

LUPUS VULGARIS FOLLOWING EAR-PIERCING

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ARTICLE INFO

Received: 19th May 2015

Revised: 8th Jul 2015

Accepted: 29th Jul 2015

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Keywords: *Cutaneous tuberculosis, Lupus vulgaris, Ear piercing*

INTRODUCTION

Tuberculosis (TB) is one of the most common, rampant infectious diseases in underdeveloped countries. In countries like India, while great progress has been made, TB is still very common; with 2.3 million new cases diagnosed every year [1]. The pattern of cutaneous TB has been changing over the last few decades. By 1980's the incidence of cutaneous TB in India had fallen to 0.15% [2]. More recent reports suggest that cutaneous TB is again becoming more prevalent with incidence of 0.26% [2]. A current problem is that atypical and even standard presentations may be overlooked, through lack of familiarity with the various patterns that may occur.

Among the cases of cutaneous TB reported in India, 57.69% are found to be that of lupus vulgaris [2]. These lesions are acquired exogenously or endogenously, although the former is significantly less common. Lupus vulgaris can arise at the site of a primary inoculation such as tattooing, ear piercing or following BCG immunization.

CASE REPORT

A 21-year-old woman, presented to our out-patient department, with a history of a fleshy growth in both ear lobules since 3 years. She first noticed the growth, at 2 weeks, following piercing of her ears for attaching adornments. Interestingly the growth started at the site of piercing and gradually progressed to involve the entire posterior aspect of both ear lobules. She did not complain of pain, itching, bleeding or any form of

ABSTRACT

In India, two-thirds of cutaneous tuberculosis cases are found to be lupus vulgaris. Lupus vulgaris could be due to primary or secondary infection to *Mycobacterium tuberculosis*. Innumerable cases of lupus vulgaris, secondary to a systemic affliction i.e., arising from an underlying focus of tuberculosis have been noted. Very few cases of primary lupus vulgaris have been reported. It may appear as a solitary lesion in the skin at a site of primary inoculation such as tattooing or ear-piercing. We hereby report a case of lupus vulgaris in a 21-year-old female following ear-piercing. Cutaneous examination revealed a soft, erythematous plaque-like growth, involving the entire posterior aspect of both ear lobules completely obscuring the site of ear piercing. It also involved the lower one thirds of anterior aspect of both ear lobules. The overlying skin was smooth with few indentations. Histopathological examination (Fig.2) revealed focal hyperplastic changes in epidermis & multiple epithelioid cell granulomas & a diffuse lymphocytic infiltrate in the entire dermis, extending into the subcutaneous fat. On the basis of these clinical features & histopathological examination findings, a diagnosis of lupus vulgaris was made and she was started on anti-tuberculous treatment. The lesions started regressing after 2 weeks.

discharge from the growth or the site of ear piercing. She presented to the out-patient department in view of cosmetic disfigurement.

Cutaneous examination (Fig.1) revealed a soft, erythematous plaque-like growth, involving the entire posterior aspect of both ear lobules completely obscuring the site of ear piercing. It also involved the lower one thirds of anterior aspect of both ear lobules. The overlying skin was smooth with few indentations. It was neither warm nor tender. Systemic examination was unremarkable. A differential diagnosis of lupus vulgaris, foreign body granuloma & keloid was considered.



Fig 1: showing the soft plaque-like growth in right and left ear lobules respectively

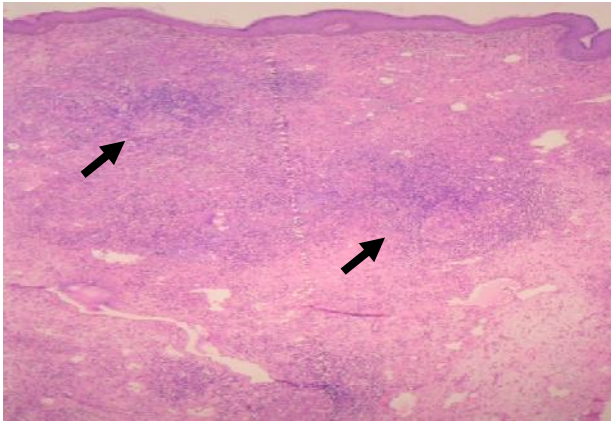


Fig 2: Multiple epithelioid cell granulomas and diffuse lymphocytic infiltrate in dermis (H & E,10x)

Routine laboratory investigations, sputum AFB, chest X-ray done did not reveal any abnormal finding. Mantoux test done was positive measuring 20 x 24mm. AFB could not be demonstrated from the lesions. Skin biopsy was done.

Histopathological examination (Fig.2) revealed focal hyperplastic changes in epidermis & multiple epithelioid cell granulomas & a diffuse lymphocytic infiltrate in the entire dermis, extending into the subcutaneous fat.

On the basis of these clinical features & histopathological examination findings, a diagnosis of lupus vulgaris was made and she was started on anti-tuberculous treatment. The lesions started regressing after 2 weeks of rifampicin 450mg/day, isoniazid 300mg/day and pyrazinamide 1000mg/day. After two months of intensive treatment with these drugs, which were given according to her weight, she showed further improvement. Treatment was continued for four months with rifampicin 450mg/day and isoniazid 300mg/day, after which complete clearance of lesions were seen. The patient was followed up for one year and there was no recurrence.

DISCUSSION

Ear piercing has been a popular practice in India since time immemorial. The risk of acute complications following ear-piercing, depends on the experience of the piercer, on the hygiene-sanitation conditions under which the procedure takes place and on general piercing aftercare. Specific complications associated with piercing the pinna include, hypertrophic /keloid scarring, chondritis / perichondritis & incrustation. The most common complication is infection, occurring in 10-20% of cases^[3,4]. Microorganisms like *staphylococcus aureus*, group A streptococci & *pseudomonas* species are usually thought to be the causative organisms of infections following ear piercing^[6]. Less common infective organisms associated with piercings are coagulase negative staphylococci, *Lactobacillus*^[4], *Mycobacterium tuberculosis*^[3,4] and atypical mycobacteria. Among the various forms of cutaneous TB, lupus vulgaris is most common manifestation as is evidently seen in 75% of the cases^[8].

Lupus vulgaris is a chronic, progressive, post primary, paucibacillary form of cutaneous tuberculosis, occurring in a person with a moderate or higher degree of immunity^[9]. It originates from an underlying focus of tuberculosis, typically in a bone, joint or lymph node. It may arise by either contiguous extension of disease from underlying affected tissue or by hematogenous or lymphatic spread. Lupus vulgaris may also arise due to direct inoculation of *mycobacterium tuberculosis* into the skin in a non-sensitized patient. This may result from minor abrasion, tattooing, ear piercing, minor surgical procedures or infections. There is a 10% risk of developing squamous cell carcinoma from a lupus vulgaris lesion that may be left untreated^[9]. This necessitates the need for knowledge, of the fact that lupus vulgaris occurs not only as a post-primary lesion, but also due to primary inoculation of the *Mycobacterium*.

CONCLUSION

As ear piercing practices are most common across the world, the rarer & treatable complications of this procedure have to be considered. This case of lupus vulgaris following ear-piercing, has been highlighted for its rarity and also to create awareness among dermatologists.

Acknowledgment:

Conflict of interest: Nil

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