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Short Communication

Lupus vulgaris of external nose

Satheesh Kumar Bhandary · B. Usha Ranganna

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Abstract Lupus vulgaris is the commonest form of cutaneous tuberculosis which commonly involve trunk and buttocks. Lupus vulgaris affecting nose and face, are rarely reported in India. This study reports an unusual case of lupus vulgaris involving the external nose that showed dramatic outcome after six months of anti- tubercular treatment.

Keywords Lupus vulgaris · External nose · Cutaneous tuberculosis

S. K. Bhandary · B. Usha Ranganna
Department of ENT,
K. S. Hegde Medical Academy, Deralakatte,
Mangalore, Karnataka - 575 018,
India

S. K. Bhandary (✉)
E mail: sakubaraj@yahoo.com

Introduction

Cutaneous tuberculosis was once a common disease. In the recent decade because of improved living environment, BCG vaccination and effective antituberculous drugs, this disease is less common.

Different forms of cutaneous tuberculosis are lupus vulgaris, scrofuloderma, tuberculosis verrucosa cutis, lichen scrofulosorum, erythema induratum, papulonecrotic tuberculid.

Amongst all these morphological variants commonest one is that of lupus vulgaris constituting 59% of total skin tuberculosis [2]. This is a chronic, progressive and tissue-destructive form of cutaneous tuberculosis seen in patients with moderate or high degree of immunity. The classical lesions consist of reddish-brown plaque with “apple-jelly” colour on diascopy.

Head and neck regions are the commonest sites involved by lupus vulgaris in European countries [3]. In Indians buttocks , trunk and legs are more often involved by lupus vulgaris [1] Lesions affecting the face, nose and periorbital regions are unusual. We present one such uncommon case of lupus vulgaris affecting the external nose.

Case report

A 39-yrs-old man, presented to the out patient department of ENT of K.S. Hegde Charitable Hospital, Mangalore, Karnataka with three months history of ulcer over his external nose. Initially it started as an erythematous lesion over the external nose, which later changed to ulcerative form. He was treated by many local practitioners with several topical and systemic medications. But there was no change in the ulcerative lesion. Biopsy done outside was showing nonspecific inflammation.

We re-evaluated the patient in our hospital. General physical examination, systemic examination was within

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normal limits. On local examination there was an ulcer over the lower third of external nose measuring 3 × 2 cm. The edges were raised, floor was covered with the crust. Surrounding skin was erythematous and thickened with intact sensations. Anterior rhinoscopy did not reveal any abnormality. Ear and throat examination was also normal. There was no cervical lymphadenopathy.

We considered the possibility of lupus vulgaris, and malignancy and Wegner's granulomatosis as next possibilities.

All the haematological and bio-chemical investigations were normal. Chest x-ray was normal. Three early morning sputum sample examinations for AFB and VDRL test for syphilis were negative. Test for ANCA was also negative.

Deeper biopsy of the lesion was taken, the histopathology showed features of non specific ulcer. The tissue from the ulcer was sent for Polymerase chain reaction for *Mycobacterium tuberculosis* which showed the DNA of the bacteria. Thus the diagnosis was established.

The patient was administered anti-tubercular therapy consisting of Rifampicin (450 mg), Isoniazid (300 mg), Pyrizinamide (1500 mg) and Ethambutol (800 mg) daily for two months, followed by two drugs (Rifampicin and Isoniazid) for the next 4 months. His lesion completely resolved over 6 months. A two and half year's follow-up showed no recurrence.

Discussion

Lupus vulgaris is the most common form of cutaneous tuberculosis. The study done by Singh Gurmohan [1] showed significantly high frequency of this disease in females. It is the most common form of cutaneous tuberculosis in Europe but is less common in United States. In India it accounts for approximately 59% of cases [2].

Lupus vulgaris can be acquired by either exogenous or endogenous routes. Exogenous mode is by direct inoculation of the bacilli and endogenously by haematogenous or lymphatic spread from an underlying distant focus.

Clinically lupus vulgaris presents in morphological patterns of papular, nodular, plaque, ulcerative and vegetating forms. The lesions characteristically progress by peripheral extension and central healing, atrophy and scarring.

This case presented initially with erythematous lesion over the external nose skin followed by ulceration. There was no evidence of necrosis or scarring of underlying cartilage, bone or nasal septum. There was no focus of tuberculosis elsewhere in the patient.

