

## Lupus Vulgaris of The Ear Lobe – A Diagnostic Enigma



### Medical Science

**KEYWORDS :** Lupus vulgaris , tuberculis, pinna, ear lobe.

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### ABSTRACT

*Lupus vulgaris is the commonest form of cutaneous tuberculosis and can affect any part of the body, the ear lobe being a very rare site. Here we report a case of a forty year old immunocompetent male who presented with a solitary granulomatous skin lesion over his left ear lobe of 15 years duration. A histopathological diagnosis of lupus vulgaris was made. The patient responded remarkably to 3 drug anti-tubercular treatment.*

### Introduction:

The earliest description of lupus vulgaris was given by Erasmus Wilson in 1865, who compared the lesions to the ravages of a wolf<sup>1</sup>. It is a chronic, progressive and the commonest form of secondary cutaneous tuberculosis<sup>2</sup>. In tropical countries including India, the sites of predilection are the buttocks and trunk<sup>3</sup>. As a result, tuberculosis is not usually considered in the differential diagnosis of cutaneous lesions involving the pinna and may present the clinician with a diagnostic enigma. This report seeks to highlight an unusual case of lupus vulgaris manifesting as a solitary lesion over the left ear lobe as a primary focus of tuberculosis in the body.

### Case Report:

A 40 year-old male patient presented with a solitary skin lesion over the left ear lobe for the past 15 years. It was insidious in onset, painless, non pruritic, gradually increasing in size. He did not give any history of ornamental piercing or trauma to the site. There was no history suggestive of any systemic illness in the patient. He had consulted several practitioners and had received various treatments but in vain.

Clinical examination revealed a solitary erythematous plaque lesion measuring about 3 cm by 2 cm involving the medial and lateral surfaces of the left ear lobe (figure 1). The external auditory canal and tympanic membrane were found to be normal. The other ear was normal. There was no palpable lymphadenopathy.



**Fig.1- Lesion on the lateral and medial aspect of left ear lobe.**

The routine haematological and biochemical analyses were within normal limits. His chest X ray was normal. Tuberculin test at 48 hours using purified protein derivative was positive (20 mm x 24mm). An incisional biopsy was performed at the site of the

lesion, which showed dermis with several granulomas composed of epithelioid cells and lymphocytes with occasional Langhan's giant cells, suggestive of tuberculosis (figure 2). Stain for AFB was found to be negative.



**Fig.2- Histopathology (H&E) showing multiple granulomas(10x) and a Langhan's type giant cell (40x).**

The patient was classified under category '3' as per Revised National tuberculosis Control Programme<sup>4</sup> and received anti-tubercular therapy for a period of 6 months. After the initial 2 months of treatment there was a drastic regression in the size of the lesion (figure 3), which totally disappeared over the course of treatment leaving behind no sequelae.



**Fig.3- Resolving lesion after two months of anti-tubercular treatment.**

**Discussion:**

Although the incidence of mycobacterial diseases, especially the extrapulmonary type, is on the rise in many regions of the world <sup>5</sup>, it still remains an underdiagnosed entity. This, in part, is because it can present with unusual clinical and histological features leading to a delay in diagnosis <sup>6</sup>. The head and neck are reported to be the most favoured sites from the western countries for lupus vulgaris <sup>7</sup>, cheek and nose are the sites of predilection with the ear lobe being an unusual site. But in India, the buttocks and trunk are more commonly involved <sup>3</sup>.

Lupus vulgaris develops in a previously sensitized host having a high degree of tuberculin sensitivity. The condition is more common in males than in females and occurs through hematogenous or lymphatic spread from an underlying infective focus <sup>3</sup>. Rarely it may develop following direct inoculation of the bacilli into skin or at the site of bacilli Calmette-Guérin (BCG) vaccination <sup>3,8</sup>. The natural course of an untreated lesion is inexorably progressive with scarring, contractures and tissue destruction being prominent features. Malignization occurs after a long latency of 10 to 30 years<sup>9</sup>, in 1-2 % of the cases, and it is mainly in squamous cell carcinoma.

In our patient, there was no evidence of a focus of tuberculosis in any other organ, nor was there any history of ornamental piercing or trauma at the site of the lesion. Another interesting feature of this case report is the underdiagnosed tubercular nature of the cutaneous lesion of the ear lobule for 15 years as a primary focus of tuberculosis in the body and its presence in an immunocompetent host. In addition, the lesion did not show any signs of malignancy or secondary destructive features in spite of its chronicity.

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