

Journal of Dermatology Forecast

Tattoo Inoculated Lupus Vulgaris – Hazards of Body Arts

Rajashekhara TS, Corneli Peter J*, Kuppuswamy SK and Ramamurthy A

Department of Dermatology, SDUMC, Kolar, Karnataka, India

Abstract

The most common form of cutaneous tuberculosis (TB) in India is lupus vulgaris. More youngsters are becoming the victims of cutaneous tuberculosis, AIDS, Hepatitis B, Hepatitis C, Syphilis cutaneous infections and eczemas by the way of tattooing and other body art methods like body painting, piercing, branding. In this case report, a 24-year old male patient, presented with well-defined erythematous scaly plaques of eight months duration over the one-year old tattoo on right forearm. The diagnosis of lupus vulgaris was made on clinical and histopathological grounds and anti-tubercular treatment was initiated. This case report creates awareness among clinicians about various hazards of body art.

Keywords: Lupus vulgaris; Tattoo; Body art

Introduction

The World Health Organisation (WHO) TB statistics of India for the year 2015 were 2.2 million cases where as global incidence was 9.6 million. So, it makes India one of the country with the highest burden of TB [1].

Tuberculosis which is caused by *M. tuberculosis* is a major public health problem. Lupus vulgaris is the commonest presentation among cutaneous TB and can be acquired exogenously or endogenously. Lupus vulgaris can arise at the site of a primary inoculation such as tattooing, ear piercing or following BCG immunization [2].

Tattoos have become increasingly popular among adolescents and young. Tattoos have been used as cultural symbols among Indians populations. The process of tattooing and other body arts exposes the recipient to risks of infections with various pathogens, like skin tuberculosis (Lupus vulgaris), AIDS, Hepatitis B, Hepatitis C, Syphilis. Some of which are serious and difficult to treat [3].

Tattoo inoculation lupus vulgaris is uncommon and there are only very few previous reports of the condition.

Case Presentation

A twenty-six-year-old male patient, presented with history of skin lesions of eight months duration at one year old tattoo site. Four months after tattooing, he noticed painless thickening with redness and minimal oozing at the site of tattoo which gradually progressed to painful reddish thickened lesion extending beyond the tattoo margin.

Cutaneous examination showed erythematous plaque of 10.3 x 5.2cm over the tattoo on the dorso-lateral aspect of right forearm with few areas of ulceration and crusted borders. Surface of the plaque was verrucous with minimal scaling. Margin was raised and hypertrophic (Figure 1). His systemic examination was unremarkable.

Possibilities of foreign body granuloma, tattoo inoculated lupus vulgaris, inoculated sarcoid and deep mycosis were considered.

The Mantoux test was negative. Hematological investigations were unremarkable except for an elevated erythrocyte sedimentation rate (ESR). Chest Xray was normal. Superficial scrapings from the ulcerated surface of the lesion were negative for fungus and AFB.

Biopsy was taken from the ulcerated area, in which epidermis showed keratinized stratified squamous epithelium with focal hyperplasia. Sub epithelium shows numerous ill-defined granulomas consists of lymphocytes, epithelioid cells, histiocytes and Langhans type of giant cells seen. No caseous necrosis seen. (Figure 2).

OPEN ACCESS

*Correspondence:

Corneli Peter J, Junior Resident,
Department of Dermatology, SDUMC,
Tamaka, Kolar, Karnataka, India.

Tel: 9447888666

E-mail: jameemacorneli@gmail.com

Received Date: 09 Dec 2017

Accepted Date: 15 Jan 2018

Published Date: 26 Jan 2018

Citation: Rajashekhara TS, Corneli Peter J, Kuppuswamy SK, Ramamurthy A. Tattoo Inoculated Lupus Vulgaris – Hazards of Body Arts. *J Dermatolog Forecast.* 2018; 1(1): 1005.

Copyright © 2018 Corneli Peter J. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



Figure 1: Erythematous plaque with verrucous surface.



Figure 2: Focal hyperplasia of epidermis with sub epithelium showing numerous ill-defined granulomas consists of lymphocytes, epithelioid cells, histiocytes and Langhans type of giant cells (H and E, X400).

Based on clinical features and investigations, a diagnosis of lupus vulgaris was made and the patient was started on antitubercular treatment category-I by the department of Revised National TB Control Program (RNTCP).

Discussion

Most common form of cutaneous tuberculosis (TB) in India is lupus vulgaris. Lupus vulgaris (skin TB) can be a result of hematogenous, lymphatic, or contiguous spread from elsewhere in the body. New lesions may arise within old scars and it can also occur after exogenous inoculation or even as a complication of (BCG) Bacillus Calmette Guérin vaccination [3].

Body art or body modification consists of various techniques to modify appearance and/or to express individuality. Just at the turn of the century, body art gained tremendous popularity and became a part of fashion and as well as anti-fashion, mass culture and self-portraying [4]. Major types of body art include tattooing, body painting, piercing, scarring and branding, among which tattooing and body piercing are more popular [5].

Inoculation tuberculosis has been reported with various practices like piercing, sharing of infected syringes or needles, sexual intercourse, venepuncture, tooth extraction and tattooing [6].

