NATURAL MODULATION OF THE MICROBIOTA IN PATIENTS WITH ATOPIC DERMATITIS

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The collective microbial composition constitutes our skin microbiota.

Atopic dermatitis is a multifactorial chronic inflammatory skin disease leading to dryness and itchiness of the skin.

Atopic dermatitis is associated with increased risk of multiple comorbidities, including food allergy, asthma, allergic rhinitis, and mental health disorders.

The multifactorial pathogenesis of atopic dermatitis is still somewhat of an enigma.

Atopic dermatitis is characterized by a defective barrier, which exacerbates microbiome stimulation of the immune system, and the combination of these factors plays major roles in atopic dermatitis pathogenesis

The pathophysiology is complex and involves a strong genetic predisposition, epidermal dysfunction, and T-cell driven inflammation.

Although type-2 mechanisms are dominant, there is increasing evidence that the disorder involves multiple immune pathways.

It is still unclear whether compositional changes in the gut microbiome precede the development of atopic dermatitis, and thereby shift the immune system and disrupt the gut epithelial barrier, making it amenable to the development of atopic dermatitis, or how the pathogenic role of the established gut microbiome contributes to the development of atopic dermatitis.

As an interface with the environment, the skin is a complex ecosystem colonized by many microorganisms that coexist in an established balance.

The skin microbiome is a key component of pathogenesis in atopic dermatitis.

The skin of atopic dermatitis patients is characterized by microbial dysbiosis, with a reduction of microbial diversity and overrepresentation of pathogenic Staphylococcus aureus.

In this review, we summarize the recent findings on the gut and skin microbiome, highlighting the roles of major commensals in modulating skin and systemic immunity in atopic dermatitis.

We summarise and discuss advances in our understanding of the disease and their implications for prevention, management, and future research.

The topic of the administration of probiotics are addressed in this presentation.

Atopic dermatitis is a pruritic inflammatory skin barrier disorder that affects 20% of children, and 10% of adults in developed countries.

Modulation of the intestinal microbiota with probiotics may offer a way to prevent or treat allergic diseases, including atopic dermatitis.

Although our understanding of the gut-skin axis is only beginning, emerging evidence indicates that the gut and skin microbiome could be manipulated to treat atopic dermatitis.

The skin microbiome in healthy individuals is generally stable over time, but patients with atopic dermatitis display strong dysbiosis especially during flares, characterized by a reduction in microbial diversity.

The established dysbiosis of the gut microbiome combined with the immune system imbalance persists into adulthood and thereby contributes to the natural courses of diseases, such as atopic dermatitis.

Commensal microbiota have a protective function in early life, as reduced exposure to microbes increases susceptibility to atopic dermatitis and other allergic conditions in early childhood.

The restoration of gut microbiome dysbiosis can be considered a therapeutic target for atopic dermatitis from the aspect of the harmonization of the gut microbiome with the subsequent immune responses.

The gut microbiome has been studied as an important contributing factor to the immunologic pathway of atopic dermatitis via probiotics.

The effects of probiotics in the prevention and treatment of atopic dermatitis remain elusive. However, evidence from different research groups show that probiotics could have positive effect on atopic dermatitis treatment.

Modifying skin and gut microbiome by applying probiotic supplementation during early years may be a preventive and therapeutic option in high risk groups.

Changes in microbial composition and function, termed dysbiosis, in the skin and the gut have recently been linked to alterations in immune responses and to the development of skin diseases, such as atopic dermatitis.

Antidermatitis tea could modulate the immune system through gut microbiota in atopic dermatitis.

We investigated the effect Antidermatitis tea in patients with atopic dermatitis.

Antidermatitis tea is a natural immunomodulator of the intestinal and skin microbiota.

It modulates the immune system by increasing the natural reactions of defense and self-healing; it regulates cellular metabolism; it prevents the formation of mast cells or the release of histamine; it reduces the level of inflammation that accompanies the allergic reaction.

Removing dysbiosis of the gut microbiota can prevent and eliminate complications caused by atopic dermatitis.

It contains cultivated medicinal plants and spontaneous flora, fruit tree buds.

Conclusion

Antidermatitis tea is the first study, to our knowledge, to show the change of gut microbiota composition in patients with atopic dermatitis.

