type of ulcerative and fungating lesion has never been reported. In our case there were multiple ulcers over the right cheek. Histopathology reveals non-specific inflammation, caseating granulomas and foreign body giant cells. The differential diagnosis of the lesions of oral tuberculosis includes trauma, actinomycosis, syphilis, carcinoma, Wegener's granulomatous and aphthous ulceration.

Another way of presentation of oral muco-cutaneous tuberculosis is Tuberculosis Cutis Orificialis (TCO). It is a rare manifestation. This is probably the result of auto-inoculation of mycobacteria in patients with advanced tuberculosis. This can present in a wide and variable mode, which may include: (i) ulcer on the tonsil or oropharyngeal wall; (ii) Granuloma of the nasopharynx; and (iii) neck abscess. The sputum of the patient with open pulmonary tuberculosis with high bacillary load is usually the source of infection for oral tuberculosis. Sometimes it may be acquired by haematogenous spread. Secondary oral TB can occur in all age groups but most common in middle and older age groups. The most common occurring lesion is an ulcer. The base of an ulcer may be granular or covered with pseudomembrane. Sometimes oral TB ulcer can be seen as superficial ulcers, patches, indurated soft tissue lesions or even lesions within the jaw that may be in the form of TB osteomyelitis. Presence of an intact squamous epithelium of the oral mucosa possibly makes tuberculosis bacilli penetration difficult and provides protection against the infection. The systemic factors that favour the chances of oral TB infection include lowered host resistance and increased virulence of the organisms.[6] In our case, the breach in the skin of the cheek due to a malignant ulcer could probably have been responsible for the penetration of the tubercle bacilli.

On the other hand prevalence of oral malignancies involving the cheek is much commoner compared to tuberculosis.[10] Squamous Cell Carcinoma (SCC) is the most common malignant neoplasm affecting the cheek. Other malignancies include salivary gland cancers, sarcomas, and melanomas. A strong etiology has been associated with tobacco chewing and alcohol consumption, more specifically with reverse smoking. Ill-fitting dentures, poor oral hygiene, mechanical irritation, and mouthwash are other factors associated oral SCC. They usually present as a painless ulcer with a necrotic base, as seen in our case. Local extension (as seen in our case), lymph node and peri-neural involvement is usually seen. Coexistence of tuberculosis with malignancy has been well reported in the past.[11] Usually in other

situations the presence of active tuberculosis in a malignant lesion is attributed to the chronic inflammatory state associated with tuberculosis or a chance finding. However, in our patient we suspect that the cause for coexistent finding of malignancy and TB is a breach of intact skin and mucosal epithelium due to the malignancy per se and chronic tobacco chewing causing a secondary tubercular infection.

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