



Scientists Close in on Origins of Psoriasis, Eczema

Rare cases where a patient has both conditions yield up crucial information

July 20, 2011

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WEDNESDAY, July 20 (HealthDay News) -- Psoriasis and eczema both cause red, scaly skin rashes, but the similarities between the two common, distressing conditions typically end there.

And now, examining patients suffering from both ailments (a very rare phenomenon), German scientists have teased out the opposing immune system responses that prompt skin flare-ups for both diseases.

They believe the findings could one day lead to more targeted, effective treatments.

The study, published in the July 21 issue of the *New England Journal of Medicine*, evaluated three patients with both psoriasis and eczema and noted that the T-cells -- types of white blood cells that fight infection -- found in psoriasis lesions differed from those found in eczema lesions.

The findings suggest that these T-cells migrate to the skin in response to distinct environmental triggers, *not* that the skin cells themselves are abnormal in either inflammatory condition, the study authors said.

"It's just another way for doctors to understand immune pathways and where they go awry," explained Dr. Doris Day, a dermatologist at Lenox Hill Hospital in New York City, who was not involved in the study. "It puts our understanding exponentially ahead and confuses us at the same time, because it's not supposed to happen [that patients can have both conditions]. The study definitely has value, and they're not making any claims or recommendations."

The most prevalent autoimmune disease in the United States, psoriasis affects up to 7.5 million Americans and is thought to arise from a combination of genetic and environmental triggers, according to the National Psoriasis Foundation. Eczema, on the other hand, is thought to be an allergic response and often occurs simultaneously in those with asthma or food allergies, according to the American Academy of Allergy, Asthma and Immunology. It is often outgrown by adulthood.

Psoriasis lesions in the study participants contained large numbers of so-called Th1 and Th17 cells, whereas eczema lesions had higher amounts of Th2 and Th22 cells. The researchers expanded their testing to include five patients with psoriasis and skin allergies to nickel -- a much more common combination that prompts an eczema-like reaction -- to confirm a similar T-cell response to psoriasis.

The study also found that all eczema lesions, but none in psoriasis, harbored *Staphylococcus aureus* bacteria, confirming that T-cells in psoriasis appear to prompt an innate immune response that's different from what is seen in eczema.

Dr. Jerry Bagel, a spokesman for the National Psoriasis Foundation and associate clinical professor of dermatology at Columbia University in New York City, said the research indicates that eczema and psoriasis "are clearly distinct entities, but there is some crossover immunologically."

If scientists could determine which antigens stimulate each condition -- a job that would likely take years -- they might find new ways to stop the disorders from developing in predisposed people, Bagel and Day agreed.

Current psoriasis treatments, which include both topical and systemic drugs, aim to suppress the body's immune response and slow down the skin cell growth cycle that leads to its trademark red, scaly plaques. Eczema treatments can involve both medications and lifestyle changes that cut itching, inflammation and worsening of the condition.

But, perhaps in the future, "they could have more direct testing to see if patients have an immune system alteration," Day said. "The more we understand the pathways and how the immune system responds to insults from the external world . . . we can adjust steps along the way, or medications that minimize side effects and maximize safety."

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