

## SUBCUTANEOUS GRANULOMA ANNULARE

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Two cases of subcutaneous granuloma annulare are reported. Clinical presentation was in the form of hard subcutaneous nodules, histopathology confirmed the clinical diagnosis. The cases were unique because of onset in adult age, occurrence over unusual sites and absence of classical lesions of granuloma annulare elsewhere.

**Key Word : Granuloma annulare**

### Introduction

Though granuloma annulare (GA) is a common entity in dermatologic practice, its subcutaneous form is uncommon and is infrequently reported in the literature. Its apparent rarity may be due to lack of awareness of the variant. In most cases it is associated with classical lesions of GA, when the diagnosis is relatively easy.<sup>1</sup> When present in isolation, a high degree of clinical suspicion and histopathology clinches the diagnosis. Children are more frequently affected, the disease may be present in the family.<sup>1</sup>

Two cases of subcutaneous granuloma annulare recently seen by us are under report. Both patients were adults, none had associated lesions of GA.

### Case Reports

**Case 1.** A 30-year-old housewife presented with bilaterally symmetrical asymptomatic nodules over elbows and knees of 3 years duration. The lesions initially appeared in the skin overlying the

olecranon process, gradually increased in size and stopped growing 6 months after onset. Soon after, similar lesions appeared over prepatellar region. There was no associated fever, sore throat, joint pains or redness of eyes. General and systemic examination was normal. There was no arthritis or arthralgia of elbows, knees and movements of joints were normal. Multiple, skin coloured hard nodules of the size ranging from 5 to 15 mm were present (Fig. 1). They were freely mobile over underlying tissues, overlying skin was adherent but normal in

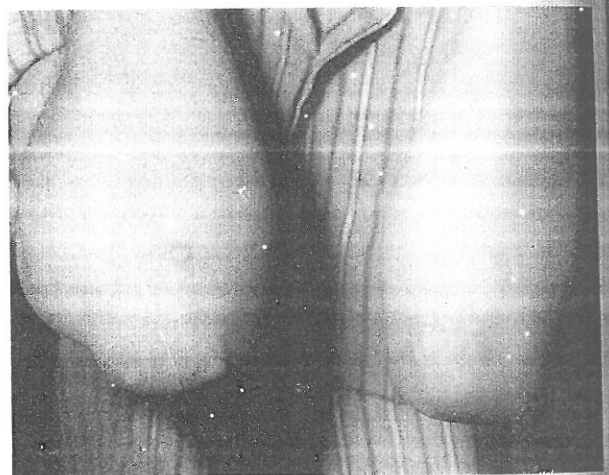


Fig. 1. Multiple asymptomatic skin coloured hard nodules present symmetrically over both elbows

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texture. Apart from GA, other clinical possibilities considered were calcinosis cutis, rheumatic nodules, rheumatoid nodules, xanthoma and fibromatosis.

Investigations revealed serum and urinary calcium as 10 mg/dl and 62 mg/dl respectively. Rheumatoid and antinuclear factors (ANF) were negative, serum cholesterol, triglyceride and lipoproteins were within normal limits. An excisional biopsy of one of the nodules over left elbow showed mucinous oedematous appearance of lower dermis and adjoining subcutaneous tissue. There were discrete necrobiotic foci in the lower dermis and subcutis with palisading

histiocytes around necrobiotic foci. There were occasional Langhan's giant cells and incomplete degeneration of collagen (Fig. 2). Von-kossa stain failed to show presence of calcium.

**Case 2.** A 33-year-old man presented with asymptomatic hard nodules over dorsal aspect of fingers and palms (bilateral) of one year duration. There was no history of associated fever, joint pain, sore throat or redness of eyes. On examination, no joint deformity was noticed. Other examinations and investigations including excision biopsy of one of the nodules were essentially same as in case 1.

No family members of both patients had subcutaneous nodules. Natural course of the disease was explained to the patients with possibility of spontaneous regression.

