

OPINION ARTICLE

## The Inappropriateness of the Term *Hand Eczema*

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There is an ever-increasing trend toward speaking about hand eczema as if it were a disease entity. There are an enormous number of scientific articles using this term,<sup>1-17</sup> and thus, an increasing number of dermatologists and interns are using it as a diagnosis. As an entity, it would be expected that hand eczema would have a characteristic clinical pattern, a detailed etiology, some complementary tests that confirm diagnosis, and a specific treatment. But nothing could be further from reality; eczema, when it affects the hands, presents a multitude of clinical, etiological, and therapeutic variants. So why should we consider it an entity or, at least, a group of syndromes?

To illustrate why it is clumsy to classify something as “hand eczema”: what would we understand by “ear eczema”? Would it not be more logical to say that a patient presents eczema *on* the ears? This can be caused by sensitivity to the nickel contained in an earring. Eczema can also appear on the ears in patients with seborrheic dermatitis, atopic dermatitis, airborne contact dermatitis, etc. There are a huge number of causes of eczemas on the ears, and so we have to study the clinical aspects of the lesions, the areas of the ear affected, other accompanying lesions outside the ear, the patient’s history, etc, to reach the correct diagnosis.

Would we be satisfied with a diagnosis of “ear eczema”? Apparently not, because the term indicates nothing more than a sign, with very striking clinical differences, of the entity that the patient may be suffering from. The same can be said in relation to hand eczema. The confusion would be partly alleviated by speaking about eczema on the hands, although this descriptive term is as broad as that of eczema on the ears.

However, the mistake in speaking about “hand eczema” goes beyond a simple grammatical issue. The real problem with this term is that it leads us into making the conceptual mistake of grouping any entity observed on the hands into a single eczema. When we say that a patient presents “hand eczema,” we gain the impression of having classified the clinical symptoms. This is nothing more than a false impression, comparable to diagnosing “ear eczema.”

The history of the term “hand eczema” goes back some decades to when researchers began to compare the different types of eczemas seen on the hands to analyze their patterns and causes.<sup>1-4</sup> Perhaps to lend this “syndrome” a weightier sound, the term “hand eczema” was invented.<sup>5</sup> Although this was initially an attempt to draw attention to the clinical and etiological diversity of eczema in this location, it ended up covering all the different clinical expressions and etiologies of eczemas found on the hands, such that the impression was given of dealing with an entity *per se*.

Currently, there are a large number of publications in journals and books entitled “hand eczema.”<sup>6-11</sup> The references cited are examples of the most significant, but the number of articles with this title is vast. They clearly describe the various clinical forms of eczema on the hands, their causes, treatment, etc, but when speaking about “hand eczema” they grant it a nosological status that it is utterly devoid of.

This is why we end up with reviews of studies that deal with the “treatment of hand eczema,”<sup>12</sup> as if all eczemas that affect the hands could follow a single therapeutic course, or as if we should deal with eczemas of the rest of the body in a very different manner. Some publications describe the treatment of “chronic hand eczema,”<sup>13-15</sup> sometimes without defining what is understood by “chronic.”<sup>13,14</sup> (How many weeks, months or years? Can we describe eczema as chronic when contact dermatitis has been ruled out?) Other studies have assessed the prognosis and quality of life of patients with occupational hand eczema,<sup>16,17</sup> mixing up its multiple causes and without taking into account the difference that exists, for example, between being sensitized to an allergen that, once identified, is easy to avoid at work, or being sensitized to another that makes it completely impossible to carry on working.

Thus, it is not surprising that contradictory results are obtained time and time again: a treatment functions perfectly well in some patients, whereas in others it is totally ineffective. The prognosis is excellent in some individuals and extremely poor in others. There is no impact whatsoever on the quality of life in some patients, whereas in others “hand eczema” forces them into depression. Is not this the result of mixing totally different pathologies together?

In general, the authors of these articles reflect their confusion regarding the lack of a definition of what is understood by hand eczema, its many clinical variants, their different therapeutic responses, etc, but continue to use this unfortunate term, without noting that it is the term itself that is responsible for the confusion.

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Eczemas that are exclusively or predominantly found on the hands have a multitude of causes. First, we can observe manifestations of what we call “endogenous eczemas,” such as atopic dermatitis, nummular eczema, or dyshidrotic eczema. Second, the skin of the hands is the preferred target of the thousands of sensitizing and irritant substances that exist in the environment. It is a very frequent (although not the only) site of occupational contact dermatitis. Taking into account allergic causes only, the clinical expression of eczemas observed on the hands is very broad. For example, acrylic resins can cause xerotic dermatitis in some finger pads, with pain and paresthesia; paraphenyldiamine can cause pruritic eczema on the backs of the second and third fingers of the nondominant hand in hair-dressers; formaldehyde can cause a type of dermatitis that mimics nummular eczema on the backs of both hands; and the antioxidant amines found in some rubbers can cause keratotic lesions in the palms, etc.

