

CASE REPORT

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A granuloma annulare case without annular lesion: A rare variant

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Abstract

Granuloma annulare (GA) is a benign, inflammatory and granulomatous disease which can be seen in both children and adults, with no known etiology. In this report, a 69-year-old female patient who was admitted with multiple non-annular papular lesions on the extensor sides of both arms was presented.

Keywords: Granuloma annulare, non-annular, female

Introduction

Granuloma annulare was first defined by Calcott Fox in 1895 as annular eruptions on fingers [1]. Radcliffe-Crocker used the term GA in 1902 [2]. GA is a granulomatous dermatosis characterized by annular, necrobiotic, dermal papules. GA has localized, generalized, subcutaneous and perforating types [3]. Localized GA is the most frequent form. In classical localized type, there are sharply-circumscribed, symmetric plaques formed by the full or nearly full annular lining of infiltrated papules which have the color of skin or which are mildly erythematous. These lesions are typically seen in distal extremities [4]. It is stated that in GA papular lesions are generally seen with other lesions in generalized, perforating or subcutaneous forms. The case presented in this report is a rare case since all lesions are papular, they do not show annular lesions and they show a different involvement than classical localizations.

Case Report

69-year-old female patient referred to our polyclinic with rashes which started on the arms three months ago and which did not cause itching or any other symptoms. Dermatological examination showed multiple violaceous erythematous, infiltrated papular lesions in sizes varying between 0.5 and 1 cm, which were dense around the elbow on the extensor sides of both arms (Figure 1).

The anamnesis of the patient did not show any peculiarity other than diabetes mellitus diagnosed 10 years ago. She has used oral anti-diabetic drugs. Histopathological examination showed well-demarcated granulomas surrounded with lymphohistiocytic infiltrates showing cellular palisading which had the appearance of apoptotic keratinocyte in the epidermis and eosinophilic granular centered in the dermis and collagen fragmentation and collagen loss in the necrotic field (Figure 2). The patient was diagnosed with papular GA with the existing clinical and histopathological findings. The patient was started hydroxychloroquine therapy.

Discussion

GA is a relatively frequent idiopathic disease of the dermis and subcutaneous tissue. It can be seen in all races and ages; however, it is two times more frequent in men when compared with women [5]. The etiology of GA is unknown. Trauma, bug bite reaction, tuberculin skin test, exposure to sun, PUVA treatment and viral infections are considered as triggering factors [4]. The anamnesis of our case did not show any history of triggering factors.

GA has been reported to be seen with systematic diseases such as rheumatoid arthritis, Addison's disease, mixedema and ulcerative colitis and malignity such as Hodgkin lymphoma, lung, breast, prostate and ovary cancers. In addition, diabetes mellitus is seen two times more in patients with GA when compared with normal population [3]. CT examination of our patient, all abdominal USG and MR examinations did not show any malignity; however, the history of diabetes brings to mind that the disease is associated with diabetes.

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Figure 1. Violase erythematous, infiltrated papular lesions

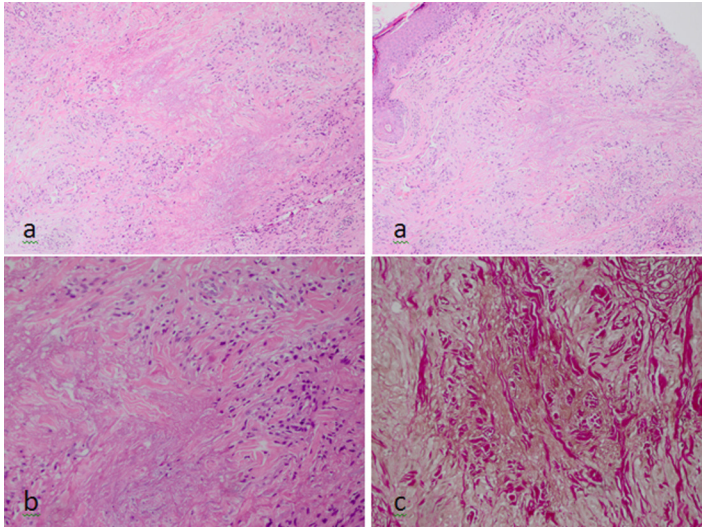


Figure 2. Lymphohistiocytic infiltrates showing cellular palisading, b. and c. Collagen fragmentation and collagen loss in the necrotic field with histiocytic cells

Immune mechanisms which develop secondary to delayed type hypersensitivity are held responsible for the pathogenesis of GA. CD4 (+) Th1 lymphocytes which are in the lesions and which release TNF with gamma interferon enable macrophages to stay in the lesion area. TNF, elastase, collagenase and matrix metalloproteinases released by these macrophages cause collagen destruction [6-8]. While the role of immunological mechanisms is reported in the pathogenesis, vascular damage caused by nonimmunogenic mechanisms has also been reported to be effective. In addition, the presence of familial cases brings to mind that genetic factors can also be effective [3].

Localized GA classically starts as asymptomatic, small, stiff, skin colored or hyperemic, papular rashes on the lateral and dorsal areas of the hands and feet. In time, it gains annular character with regress in the middle part, continues to expand to the center and can form plaques by combining [9]. Our case had extensive papular lesions which were dense in the extensors of both arms and around the elbow. GA can also accompany HIV disease. In these patients, the lesions are reported to be typically papular and 60% are reported to spread commonly, while 40% are reported to spread locally [5]. While our patient was clinically similar to GA which accompanied HIV, HIV was not found in the tests.

The most determinative three characteristics in the histopathological diagnosis of GA are lymphohistiocytic infiltration, mucin storage

and collagen degeneration. These characteristics are observed in two main patterns. Interstitial pattern which includes histiocytes scattered among collagen fibers is the most common pattern observed in 70% of the cases, mainly the localized type. The second pattern is seen in 25% of the cases and its diagnosis is easier. It includes one or more palisadic granulomas which have centralized connective tissue degeneration surrounded by histiocytes and lymphocytes [4]. Our case showed the second pattern.

Clinical observation can be preferred in case of localized and asymptomatic diseases. In addition, topical or intralesional steroids, topical imiquimod, cryotherapy, intralesional interferon, hydroxychloroquine, dapsone, isotretinoin, PUVA, CO₂ laser and even TNF- α inhibitors are among treatment options [4,9].

Conclusions

As a conclusion, the classical localized form of GA starts as papular rashes on the dorsal and lateral sides of the hands and the feet and get an annular character in time. However, although rare, lesions which start in papular type can be seen in different types different from typical localizations as in our patient. In such cases, GA should also be among pre-diagnoses during histopathological assessment and HIV disease should also be investigated.

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