A rare presentation of subcutaneous granuloma annulare in an adult patient; A case report

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Abstract

We are reporting a 33-year old woman with multiple skin-colored, firm, non-tender nodules of varying sizes (ranging between 1 and 1.5 cm), with limited mobility and normal overlying skin. They were distributed mainly on the palmer side of the fingers. History and laboratory examination indicated lack of systemic diseases such as diabetes, rheumatoid arthritis, and tuberculosis. Histopathologic examination confirmed the subcutaneous granuloma annulare (SGA) diagnosis by showing a normal epidermis with palisading granulomas (histocytes and giant cells) surrounding small areas of connective tissue degeneration (central necrobiosis) and mucin accumulation in the reticular dermis and subcutaneous tissues. The patient responded well to two-session course of intra-lesional steroid injections. SGA should be considered by dermatologists in the differential diagnosis of subcutaneous nodules even without concomitant systemic disease and with rare presentation.

Keywords: Subcutaneous granuloma annulare; Adult; Saudi Arabia

1. Introduction

Subcutaneous granuloma annulare (SGA) is a rare type of granuloma annulare (GA), a benign granulomatous inflammatory disease that usually involves the skin or deeper tissues (Requena and Fernandez-Figueras, 2007). GA has been given several names in different reports; such as pseudorheumatoid nodule, isolated subcutaneous nodule, subcutaneous palisading granuloma and palisading granuloma nodosum (Davids et al., 1993). The etiology and pathogenesis of GA is not clearly understood. However, it is sometimes associated with systemic diseases such as diabetes, rheumatoid arthritis, and malignancy (Thornsberry and English, 2013). The lesions of SGA are frequently seen in the legs, forearms as well as scalp. (Felner et al., 1997; Grogg and Nascimento, 2001; McDermott et al., 1998) SGA is frequently reported among children, especially in their early years (Felner et al., 1997; Grogg and Nascimento, 2001; McDermott et al., 1998), and to less extent among adolescents and adults (Sidwell et al., 2005; De Aloe et al., 2006).

2. Case report

A 33-year old woman was presented at the Dermatology clinic complaining of multiple, slowly growing nodules on the palmar surface of both hands, which were causing...
minimal discomfort during movement. The lesions appeared for the first time 5 years back and they never disappeared since then. There was no history of discharge or bleeding from any nodule. The patient had no history of any medical illness, including diabetes, rheumatoid arthritis, and tuberculosis. Family history revealed no similar conditions and was negative for tuberculosis. On examination, the patient had multiple skin-colored, firm, nontender nodules of variable sizes (ranging between 1 and 1.5 cm), with limited mobility and normal overlying skin (Fig. 1). The lesions were distributed mainly over the palmar aspect of distal phalanges of the fingers on both sides. Two more solitary nodules were found on the left elbow and right knee. All joints around the lesions had a normal range of movement. A punch biopsy taken from the lesion over the left elbow showed a normal epidermis with palisading granulomas (histocytes and giant cells) surrounding small areas of connective tissue degeneration (central necrobiosis) and mucin accumulation in the reticular dermis and subcutaneous tissues (Fig. 2). The patient was negative for rheumatoid factor, antinuclear antibody (ANA), anti-DNA, and syphilis screening. The patient had also negative purified protein derivative (PPD) skin test and the chest X-ray was clear. Additionally, the biopsy was negative for Tuberculous (Zeihl Neelson’s stain) and fungal (Gomori Methenamine silver stains and Periodic acid Schiff) examinations. The patient was treated by intralesional triamcinolone acetonide (Kenacort) injection; 10 mg/cc. The treatment session was repeated after 6 weeks and the patient experienced marked improvement (Fig. 3).

3. Discussion

We are reporting a patient with multiple nodules of SGA. The diagnosis was clinically suggested and histopathologically confirmed. Detecting the characteristic histopathologic features of SGA was essential to differentiate the lesion from other similar lesions such as rheumatoid nodule, necrobiosis lipoidica and epithelioid sarcoma (Requena and Fernandez-Figuera, 2007). Clinical and laboratory examination also helped to exclude other causes of nodules such as tuberculosis, fungal infection, and autoimmune disease. The SGA in our patients was not associated with any chronic disease. Although has been linked to systemic diseases in some reports (Thornsberry and English, 2013), several reports showed that the majority of pediatric and adult patients with SGA had unremarkable medical history (Felner et al., 1997; Grogg and Nascimento, 2001; De Aloe et al., 2006). Similar to our patient, the SGA nodules usually are slowly growing and cause little discomfort which may delay the medical advice (Felner et al., 1997; Grogg and Nascimento, 2001; De Aloe et al., 2006). However, sometimes SGA has a rapid growth that could be alarming to the patient and requires extensive differential diagnosis (Hutcheson et al., 2005). As the majority of the SGA present on the extensor aspect of the limbs (Vandevenne et al., 1998), the presentation of the SGA in our patient on the palmer side of the fingers is considered a rare presentation (Mur et al., 2005). Different modalities of treatment have been suggested including watchful waiting for spontaneous resolution, intra-lesional steroids, surgery and dapsone (Martín-Sáez et al., 2008). Our patient
Figure 2. This figure shows a normal epidermis with palisading granulomas (histocytes and giant cells) surrounding small areas of connective tissue degeneration (central necrobiosis) and mucin accumulation in the reticular dermis and subcutaneous tissues.

Figure 3. This figure shows both hands post treatment free of lesions.
responded well to intra-lesional steroid injections, which is considered the most widely used medical therapy. Given the multiplicity of the lesions, their presentation on the distal phalanges of the fingers, and the known benign course, surgical excision was not thought as the first choice treatment because it is usually done for solitary lesions.

In conclusion, we are reporting a rare presentation of SGA on the palmar side of the fingers, which responded well to intra-lesional steroid injections. SGA should be considered by dermatologist in the differential diagnosis of subcutaneous nodules even without concomitant systemic disease and with rare presentation.

Conflict of interest

None declared.

References