Skin allergies on the job: NetWellness

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By Special to The Plain Dealer

The workplace offers a wide variety of allergens and irritants that could potentially cause contact dermatitis. Substances from preservatives (biocides) in industrial chemicals to dye in hairdressing products can prompt an allergic reaction of the skin. The resulting skin inflammation can vary from redness to widespread rashes with open sores.

But the good news is that with identification of the allergen and avoidance strategies, workers can be cured of occupational dermatitis.

Irritant contact dermatitis

Accounting for an estimated 80 percent of dermatitis stemming from the workplace, irritant contact dermatitis occurs when the skin immediately becomes inflamed following exposure to a chemical or physical irritant. Common irritants include: soaps; solvents; waterless hand cleaners; friction; trauma; vibration.

Wet work conducted in low humidity conditions is the most common cause of irritant contact dermatitis.

For example, when the sun suddenly shines over a wet field, the mud in that field cracks as it dries suddenly. If the mud dries slowly, there is no cracking. The same scenario occurs on the skin. Rapid drying is far more damaging to the skin than slow drying; therefore minimizing exposure to wet-dry cycles will often prevent ICD.

Allergic contact dermatitis

The combination of inflamed skin, such as that from the wet-dry effect, and contact with a potential allergen creates the perfect storm for
Allergic contact dermatitis.

Not surprisingly, occupations in which workers deal with both wet work and potential sensitizers are at an increased risk for developing allergic contact dermatitis. For example, hairdressers, dental workers and machinists are exposed to chemicals at work that can lead to sensitization.

ACD is a delayed allergic response, resulting from a substance that causes an immune system response in the skin, that lasts for days to weeks. It can take upwards of three to seven days after the person encounters the allergen before visible signs of an allergic reaction emerge, making it difficult for an employee to locate the source of their rash. This type of occupational dermatitis often involves the hands, but because hands can transfer allergens, skin inflammation can also spread to the face and neck.

Prevention as a resolution

You might suspect occupational hand dermatitis if your rash improves after days or weeks away from work. If you often deal with wet work, consider doing the following to minimize your risk for irritation:

- Wear cotton gloves (to absorb perspiration and leakage) under occlusive gloves for wet work.
- Be sure to change these gloves when they become damp (many brands can be laundered and reused).
- Minimize water-based hand washing.
- Substitute alcohol-based hand sanitizers for water washing.
- While hands are still damp, apply an emollient immediately after washing (this will slow down the drying process).
- Use tepid water for hand washing, baths and showers.
- Barrier creams provide modest benefit for certain irritants.

If you believe you are having an allergic reaction to something in the workplace, occlusive gloves may create a physical barrier. Keep in mind that rubber gloves can cause allergic reactions in certain people; however, vinyl gloves are less likely to cause a contact allergy. It is necessary to wear cotton gloves under occlusive gloves in order to prevent the build-up of moisture, which could worsen the problem.

Seeking a specialist

If preventative steps are not yielding results, it may be best to seek the professional advice of a dermatologist who specializes in contact dermatitis. If ACD is suspected, the physician may recommend the worker undergo patch testing. Patch testing is the gold standard for diagnosing a contact allergy. In this test, a dermatologist applies patches that each contains a specific type of allergen on the patient.

The patient wears the patches for 48 hours and returns to the office near day three and day seven of the test. This is because the reaction taking place between the skin and allergen is delayed, meaning it will take the skin time to show visible signs of an allergy. When the dermatologist notices redness at the test site, they have identified a substance to which the person is allergic.

Only specialists in contact dermatitis will have tests for occupation specific allergens in addition to the 75 to 100 allergens that are standard testing for non-occupational contact dermatitis. These specialists are also experts in recommending personal protective equipment. For example, some
allergens like epoxy resin, acrylates, and glutaraldehyde penetrate most gloves. By avoiding the allergen causing the contact dermatitis, the patient can actually be cured of the condition and keep their job.

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