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Case Report

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Erythema Annulare Centrifugum (Deep Type): A Rare Case Report

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ABSTRACT

Erythema annulare centrifugum (EAC) is one of the figurate erythemas. It is uncommon inflammatory condition characterized by annular or arcuate erythematous eruptions that slowly enlarge centrifugally. It persists from few days to several months. It can recurrent. Here in we present a 40-year-old-male otherwise healthy, is working as a nurse in leprosy hospital. He was concerned from having leprosy. He developed recurrent asymptomatic skin lesions on his face for the last 5 months. The lesions start as small pimples that are getting bigger every day. The lesions last for few weeks and then disappear but recur again after weeks to months. Sensation examination of the facial skin was normal. On palpation of periauricular nerves, there was nerve hypertrophy. His older brother had similar skin lesions 10 years ago that lasted for few months and then healed without treatment. Skin examination revealed multiple non-scaly annular erythematous plaques, with variable sizes ranging from 2 cm to 4 cm on his face. Skin biopsy showed normal epidermis. The dermis showed moderately dense perivascular and periadnexal mononuclear cellular infiltrate in coat sleeve pattern in both upper and lower dermis. Fite stain was negative. The patient was reassured.

KEYWORDS: Erythema annulare centrifugum; Figurate erythema; Erythema gyratum perstans.

ABBREVIATIONS: EAC: Erythema Annulare Centrifugum; GA: Granuloma Annulare.

INTRODUCTION

Erythema annulare centrifugum (EAC) is uncommon inflammatory skin disorder characterized by figurate erythematous eruptions that slowly enlarge centrifugally.[1-3] EAC is self-limited disease with variable course that lasts as little as few weeks to as long as three decades. The exact cause of EAC is not known. However, various agents have been implicated including hypersensitivity reaction to drugs (penicillin, salicylates, hydrochlorothiazide), arthropod bites, infections (bacterial, mycobacterial, viral, fungal, filarial), food allergy (blue cheese Penicillium), malignancy as (lymphoma, multiple myeloma, breast cancer), autoimmune and endocrine disease (Hashimoto Thyroiditis , Sjogren syndrome).[4-8]

EAC is classified into two types. The superficial type is characterized clinically by presence of fine collarette of scales on the trailing edge of the annular plaques which histopathologically show pronounced epidermal changes as well as perivascular cellular infiltrate in superficial dermis. The deep type is characterized clinically by non-scaly annular plaques with infiltrated borders which histopathologically show perivascular cellular infiltrate in both

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superficial and deep dermis with minimal epidermal changes.[3-8] A "Coat sleeve" pattern of the perivascular cellular infiltrate in the dermis is the classical histopathological feature of EAC.

A "Coat sleeve" pattern is a tight (sharply demarcated) mononuclear cellular infiltrate around blood vessels of the dermis. EAC occurs at any age but more commonly in fifth decade of life. Male to female ratio are equal. It can present in any part of the body but more commonly on trunk, the thigh, the legs and buttocks.[8]

CASE REPORT

A 40-year-old-male who is working as a nurse in leprosy hospital for the last 20 years, presented with 6-month-history of asymptomatic recurrent migratory skin lesions on his face. He was concerned from having leprosy. Over the last 6 months, he started to develop skin lesions that start as small pimples and then expand slowly forming large rings which then disappear gradually without treatment but reappear again in another site on his face. The lesions are not associated with loss of sensation or numbness. Review of systems and past medical history were unremarkable. Family history revealed that his younger brother developed similar condition 10 years ago that last for few months and then disappeared spontaneously without any recurrence until now. Skin examination revealed multiple annular non-scaly erythematous indurated plaques of variable sizes ranging from 2 cm to 5 cm on his face (Figure 1). Sensation examination of the facial skin was normal. On palpation of periauricular nerves, there were nerve hypertrophy. Skin biopsy taken from the edge of the lesion showed dense very tight perivascular mononuclear cellular infiltrate both in upper and lower dermis with a "coat sleeve" pattern (Figure 2). Stain for acid fast bacilli were negative. On the basis of the above clinicopathological findings, the diagnosis of deep type of erythema annulare centrifugum was made. The patient was reassured.

DISCUSSION

EAC is uncommon inflammatory condition characterized by annular or arcuate erythematous eruptions that slowly enlarge centrifugally.[3-8] The main differential diagnosis in our patient include leprosy especially that our patient has history of contact with leprosy patients. Other differential diagnosis include granuloma annulare (GA), annular elastolytic giant cell granuloma, and secondary syphilis.[3-8] However, the histopathology of the skin lesions was classical for EAC. The migratory feature and the spontaneous resolution of the skin lesions are not features of leprosy. GA is not migratory in nature. Familial EAC, as in our patient is rare. However, it has been reported before as "familial annular erythema".[5]

EAC resolves either spontaneously or once the underlying disease has been successfully treated. Topical medications like corticosteroids, tacrolimus, calcipotriene, oral metronidazole, subcutaneous etanercept and subcutaneous interferon-α have been all used with some benefit.[8] These have not been tried in our patient because the patient refused the treatment. He just wants to be reassured that he is not having leprosy.

Figure 1: Multiple Non-scaly Annular Erythematus Plaques with Infiltrated Border on Peri-auricular Area.

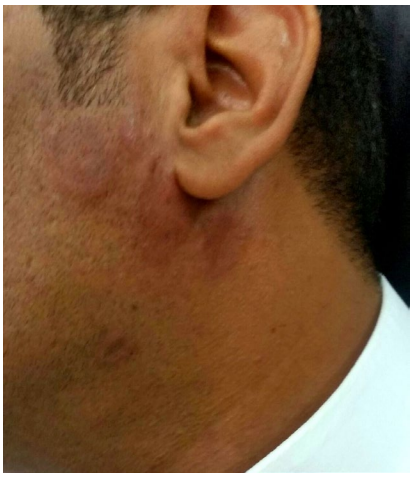
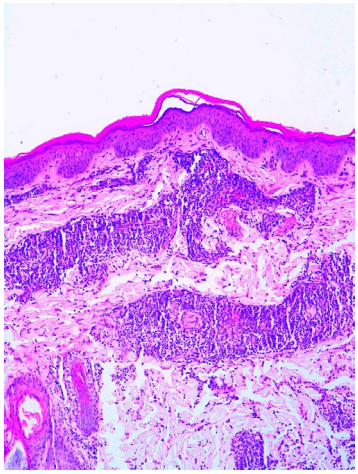


Figure 2: Histopathological Features of the Skin Lesions Showing Dense Very Tight Perivascular Mononuclear Cellular Infiltrate Both in Upper and Lower Dermis with A "Coat Sleeve" Pattern.



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CONFLICTS OF INTEREST

The authors have no conflicts of interest that are directly relevant to the content of this review.

CONSENT STATEMENT

Consent has been taken from the patient for purpose of using patient's photographs for publication in print or on the internet.

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