Skin Diseases Induced by Other Skin Diseases: The Boomerang Phenomenon

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Special Features and Relationship
between Satellite and Initial
Skin Diseases

The satellite skin diseases and the initial ones can be related in various ways.

Frequency of Association. The satellite dermatoses can be divided into two subgroups on the basis of their frequency elicited by the boomerang phenomenon: (1) satellite dermatoses elicited with a low frequency by the boomerang phenomenon are very often provoked by other causes which must be excluded in order to characterize them as satellite; the satellite dermatoses of this subgroup are usually provoked by an immunological mechanism (table 1); (2) satellite dermatoses elicited with a high frequency by the boomer-
«initial» skin disease

Fig. 1. The
boomerang phenomenon shown schematically.

Each skin disease can be examined, apart from its clinical picture, course, prognosis or aetiology, under the aspect of many other parameters in order to understand the true meaning and nature of the disease for the skin itself as well as for the whole body. In this study we present a new classification of a number of dermatoses which have as a common sign the possibility to be induced by the presence of other skin diseases.

Classification and Characteristics It is well known that there is a number of skin diseases (we named 'satellite') which can be provoked by the presence of other skin diseases (we named 'initial') [1-4] (table 1). The characteristics of this pair of initial and satellite skin diseases are the following: (1) the satellite skin disease is entirely different (clinically and histologically) from the initial one. So, the Köbner phenomenon and the secondary spreading dermatitis cannot be included in this mentioned group of skin diseases; (2) the satellite skin disease follows the onset and the course of the initial skin disease; (3) the satellite skin disease is located in different skin areas from those of the initial one, except in the Sutton naevus, where the vitiliginous halo is sited in the adjacent naevus skin area.

Mechanisms

The implicated mechanisms in this pair of skin diseases are as follows: at a first stage the initial skin disease produces a systemic disturbance (immunological, toxic, gene expression or unknown nature) [1-4] which finally is turned against the skin itself ['boomerang phenomenon' (fig. 1)] provoking the satellite skin disease.

ang phenomenon and rarely by other factors are usually provoked by a non-immunolog-ical mechanism with the exception of Sutton's naevus.

Predisposing Factors. In a few patients the initial skin diseases can produce the satellite skin diseases. This means that the boomerang phenomenon which is responsible for eliciting the satellite skin disease probably depends on various other predisposing factors (e.g. genetic, individual, sex, age).

Severity of Satellite and Initial Skin Disease. The clinical severity and prognosis of the satellite skin disease in relation to the initial one can be: better (e.g. vitiligo or Sutton's disease and malignant melanoma, erythema nodosum and leprosy, acquired ichthyosis

«satellite» skin disease

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Table 1. Skin diseases induced by other skin diseases and their provocation mechanisms

Initial skin disease

Provocation mechanism

Satellite skin disease

Herpes simplex, Orf disease

Mycoses

Malignant melanoma Lepra, tuberculosis, syphilis

(and other sexually transmitted diseases), sarcoidosis

immunological

immunological immunological

immunological

elicited with a low frequency by the

boomerang phenomenon

erythema multiforme

dyshidrosis and other mycid reactions

vitiligo

erythema nodosum

Melanocytic naevi, malignant melanoma
Staphylococcal infection Lymphomas, leprosy
immunological
toxic
genetic
unknown
elicited with a high frequency by the
boomerang phenomenon
Sutton naevus
staphylococcal scalded skin syndrome
acquired ichthyosis
alopecia mucinosa

and lymphomas), of equal severity and prognosis (e.g. dyshidrosis and dermatophytosis, vitiliginous halo and the naevus in Sutton's disease) or worse in severity and prognosis (e.g. staphylococcal scalded skin syndrome and staphylococcal infection, erythema multiforme and herpes simplex; table 1).

The aetiological treatment of the satellite skin disease coincides with the treatment of the initial skin disease.

The satellite skin diseases which are produced by an immunological mechanism need a period of time in order to establish the immunological hypersensitivity.

The boomerang phenomenon occurs often in the skin and may be responsible for many kinds of skin reactions (table 1). In contrast, for other organs the boomerang phenomenon is very rare. We can find it in eye pathology, e.g. sympathetic ophthalmia and injuries of the radial body, cataract and detachment of the retina.

Conclusions

The skin diseases induced by other skin diseases represent a bipolar group in which the two poles are closely connected by a peculiar one-way mechanism (boomerang phenomenon) induced only by the initial skin diseases.

We think that this bipolar group of skin diseases can be classified separately contributing to a better understanding of these skin diseases and also promoting the study of the various mechanisms and parameters which act in the boomerang phenomenon.

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