Tattooing related dermatoses can be due to tattoo ink or pigment allergy reactions which can be classified as acute inflammatory reactions, allergic hypersensitivities, granulomatous, lichenoid, and pseudo lymphomatous types of reactions [5].

The most common skin reactions to tattooing includes transient

Table 1: Complications and dermatological conditions after tattooing [6,7].

Allergic contact dermatitis secondary to tattoo ink.
Infections: Impetigo, cellulitis, tetanus, syphilis, cutaneous tuberculosis, deep mycosis, viral warts, hepatitis B&C, HIV.
Malignancy: Keratoacanthoma, melanoma, squamous cell carcinoma.
Dermatological conditions: Psoriasis, vitiligo, lichen planus.

acute inflammatory reactions and other multiple complications such as superficial and deep infections, systemic infections, allergic contact dermatitis, photodermatitis, granulomatous and lichenoid reactions. Few other dermatological conditions seen localized to tattoo site includes eczema, morphea, psoriasis and vitiligo (Table 1) [6,7].

Painting is application of paint on to the skin includes face painting, application of mehndi and temporary tattoos. Face painting is popular in children, where the art of body painting is rather exclusively reserved for adult. The adverse effects of painting can be localized/generalized eczemas, pigmentation, and type 1 hypersensitivity reactions [8].

Body piercing is the practice of puncturing or cutting a part of the human body, creating an opening, in which jewelry or other decoration may be inserted. Body piercing has become a widespread fashion trend in Western industrialized nations. Though ear and nose are the commonly pierced sites among Indian females, even other body parts including lip, tongue, nipple, genital and navel are the other preferred sites for body piercing [9].

The complications common to all pierced sites include bacterial, viral and fungal infections. Also, hypertrophic scars, keloid and pyogenic granuloma too are common [10]. There was an isolated case report of lupus vulgaris in a child secondary to ear piercing [11].

Branding refers to a traditional practice of creating 'burns' on the skin with a hot iron rod or metallic object with the intent of self-expression. There are various forms of branding including strike branding and others are hypothermal branding, chemical branding, electro cautery branding, and laser branding [8,12].

Therapeutic usage of branding in few medical conditions such as backache, sciatica, arthritis, paralysis, facial palsy, ascites, lymphadenopathy, jaundice, glaucoma, migraine headaches and sore throat is largely debatable [13].

Similar to present case, there are few isolated case reports of cutaneous tuberculosis that presented 4-12 months after tattooing wherein the patients developed multiple papules and plaques overlying and extending beyond the tattoo site [14].

Conclusion

Body art practitioners and their clients are often unaware of the risks and complications especially invasive procedures associated with body art. Tattoo parlors should be educated about the risks involved and the importance of proper infection control procedures to be practiced.

Similarly, there is a need to increase awareness in the adolescents who are prone and interested for such body art procedures thereby preventing hazards of body art.

References

1. World Health Organization. Global tuberculosis report. 2015.
2. Patra AC, Gharammi RC, Banerjee PK. A profile of cutaneous tuberculosis.

- Indian J Dermatol. 2006; 51: 105-107.
3. Saugat R, Modi CS, Suthar O, Gujrani M. Lupus Vulgaris in tattoo mark is a rare Presentation. IJSAR. 2015; 2: 16-18.
 4. Braverman PK. Body art: piercing, tattooing, and scarification. *Adolesc Med Clin.* 2006; 17: 505-519
 5. Wollina U. Severe adverse events related to tattooing: An retrospective analysis of 11 years. *Indian J Dermatol.* 2012; 57: 439-443.
 6. Bassi A, Campolmi P, Cannarozzo G, et al., "Tattoo-Associated Skin Reaction: The Importance of an Early Diagnosis and Proper Treatment." *BioMed Research International.* 2014; 2014.
 7. Wenzel SM, Rittmann I, Landthaler M, Bäuml W. Adverse reactions after tattooing: review of the literature and comparison to results of a survey. *Dermatology.* 2013; 226: 138-147.
 8. Laumann A. Body art. In: *Dermatology in general medicine*, edited by Goldsmith LA, Katz. SI, Gilcrest BA, Paller AS, Leffel DJ, Wolff K. 8th edn, New York: Mc Graw. Hill, 2012; pp 1129-1136.
 9. Fijalkowska M, Kasielska A, Antoszewski B. Variety of complications after auricle piercing. *Int J Dermatol.* 2014; 53: 952-955.
 10. Stirn A. Body piercing: Medical consequences and psychological motivations. *Lancet.* 2003; 361: 1205-1215.
 11. Kumar P, Mondal A, Lal NR, Gharami RC. Lupus vulgaris in a child: A complication of ear piercing. *Indian J Dermatol Venereol Leprol.* 2014; 80: 97.
 12. Karamanoukian R, Ukatu C, Lee E, Hyman J, Sundine M, Kobayashi M, et al. Aesthetic skin branding: a novel form of body art with adverse clinical sequela. *J Burn Care Res.* 2006; 27: 108-110.
 13. Patra PK. Branding in children: a barbaric practice still exists in India. *Pan Afr Med J.* 2016; 23: 62.
 14. Dhawan AK, Pandhi D, Wadhwa N, Singal A. Tattoo inoculation lupus vulgaris in two brothers. *Indian J Dermatol Venereol Leprol.* 2015; 81: 516-518.