

Clinical Review on Sensitive Skin: History, Epidemiology, Pathogenesis and Management

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Sensitive skin syndrome is a common and challenging condition, where little is known about its underlying pathophysiology. Patients with Sensitive skin syndrome often present with subjective complaints of severe facial irritation, burning, and stinging after application of cosmetic products. These complaints are out of proportion to the objective clinical findings. Defined as a self-diagnosed condition lacking any specific objective findings, Sensitive skin syndrome is by definition difficult to quantify and, therefore, the scientific community has yet to identify an acceptable screening test.

In cosmetic industry Sensitive skin is a common term used by patients and clinicians, and represents a complex clinical challenge faced by dermatologists and other skin care professionals. Extensive availability of irritant skincare products in the markets with its misuse together with other factors like pollutions, climatic and life style changes; an escalating prevalence may be expected. The subsequent adverse reactions and patient dissatisfaction with management may prompt medical litigations and legal disputes.

Several studies have posited a connection between sensitive skin and a disruption of epidermal barrier function, which is thought to give rise to a feeling of discomfort in the skin. In terms of epidermal barrier function, sensitive skin can be classified into 3 types:

Type I: low barrier function

Type II: normal barrier function with inflammatory changes

Type III: normal barrier function without inflammation but with reactivity problems

In terms of the factors that cause a reaction in sensitive skin, the condition can be classified as follows:

High sensitivity: reactive to a wide variety of both endogenous and exogenous factors and associated with acute or chronic symptoms and a strong psychological component

Environmental sensitivity: fair, dry, and fine skin that has a tendency to blush and is reactive to primary environmental factors

Cosmetic sensitivity: skin that exhibits transient reactivity to specific cosmetic products.

We propose a classification of the syndrome according to the presence or absence of associated skin diseases: Primary sensitive skin, in which the affected person has no associated underlying disease.

Secondary sensitive skin, in which the patient has a skin condition, such as seborrheic, atopic, or contact dermatitis, rosacea, or acne.

The prevalence of sensitive skin syndrome in Europe is high, approximately 39%, and the condition appears to affect women more than men. The only reference to the prevalence of sensitive skin in Spain comes from a study published by Misery et al. in 2009. The data collected also showed a higher prevalence of the syndrome in women and no correlation with factors such as age, rural or urban setting, and socioprofessional category. Although these data provide an initial insight into the epidemiology of sensitive skin in Spain

Pathophysiology mechanism underlying sensitive skin syndrome continue to be studied and debated in the literature. Current evidence indicates that individuals with sensitive skin have one of the following cutaneous alterations: increased nerve fiber density, increased immune response, or low epidermal barrier function. All of these alterations contribute to the activation of a response to several factors. These factors may be environmental (pollution, radiation, UV exposure, weather), lifestyle-related (diet, use of cosmetics, alcohol consumption), or endogenous (psychological factors and emotional stress). In the following section, we will discuss the biological mechanisms activated by these different factors.

Our main aim in this article is to provide a simple and practical algorithm for the diagnosis and treatment of sensitive skin syndrome based on expert opinion and the most recent updates on the topic in the literature.

Sensitive skin-A Real Concern. Day 1: Patient with a history of sensitive skin presented with severely inflamed burning tightening erythematous skin eruption over site of application of irritating skin care products, Day 4: Gradual improvement of skin condition after stopping the suspicious skin care products with liberal use of non-irritant moisturizers without topical or systemic steroids, Day 7: Complete recovery after continuous moisturization.

As confirmatory diagnosis, severity assessment, long term outcomes and possible complications of SSS are still not fully understood, management of SSS is challenging and difficult. She recovered after stopping the causative skin care products, liberal moisturizers, humectants and occlusive emollients and total avoidance of systemic and topical steroids.

With the advance of neuroscience and collaborative epidemiological studies and researches, the puzzling condition of SSS begins to be unveiled. Defective epidermal skin barrier, neuronal receptors sensitization, neuropathic pruritus secondary to small fibre neuropathy, neurogenic inflammation interacted with endogenous and exogenous triggering factors resulted the distressing cognitive perception of SSS. Local consumer councils, health departments, managing doctors and skin care manufacturing industries are all stakeholders and have a social responsibility in explaining, informing and educating the public of all age groups in understanding and preventing exacerbation of SSS. Dermatologists should take the lead and act as gate keeper and participate in an active role in managing and preventing this global public health problem