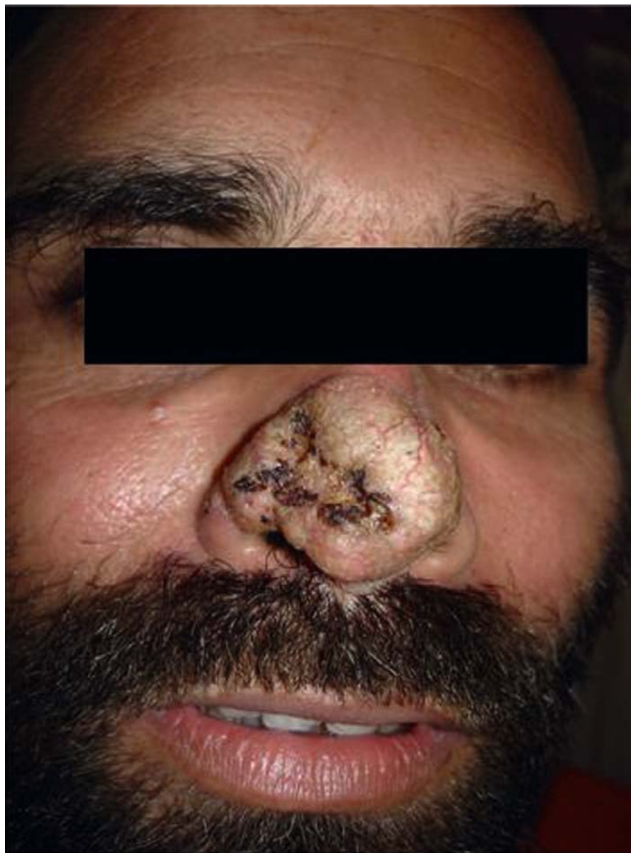

Fig. 1 Pre-Treatment photograph of the patient

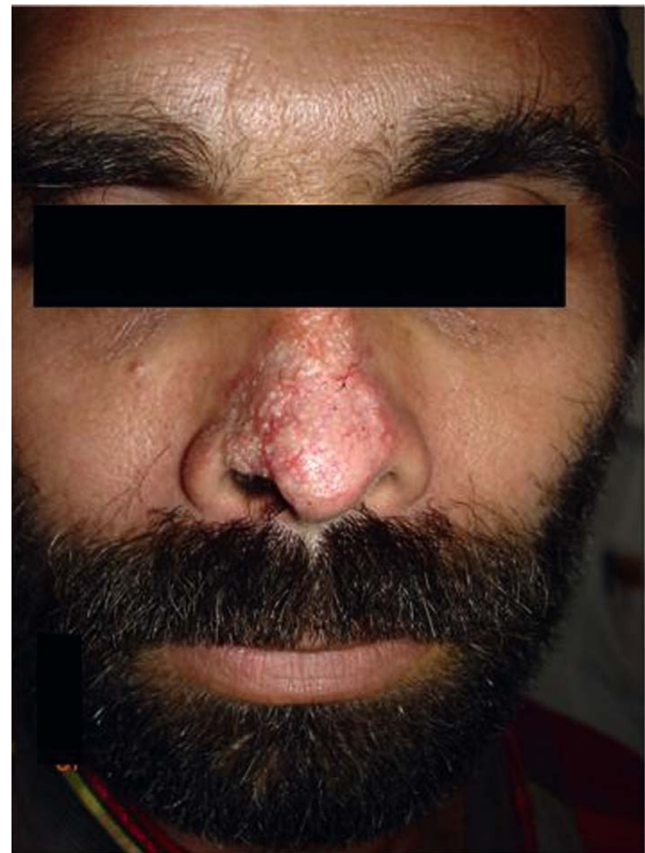

Fig. 2 Post-Treatment photograph of the patient

The diagnosis is based on the clinical presentation, histopathology of the lesion showing characteristic tubercular granuloma. The diagnosis can be confirmed by polymerase chain reaction (PCR) for *Mycobacterium tuberculosis*.

In our case histopathological study of deeper section was also not supportive for the diagnosis. PCR study gave a positive result, thus showing its importance wherever the histopathology is inconclusive as in our case.

As at any other sites lupus vulgaris is very well curable by conventional anti tubercular medications as evidenced by our case.

Conclusion

Lupus vulgaris is a common morphologic form of cutaneous tuberculosis. Diagnosis of the disease necessitates an adequate and deeper biopsy of the lesion as the superficial tissue may show only the non-specific inflammatory cell infiltrate missing the characteristic features of lupus vulgaris. The diagnostic dilema of the disease when histopathology is not supportive can be solved by Poymerase chain reaction studies. It is a completely curable disease when the diagnosis is made early, which otherwise leads to an irreversible deformity.

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