Our results demonstrated that the microbial composition was significantly different between atopic dermatitis patients and the healthy individual, which may be the reason leading to the various outcomes of probiotic treatment.

This study suggests that disturbances in the gut microbiome composition and metabolites and their crosstalk or interaction may participate in the pathogenesis of atopic dermatitis.

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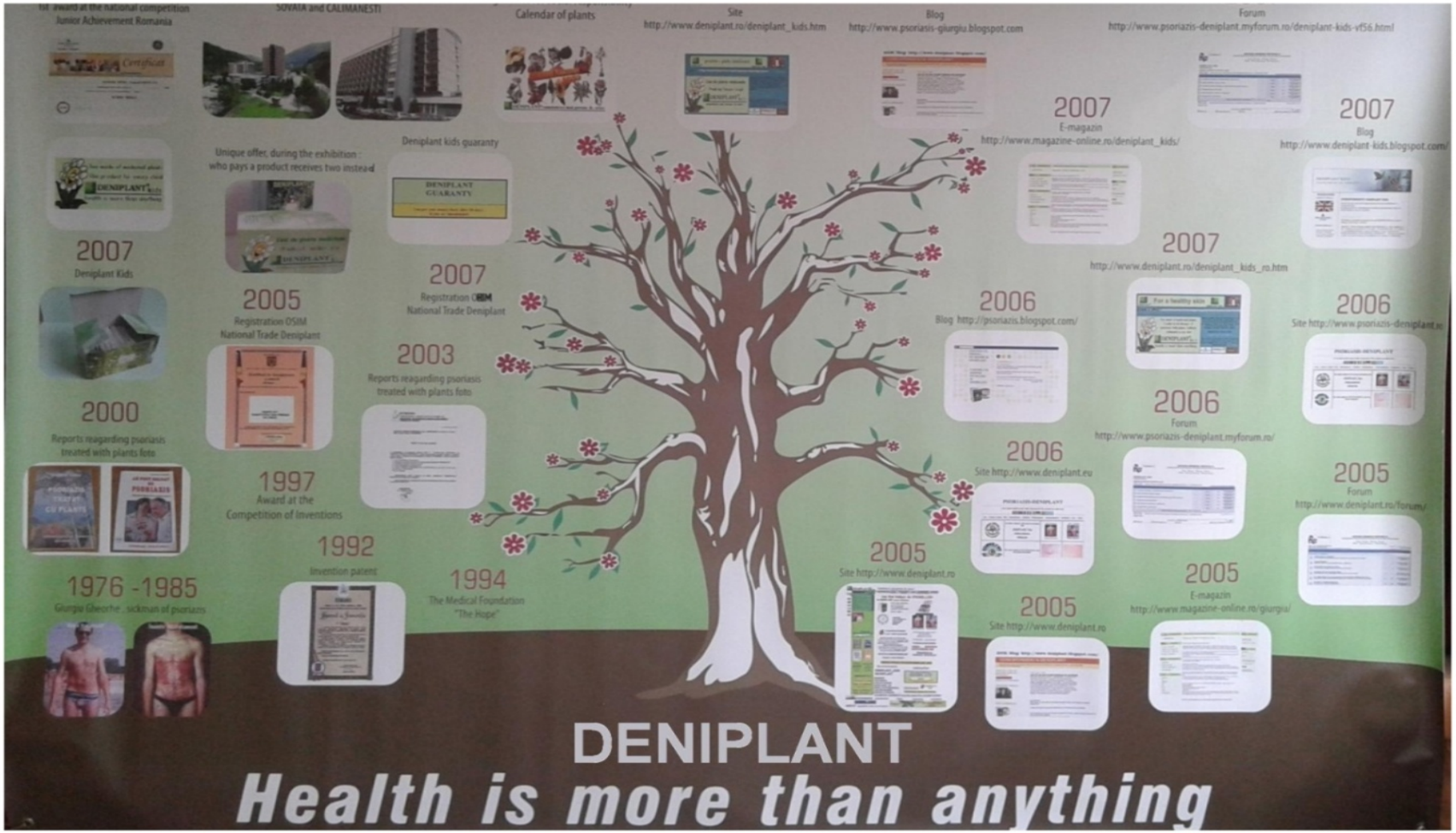

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