Given that the symptoms of allergic contact eczemas are already so diverse, why group any eczema that occurs on the hands as if implying the lesions are similar? Regarding treatment, it is clear that contact dermatitis resolves by allergen avoidance, without any recurrence, whereas the treatment and course of dyshidrotic eczema is very different.

Another aspect that remains unclarified is whether so-called “hand eczema” is found exclusively on the hands, or whether we can also speak about “hand eczema” in the patient who presents eczemas elsewhere on the body, in addition to the hands. In some cases this aspect has been solved with a certain amount of clarity,<sup>7</sup> but what can be deduced from most studies is that when the authors use the term “hand eczema,” they wish to refer to disease exclusively on the hands. Thus, it is hard to understand the

regular inclusion of dyshidrotic eczema as an example of hand eczema, since this very often affects the feet.

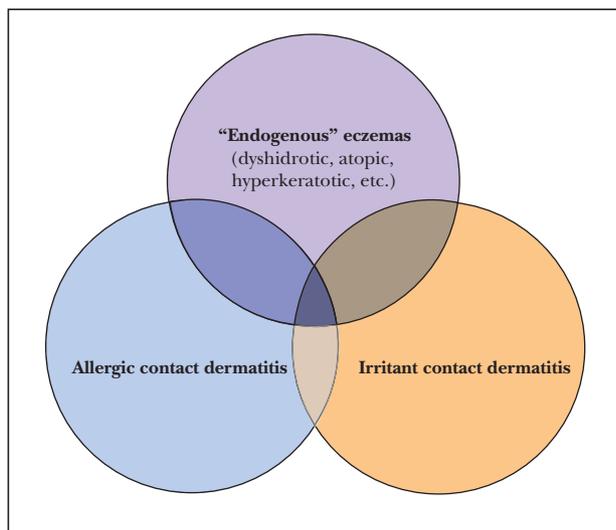
“Hand eczema” is therefore a meaningless term. In some way, we resemble the patients who come to our clinic complaining of “dermatitis.” This lack of rigor can be forgiven in patients, but among dermatologists we would not understand each other if we said that such a patient is suffering from “a dermatitis.” Would that be atopic dermatitis, seborrheic dermatitis, or dermatitis herpetiformis? Or one of the other tens or hundreds of types of “dermatitis”?

Many authors use the following fact to explain the tendency to group all eczemas that appear on the hand as if they are treating a single disease. In clinical practice, we relatively often find hand eczemas that can only be explained by a multifactorial cause. For example, there may be an endogenous component (such as atopic dermatitis), with an additional exogenous irritative process (for example, the constant use of soap) and an allergen (such as a preservative in the soap). This gives the impression, in these cases, that had all these factors (both endogenous and exogenous) not been present then eczema would not have developed. But this is not exclusive to the hands, and we can easily imagine how an atopic patient could develop an outbreak of his or her dermatitis in body areas that come into contact with specific cosmetics or textile fibers.

Eczemas that appear on the hands, like those that occur on the axillae, thighs, genitals, scalp, outer ears, etc, and ultimately on any part of the body, can be purely endogenous eczemas, purely exogenous ones, or a combination of both (Figure). The complexity of the factors that can be involved in the development of eczema does not imply that we should group them all under a single name or entity.

We often point to the characteristics of “hand eczema” as a sign of a possible occupational disease. Without doubt, the hands are the main location of dermatological disease caused or aggravated by work, although not the only one. The forearms can also suffer occupational eczema, or the eyelids, neck, thighs, etc. Of course, we often encounter eczemas on the hand that have no relationship to any occupational factor. The fact that eczema on the hands should suggest a contactant or occupational factor does not imply that this factor is present in all patients or that it has the same relevance in patients in whom it is present. Thus, the term “hand eczema” is not justified by the fact that it refers to a body area characteristic of occupational dermatoses.

We are far from knowing the exact causes of many types of eczema. Although the cause of contact eczemas seems more or less clear, the gaps in our knowledge on endogenous eczemas (in other words, idiopathic ones) are enormous. It is quite likely that the terminology we use for many “endogenous” eczemas is inappropriate. For example, 2 or more entities could be concealed under the name “dyshidrotic eczema,” with very different causes, clinical expressions,



**Figure 1.** Entities responsible for the different eczemas observed on the hands, showing the possible associations among them.

and treatment.<sup>18</sup> Most research on the origin of many hand eczemas is pending a better understanding of what we call “endogenous eczemas.”

But just because some eczemas occur on the hands, with a mixture of so many known and unknown endogenous and exogenous factors, we should not fall into the trap of simplistically classifying any symptom of dermatitis on the hands as “hand eczema.” There are many differences between these eczemas that can be identified through examination, symptom progression, the history of the patient, and patch test. The correct treatment of these lesions depends on us making this intellectual effort.

In conclusion, we believe that the confusing term “hand eczema” should not be used. If the exact causes of each eczema are not known it would be more advisable to describe its location (eczema between the fingers, eczema on the palms, eczema on the back of both hands, etc), while appropriate tests are performed or we observe its course until a specific diagnosis can be made.

#### Conflicts of Interest

The authors declare no conflicts of interest

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