



Pruritic Rash

Juan Antonio Garcia-R., MD, CCFP, Dip Sport Med

A 20-year-old male complains of an episodic, recurrent pruritic rash that started 20 days earlier, after he began taking penicillin for tonsillitis. On the day of the visit, he is asymptomatic and he does not have any skin lesions.

1. What manoeuvre can be used to clarify his diagnosis?

- Skin examination under Wood's lamp
- Intra-dermal injection skin testing
- Dermatographism stroking test
- BP cuff compression test to his arm

2. What diagnosis is suggested by this positive manoeuvre?

- Atopic dermatitis
- Contact dermatitis
- Erythema multiforme
- Urticaria

3. How could you manage this condition?

- Glucocorticoids
- Antihistamines
- Doxepin
- All of the above


Dermatographism is a condition where skin reacts to stroking, scratching or rubbing. In other words, the term means means “skin writing,” and represents an exaggerated triple response of Lewis. After skin is stroked, local capillary dilatation produces a red line, a flare ensues around that line due to arteriolar dilatation, and finally, a wheal develops due to local edema. The patient feels local pruritus and a burning sensation over the tested area. This reaction starts after three to five minutes, and usually last 10 to 30 minutes, but in severe cases it can last a few hours.



This reaction is due to the release of vasoactive substances, such as histamine, by the mast cells.

The presence of this reaction suggests urticaria. Symptomatic dermatographism is classified by some physicians as a specific type of urticaria, but it can also be a skin manifestation in other types of urticaria. Urticaria is classified as acute when it lasts up to six weeks, and chronic when it lasts for more than six weeks.

Urticaria and dermatographism are frequently idiopathic, but they can also be associated with factors such as cold, heat, skin pressure, exercise, medications, food, stress, psychological distress, infestations, drugs, autoimmune disorders, chronic medical illnesses and congenital mastocytosis.

This condition can be treated with a combination of H1 and H2 antihistamines, avoidance of triggering factors, and management of psychological stressors. In refractory cases, glucocorticoids or doxepin can be used. If bronchospasm or angioedema is associated with acute urticaria, urgent treatment in the emergency department is needed and prehospital administration of albuterol (for bronchospasm) or epinephrine (for angioedema) may be warranted. In chronic symptomatic dermatographism, UV-A phototherapy with psoralen can be used. 

Answers: 1-c; 2-d; 3-d

Dr. Garcia is an Assistant Professor in the Department of Family Medicine, University of Calgary, in Calgary, Alberta.