### Comments

Subcutaneous form of granuloma annulare has been reported to be familial. None of our patients had family members similarly effected. Palms, buttocks, scalp and legs, are reported to be most affected by subcutaneous GA.<sup>2</sup> The lesions predominantly involved olecranon and patellar regions in our patients, similar findings have been reported by others.<sup>3</sup> Repeated trauma is presumed to be a triggering factor for localization of the lesions over bony prominences.<sup>3</sup> In contrast to the superficial form, the deeper lesions have a hard consistency.<sup>1</sup> In rare cases of anarthritic rheumatoid nodules and cases where rheumatoid nodules precede arthritis, differentiation from subcutaneous GA becomes difficult.

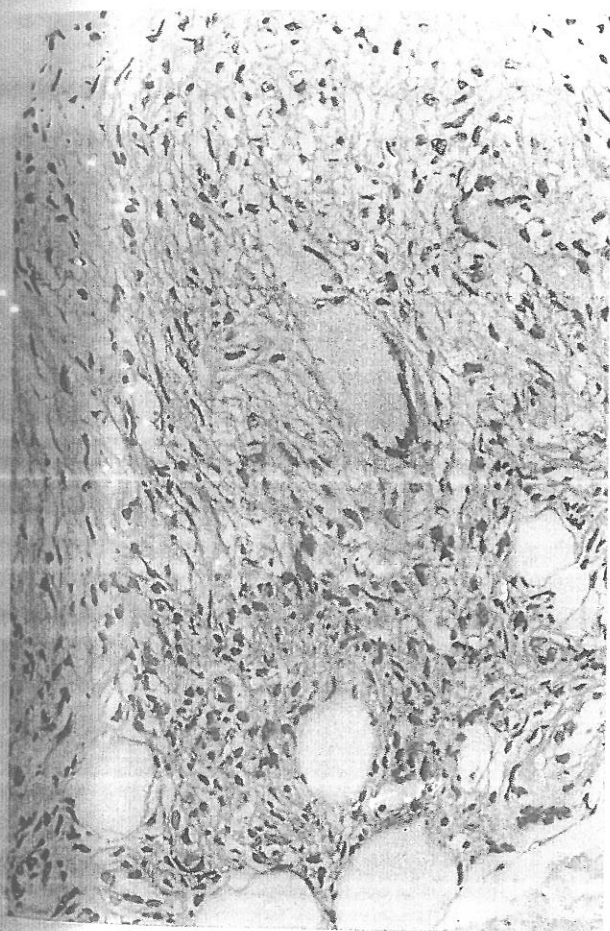


Fig. 2. Discrete necrobiotic foci with palisading histiocytes and Langhan's giant cells invading into subcutaneous tissue (x200)

However, some authors feel that probably they all are one and same entity.<sup>4,5</sup> Although some workers feel the two entities are indistinguishable histopathologically,<sup>2,6</sup> others have emphasized that the histopathological similarity has been overemphasized and differentiation between the two conditions is possible.<sup>7</sup> The necrobiosis in rheumatoid nodules has a homogenous eosinophilic appearance, whereas in subcutaneous GA there is mucinous oedematous appearance.<sup>7</sup>

Both our patients are unique as regards unusual age of onset, involvement of unusual site, and not being associated with classical lesions of GA elsewhere.

## References

1. Robin M, Lynch FW. Subcutaneous granuloma annulare. Arch Dermatol 1966; 93: 416-20.
2. Miller HB. Subcutaneous granuloma annulare? Arch Derm Syph 1949; 60: 104.
3. Stillians AW. An unusual case of granuloma annulare. J Cutan Dis. 1919; 37:580.
4. Ginsberg MH, Grenant HK, Yu TF, et al. Rheumatoid nodules. An unusual variant of rheumatoid disease. Arthritis Rheum 1975; 18 : 49-58.
5. Belin DC, Abeles M, Weinstein A. Rheumatoid markers in the absence of arthritis. J Rheumatol 1979; 6: 293-99.
6. Tizard PM. Subcutaneous nodules : For diagnosis ? Granuloma Annulare. Proc Roy Soc Med 1948; 41: 301.
7. Isdale AH, Helliwell PS. An infiltrating rheumatoid nodule ? Ann Rheum Dis 1992; 51 : 688-89.