



REVERSE KOEBNERIZATION IN A CASE OF GRANULOMA ANNULARE- A CASE REPORT

Dermatology

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ABSTRACT

Granuloma annulare is a common granulomatous disorder of the skin seen frequently in children. It is associated with reverse koebner phenomenon and here we report a case of granuloma annulare exhibiting this phenomenon.

KEYWORDS

Granuloma Annulare, Reverse Koebnerization

INTRODUCTION:

Granuloma annulare is a self-limiting disorder of the skin commonly seen in children but can be seen in any age group¹. It is a necrobiotic condition thought to be a delayed hypersensitivity to dermal components mediated by cytokines like TNF-alpha².

CASE REPORT:

A 10-year-old female child presented with asymptomatic, dark coloured raised lesions over bilateral hands and lower limbs for the past 4 years. On examination, skin coloured to pigmented annular plaques with papules at the periphery of the lesion giving a beaded appearance were seen over the dorsa of bilateral hands and the flexor aspect of bilateral thighs and legs.

A biopsy was taken from the lesion on the right upper thigh and revealed normal epidermis with interstitial collections of lymphohistiocytic infiltrate suggestive of granuloma annulare.

On review after 3 months, there was disappearance of the lesions all over the body with some remnant pigmentary changes.

DISCUSSION:

Granuloma annulare is an idiopathic granulomatous disorder of the skin associated with trauma, insect bite, viral infections like HIV, varicella zoster virus, Epstein-Barr virus, herpes simplex virus, hepatitis B and C virus, drugs like gold, allopurinol, vitamin D and diclofenac, diabetes mellitus, sun exposure, BCG vaccination and Mantoux testing³. The different types of this condition include the localized type, generalized type, subcutaneous type, patch type, deep destructive type and the perforating type.

The classical type presents with asymptomatic, skin-coloured to erythematous annular plaques with papules. The plaques usually show central clearing with centrifugal enlargement.

A histopathological examination of the skin lesion will reveal multiple granulomas with palisaded or interstitial collections of lymphohistiocytic infiltrate along with mucin deposition. Few giant cells can also be seen.

Reverse koebnerization is commonly exhibited by granuloma annulare in that there is disappearance of the lesion on inducing trauma⁴ of any kind most commonly following a biopsy. The term remote reverse koebner's⁵ is warranted in our case wherein there was disappearance of almost all the lesions following biopsy at one site. Some of the common differentials for this condition include necrobiosis lipoidica, rheumatoid nodule, dermatophytosis, figurative erythemas, sarcoidosis and syphilis⁶.

Though a self-limiting condition, the various treatment modalities include topical and intralesional steroids, calcineurin inhibitors,

cryotherapy, pulsed dye and excimer lasers as well as phototherapy.

CONCLUSION:

Though cases of granuloma annulare tend to resolve spontaneously without treatment, various treatment modalities are offered to hasten the duration of resolution. A simple biopsy of the lesion through the process of reverse koebnerization will result in rapid resolution of multiple lesions thus circumventing the need for expensive and cumbersome modalities of treatment.

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None

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

LEGENDS TO FIGURE

Figure 1: Clinical picture of granuloma annulare on the dorsa of hands pre (A) and post (B) biopsy at a distant site.

Figure 2: Clinical picture of granuloma annulare over the thighs of the same patient pre (A) and post (B) biopsy with the biopsy scar evident in picture B

Figure 3: Histopathological image showing interstitial lymphohistiocytic infiltrate in the dermis.

Figure 1



Figure 2

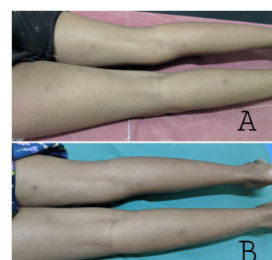
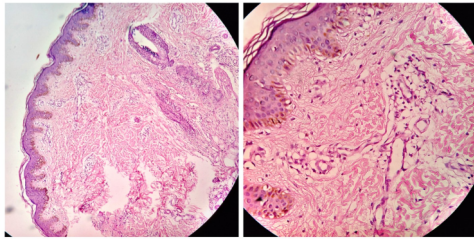


Figure 3

**REFERENCES**

1. Sivaramkrishnan.S, B.S Subhasree, Jayakar Thomas, Granuloma annulare masquerading as hansen's disease- a case report, international journal of scientific research : Volume-7 | Issue-7 | July-2018
2. Piette EW, Rosenbach M. Granuloma annulare: pathogenesis, disease associations and triggers, and therapeutic options. Journal of the American Academy of Dermatology. 2016 Sep 1;75(3):467-79.
3. Parimalam K, Thomas J. Subcutaneous granuloma annulare in a child: A rare presentation. Indian Journal of Dermatopathology and Diagnostic Dermatology. 2014 Jan 1;1(1):39.
4. Thappa DM. The isomorphic phenomenon of Koebner. Indian Journal of Dermatology, Venereology, and Leprology. 2004 May 1;70(3):187.
5. Naveen KN, Pai VV, Athanikar SB, Gupta G, Parshwanath HA. Remote reverse Koebner phenomenon in generalized granuloma annulare. Indian dermatology online journal. 2014 Apr;5(2):219.
6. Moozhiyil S, Reddy DI, Thomas J. Disseminated granuloma annulare. International Journal of Scientific Research. 2019 Oct 4;8(9).