

Image

Localized allergic contact dermatitis on skin flap: Unveiling immune privilege in non-immune privileged sites

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A 31-year-old concrete worker came with complaints of itching and fissuring over their left hand for 10 days. Physical examination revealed a hyperpigmented skin flap covering a palmar aspect of the left thumb and index finger along with thenar eminence with overlying erythema, fine whitish to brownish scales, and multiple fissures which were localized to the skin flap only and were sharply demarcated from adjacent normal skin [Figure 1]. Patch testing was performed using the Indian standard series, which revealed grouped erythematous papules with background erythema (grade 2 positivity) with potassium dichromate and cobalt antigen [Figure 2]. Clinically differential diagnosis of

autonomic denervation dermatitis can be kept in such cases, but absence of sensory or autonomic alteration and positive patch test in this case favors possibility of allergic contact dermatitis. The immune privilege phenomenon is a unique immunological property of certain tissues that exhibit reduced immune response as compared to other tissues in the body.^[1] Here in this case, the uninvolved skin adjacent to the flap acted as an immune privilege site that basically had a lack of contact allergic response to exposed allergens as compared to the skin flap. This case demonstrates the unique immune privileged phenomenon in non-immune privileged sites.



Figure 1: Hyperpigmented skin flap with overlying scaling and fissures localized to skin flap with sharp demarcation line from adjacent normal skin.



Figure 2: Grouped erythematous papule with background erythema (grade 2 positive patch test) with potassium dichromate and cobalt antigen.

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Ethical approval

The Institutional Review Board approval is not required.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Conflicts of interest

There are no conflicts of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

REFERENCES

1. Forrester JV, Xu H, Lambe T, Cornall R. Immune privilege or privileged immunity? *Mucosal Immunol* 2008;1:372-81.

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