Subcutaneous Granuloma Annulare: A Case Report with Histologic Findings

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Abstract

Granuloma annulare is one of the granulomatous dermatoses, the localized form of which is the most common clinical type, although rare variants such as subcutaneous form have been reported.

We present a 22-year-old girl with asymptomatic cutaneous lesions on her fingers from 14 years ago.

On physical examination, multiple nodules with rubbery consistency were noted on palmar aspects of fingers of both hands.

Histopathologic examination showed granulomas with a palisading pattern and degeneration of collagen bundles. The diagnosis of subcutaneous granuloma annulare was confirmed. Intralesional triamcinolone prescribed for the patient caused slight improvement. *(Iran J Dermatol 2008;11: 123-125)*

Keywords: granuloma annulare, young, subcutaneous nodules

Introduction

Subcutaneous granuloma annulare is a rare variant of granuloma annulare that presents with single or multiple nodules[1]. As there may be associations with diabetes and thyroiditis[2,3], necessary investigations must be carried out. As other subcutaneous nodules may cause diagnostic confusion[4], histopathologic characteristics of the lesion would be helpful.

Case Report

A 22-year–old woman presented with spontaneous cutaneous lesions on the fingers since 14 years ago which had shown no response to topical therapies. There was no family history of similar lesions and no history of other diseases. On skin examination, there were multiple, mobile, skin colored nodules on the palmar aspects of fingers with no tenderness (Figure 1).

Hair, nails and mucous membranes were normal. Histopathology of the lesions revealed palisading granuloma with central necrobiosis (Figure2) and the diagnosis of granuloma annulare was confirmed. Thyroid function tests and blood sugar were in normal range.

Discussion

Granuloma annulare is one of the most common dermatoses with the involvement of skin and/or subcutis in its typical cases, but the ethiology and pathogenesis are unclear[5]. Clinical variants include localized, generalized, perforating and subcutaneous granuloma annulare.

Localized granuloma annulare is the commonest

Figure 1: *Subcoutaneous nodules in the palmar aspect of finger*

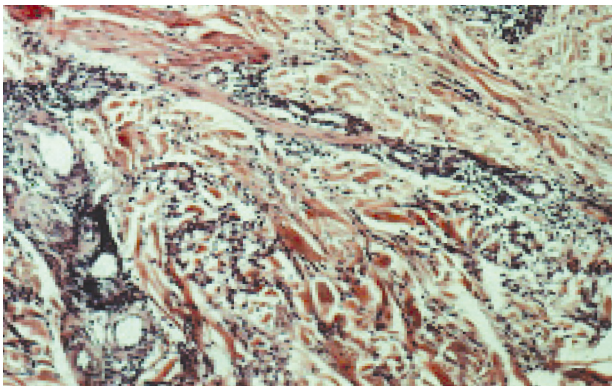

Figure 2: *Collagen degeneration with palisading granuloma (H & E staining , 100X)*

form and typically presents as a ring of small, smooth, flesh colored papules[6]. The subcutaneous variant, so named as subcutaneous necrobiotic granuloma[7] and deep granuloma annulare[8], is a rare clinicopathologic variant of granuloma annulare. Pathogenesis of this variant of granuloma annulare is also unknown but the majority of the affected are children[3,5,9]. In one study, 75% of cases were children[10]. The reported mean age of patients was 3.9 years in one[11] and 4.6 in another study[3]. The congenital type of subcutaneous granuloma annulare is also recorded[6]. However, it can occur in young adults too[5]. There may also be an association with type 1 diabetes[3]. Differential diagnoses of these lesions are rheumatoid nodules, necrobiosis lipoidica and epitheloid sarcoma, so the diagnosis must be confirmed with histopathology examination[3,5]. Lower legs, dorsa of hands, buttocks[5], knee, elbow[9] and scalp[7,10] are the commonest sites of involvement but they may occur anywhere on the skin including palms[1].

Lesions in general are asymptomatic and resolve over a few years and no treatment is required in most mild cases[6]; Most cases relapse within months[9] but as mentioned above, skin biopsies are often performed to confirm the diagnosis[10].

In some patients, explaining the natural course of the disease is all that is required[9]. Various treatment methods have been suggested such as cryosurgery and intralesional steroids[12,13]. We can try scarification[14] and intralesional gamma-interferon (2.5×10^5 IU for each lesion for a week) for resistant lesions[15]. Scarification with 19-gauge needle used weekly for 8 weeks has improved lesions in two cases[14]. Tumid lesions may be excised[16]. Imiquimod[17] and topical tacrolimus[18] may be helpful.

In our patient, the lesions were treated with intralesional triamcinolone acetonide (20 mg/cc) and some improvement was noted in the first month, so we preferred to continue with it.

The authors would like to emphasize the importance of histopathological examination of all nodular skin colored lesions at any age.

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