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Case Report

FIGURATE ERYTHEMA ENCOMPASSING BENIGN CUTANEOUS OUTGROWTHS

Article History:

Name of Author:

Dr Roshini Rajendran [1], Dr Gokul R[2] and Dr Arishta Bala [3]

Affiliation: *[1]Senior Resident, Department of Dermatology, Venereology and Leprosy, Shri Sathya Sai Medical College and Research Institute- 603108 Sri Balaji Vidyapeeth (Deemed to be University) ORCHID ID-0009-0007-6648-0309*

[2]Assistant Professor, Department of Dermatology, Venereology and Leprosy, Shri Sathya Sai Medical College and Research Institute- 603108 Sri Balaji Vidyapeeth (Deemed to be University) ORCHID ID: 0009-0000-9882-7580

[3]Assistant Professor, Department of Dermatology, Venereology and Leprosy, Shri Sathya Sai Medical College and Research Institute- 603108 Sri Balaji Vidyapeeth (Deemed to be University) ORCID ID – 0009-0009-0769-2461

Corresponding Author:

Dr Roshini Rajendran

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Abstract: ***Background***: (EAC) is a rare figurate erythema characterized by annular erythematous lesions with trailing scales that expand centrifugally. It is considered a hypersensitivity reaction associated with various infections, drugs, autoimmune conditions, and malignancies. Occurrence of EAC surrounding benign cutaneous outgrowths such as Acrochordon and Seborrheic Keratosis is extremely uncommon. ***Case Presentation:*** A 47-year-old male presented with multiple pruritic erythematous annular lesions over the trunk, abdomen, axilla, and thighs for three weeks. Dermatological examination revealed well-defined annular patches with trailing scales confined to pedunculated or flat cutaneous outgrowths suggestive of acrochordons and seborrheic keratoses. Differential diagnoses included erythema annulare centrifugum, Meyerson phenomenon, granuloma annulare, and contact dermatitis. Laboratory investigations were within normal limits. Histopathology demonstrated spongiosis, dermal edema, and a characteristic coat-sleeve pattern of perivascular lymphohistiocytic infiltrate, confirming the diagnosis of EAC. The lesions were treated with radiofrequency ablation of the benign growths along with topical mid-potent corticosteroids and oral antihistamines. Significant improvement was noted at two weeks, with complete resolution by five weeks leaving minimal post-inflammatory hyperpigmentation. ***Conclusion:*** This case highlights a rare presentation of EAC localized around benign skin tumors such as acrochordons and seborrheic keratoses. Recognition of this unusual association is important for accurate diagnosis and appropriate management.

Keywords: Digital CBT, adolescent depression, randomized controlled trial, PHQ-9, mental health intervention, mobile therapy, school counselling.

CASE REPORT:

A 47 year old male presented to Dermatology OPD with complaints of red colored lesions, gradually increasing in size, associated with moderate itching all over the body for the past 3 weeks. He occasionally took Tab. Hydroxyzine 10mg over the counter for itching and gives a negative history for topical application before or after onset of the rash. He has no known comorbidities and there was no history of intake of other drugs. Dermatological examination showed numerous well defined eyrthematous annular patches of sizes varying from 1*1cm to 5*4cm with trailing scale at the borders. These patches were confined only to pedunculated or flat outgrowths over the skin (soft fibroma/ acrochordon and seborrheic keratosis), distributed over trunk, abdomen,

axilla and thighs. Considering the morphology, a differential diagnosis of Erythema Annulare Centrifugum, Meyerson phenomenon, Granuloma Annulare and contact dermatitis were made. The blood investigations including fasting and post prandial blood sugar, HbA1C, lipid profile, complete blood count, absolute eosinophil count, ESR , CRP, renal and liver function test, chest X ray were taken and found to be normal. A 4mm punch biopsy was taken from the periphery of the patch. Histopathological examination showed spongiosis, dermal edema, diffuse lymphohistiocytic inflitrate over papillary dermis and coat sleeve pattern of perivascular infiltrate. Alcian blue stain was negative for dermal mucin. Thus, a diagnosis of Erythema Annulare Centrifugum was made. Acrochordon and seborrheic keratosis were excised by Radio frequency ablation. A short course of topical mid potent steroid with antibiotic combination and oral antihistamines were prescribed for 2 weeks. The patient was followed up at week 2, the lesions were resolving with post inflammatory hyperpigmentation. There was reduction in scaling and erythema. At week 5, the lesions were completely resolved, only minimal post inflammatory hyperpigmentation was noted. He was further followed up for a period of 3 months and no recurrence was observed.

Figure 1: Clinical picture of Erythema Annulare Centrifugum surrounding seborrheic keratosis and acrochordon. Note the trailing scale just behind the advancing edge of the patch.

