



Isotopic response versus isomorphic response

Sir,

In response to the above letter (*Vitiligo and lichen planus in striae: Is it Koebner phenomenon?*), I would like to thank the authors for appreciating my article.¹ The issue that they have raised is whether the development of lesions in stretch marks (striae distensae) in their two patients of lichen planus and vitiligo represents the Koebner phenomenon. Since the lesions developed only along the course of stretch marks and the intervening skin was unaffected, the authors are probably describing the isotopic response rather than the Koebner phenomenon.

The term isotopic response refers to the occurrence of a new skin disorder at the site of another, unrelated, and already healed skin disease.² It was first defined by Wolf et al in 1985 and hence is also known as Wolf's isotopic response.^{3,4} The term "isoloci response" has also been suggested. The isomorphic response, first defined by Koebner, indicates the appearance of typical skin lesions of an existing dermatosis at sites of injuries.²

The differences and similarities between these two terms are obvious.^{1,2,5} The isomorphic response describes the appearance of a skin lesion which is morphologically similar to an existing skin disease at the site of an injury of any kind. Thus the term "isomorphic" means "the same morphology" (as the existing disease). The term "isotopic response", on the other hand, describes the occurrence of a new, unrelated disease that appears at the same location as a previously already healed disease; hence "isotopic" means "at the same place".

The localization of skin diseases remains one of the most elusive problems in dermatology.² The proposed etiologies of isotopic response are viral, immunologic, neural, vascular and locus minoris resistentiae (a site of lessened resistance). Most cases of isotopic response have been described in healed lesions (scars) of herpes zoster. The second disease has been reported to be

granuloma annulare, Kaposi's sarcoma, leukemia cutis, metastasis, sarcoidosis, acne, lichen planus, granulomatous folliculitis, tinea, verrucae plana, molluscum contagiosum, squamous cell carcinoma, basal cell carcinoma, or multiple epidermoid cysts.^{2,3,6-9} A recent report describes herpes simplex appearing on a scrofuloderma scar.⁴

In the cases described by the authors, striae distensae, which are basically atrophic scars in histopathological terms, were the first disease, and lichen planus and vitiligo were the second diseases occurring as isotopic responses.

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