PSORIASIS

PSORIASIS AND TINEA: INTERLEUKIN-17 MEDIATED MANIFESTATION

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Background: In psoriasis, the blockade of the Interleukin (IL)?17A system by monoclonal antibodies brings significant improvement in skin symptoms, but fungal infections such as candidiasis and tinea are known adverse effects.

Observation: Patient 1, 30 y.o. male with severe psoriasis. His body was covered by very well-demarcated round thick erythematous plaque with scales and pustules on the fringe. Patient 2, 70 y.o female with ringworm. The annular plaque with scales and pustules on the fringe was observed.

Key message: There are several reports describing the association between increased risk for candida infection and the use of IL-17 inhibitors in patients with psoriasis, suggesting the protective role of IL-17 against fungal infection. IL-17 is a pro-inflammatory cytokine that plays a role in defense against extracellular pathogens, such as bacteria and fungi. IL-17 production is increased in tinea to protect the host from fungus, which in turn results in skin phenotype like patient 2. Therefore, psoriatic plaques may be a similar reaction to tinea, produced by excess anti-fungal immunity in the skin, with profound accelerated innate immune background in psoriasis patients. Why is the IL-17 system hyperactive in psoriatic patients? There may be a defect in the immune system in psoriatic patients, whereby T helper 17 cells (Th17) or innate lymphoid cell 3 (ILC3) systems become overactive to compensate. Koebner phenomenon, the formation of psoriatic eruption in uninvolved skin after irritation or trauma, may explain some of the distribution of the plaques. Increased expression of antimicrobial peptide, cathelicidin (LL-37), in psoriatic lesional epidermis is one of the provoking causes of inflammatory cascades.