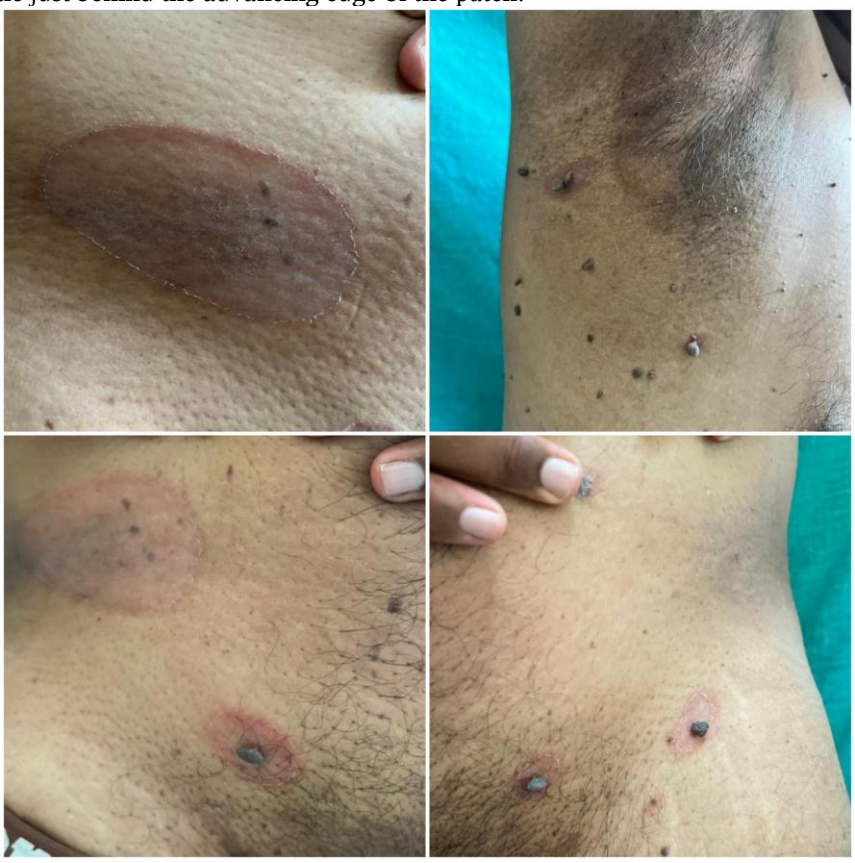


Figure 2: Histopathology showing spongiosis, dermal edema and coat sleeve pattern of perivascular lymphohistiocytic infiltrate.

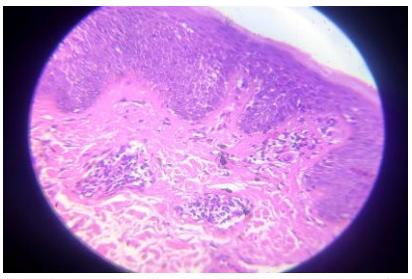


Figure 3: Clinical picture at week 2 following radiofrequency ablation of seborrheic keratosis and acrochordons. Note that the erythema and scaling are significantly reduced, post inflammatory hyperpigmentation is noted.

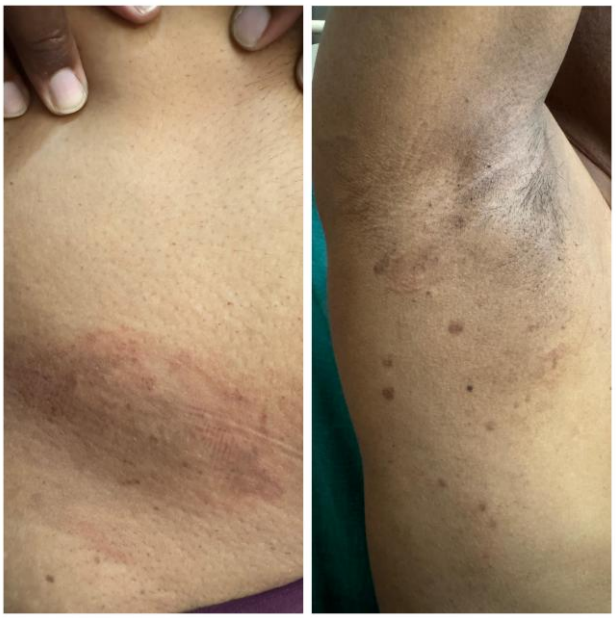
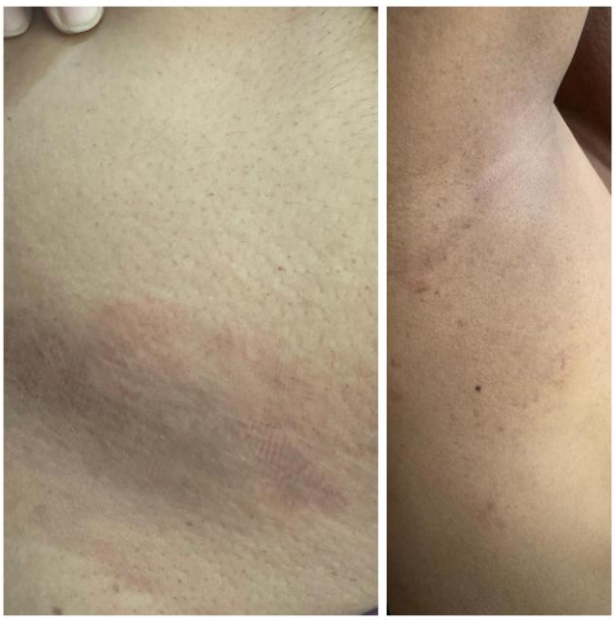


Figure 4: Clinical picture at week 5, post inflammatory hyperpigmentation is also reduced significantly.



DISCUSSION

Soft fibromas are benign cutaneous outgrowths, commonly called skin tag, arising from connective tissue (fibroblasts) of dermis. The other names include acrochordon or fibroepithelial polyp. They occur as skin colored or pigmented pedunculated papules with affinity to flexures like neck, axillae, groin and eyelids. They are mostly asymptomatic and start in late adolescent or early adult life. The association includes genetics, obesity and dyslipidemia, diabetes mellitus and metabolic syndrome.[1,2] Excision is suggested either for cosmetic reasons or repeated friction with the garments which could possibly cause irritation.

Seborrheic keratosis is also a benign tumor arising from the proliferation of immature epidermal keratinocytes.[3,4] They are asymptomatic or occasionally presents with itching, commonly occuring in individuals > 50 years. They present as few well defined pigmented papules or plaques giving "stuck on" appearance, sometimes pedunculated. Concern should arise when there is rapid progression or multiple lesions as in Lesser trelat sign, where an underlying gastrointestinal malignancy should be suspected. Removal is warranted if it is symptomatic or cosmetically distressing to the individual. Biopsy may be required to rule out cutaneous malignancy if the morphology is atypical.

These benign outgrowths of the skin rarely exhibit reaction pattern viz, Meyerson phenomenon, Halo phenomenon and even more rarely Erythema Annulare Centrifugum.

Erythema Annulare Centrifugum is one of the figurate erythema characterised by annular erythematous patches/ plaques with trailing scale at the periphery (fine annular scaling that trails behind the border), progressing centrifugally at the rate of 1 to 3 mm per day.[5] It is a hypersensitivity reaction that results in release of inflammatory cytokines and vasoactive peptides which is attributed to the peripheral spreading. It usually affects adults and rare in newborn or children. Etiology includes drugs (penicillin, salicylates/NSAIDS, antimalarials, rituximab, amitryptiline, interferons, ribavirin), fungal infections (Candidiasis and Dermatophytosis), viral infections (Chicken pox, EBV, HIV), bacterial infections (Pseudomonas), parasitic infections (Phthirus pubis), autoimmune endocrinopathies, pregnancy, Crohn's disease, malignancy (leukemia and lymphoma) where it is called PEACE (Paraneoplastic Erythema Annulare Centrifugum Eruption). [6]

EAC can take superficial or deep forms. The superficial variant has predominant surface changes like trailing scale. However, the deep gyrate variant presents as palpable erythema with central clearing and devoid of surface changes. Very rarely, telengiectasia or purpura may be seen.

Histopathology is often mandatory to differentiate EAC from other annular erythema viz, Erythema gyratum repens, Erythema multiforme, Erythema chronicum migrans, subcutaneous lupus erythematosus, Granuloma Annulare, Dermatophytosis etc. In superficial EAC , there is predominant epidermal changes like Hyperkeratosis, parakeratosis and spongiosis. Vacuolar degeneration may be present in some cases. Coat sleeve pattern of perivascular infiltrate is seen. Eosinophils may also be seen in perivascular infiltrate. The advancing edge may show dermal edema. In deep EAC, epidermal changes are not seen, however, there are dense perivascular lymphohistiocytic infiltrate in the papillary and reticular dermis.[7]

With respect to treatment, the primary cause should be investigated and eliminated. It is usually self resolving in about 6-8 weeks. Topical therapy includes potent/ midpotent corticosteroids, tacrolimus. In resistant cases, systemic corticosteroids or immunomodulators like methotrexate, mycophenolate mofetil, hydroxychloroquine etc can be added. Some authors suggests the use of antibiotics- erthromycin, Azithromycin, doxycycline or metronidazole if infection is suspected. [8,9] In resistant cases, Apremilast, Roflumilast, upadacitinib or etanercept can be tried. [10,11,12]

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