

# Prostatitis and pruritus

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A 47-year-old man had severe itching that started the previous day and kept him up all night. We examined his rash (**Figure**) as we inquired about his history. He had no previous skin problems and no known allergies. He had no fever, pain, or malaise.

We discovered that a month ago he had started taking 1 trimethoprim-sulfamethoxazole double-strength tablet twice daily for chronic

prostatitis. He was told he would need to take the medication for 3 months. Other than prostatitis, he had no other medical problems and was not taking any other medications.

## ■ WHAT IS THE DIAGNOSIS?

**What is the best course of management?**

### FIGURE



*This patient complained of pruritus and had wheals on his chest and arms.*

## ■ SUBMITTING IMAGES TO PHOTO ROUNDS

Do you have images (slides, prints, digitized photos) of compelling clinical cases of interest to family physicians? We would like to publish them, along with a brief description of the clinical presentation and a diagnostic question for readers. The case should include information on the differential diagnosis and treatment, the latter applying an evidence-based approach supported by current references. Submit electronic files to [richard.usatine@med.fsu.edu](mailto:richard.usatine@med.fsu.edu), or send high-quality slides and prints to:

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### Pathophysiology

**T**he pathophysiology of urticaria and angioedema can be mediated by immunoglobulin E, complement, physical stimuli, or autoantibodies, or it may be idiopathic. These mechanisms lead to mast cell degranulation, resulting in the release of histamine. Histamine and other inflammatory mediators produce the wheals, edema, and pruritus.

### Diagnosis

This patient has urticaria (hives), presenting as variously shaped wheals on his chest and arms, resulting from a drug allergy.

These wheals are erythematous, nonpitting, edematous plaques that change size and shape by peripheral extension or regression. Urticaria is a dynamic process in which new wheals evolve as old ones resolve. Wheals result from localized capillary vasodilation, followed by transudation of protein-rich fluid into the surrounding skin. The wheals resolve when the fluid is slowly reabsorbed.

### Urticaria symptoms and signs

Itching is the hallmark symptom of urticaria. Patients may also experience burning or stinging. Acute urticaria may exhibit a rapid or gradual onset. The onset and resolution of wheals vary with the cause, and vary even among persons who have the same underlying cause.

It is easier to determine the precipitating factor—a drug allergy in this case—with acute urticaria than chronic urticaria (lasting 6 or more weeks). Angioedema causes a deeper edematous area that involves transudation of fluid into the dermis and subcutaneous tissue.

Wheals vary in size from the small, 2-mm papules of cholinergic urticaria to giant hives

that may cover an extremity or part of the abdomen in a single wheal. The wheal may be all red or white, or the border may be red with the remainder of the surface white. Wheals may be surrounded by a red halo. The larger lesions (over 5 mm in diameter) are called plaques. In patients with darker skin, the wheals may be skin-colored only, with no visible erythema.

### Differential diagnosis

The full differential diagnosis of urticaria includes angioedema, insect bites, food allergies, erythema multiforme, bullous pemphigoid, dermatitis herpetiformis, urticarial contact dermatitis, pruritic urticarial papules and plaques of pregnancy (known as PUPPP), mast cell releasability syndromes, and urticarial vasculitis.

Food allergies and insect bites can sometimes cause urticarial reactions. Angioedema is seen more often on the face and is especially found around the mouth and eyes.

### ■ MANAGEMENT

#### First-generation antihistamines

H<sub>1</sub> antihistamines, which compete with histamine for the H<sub>1</sub> receptor sites, are the first-line therapy for urticaria. First-generation antihistamines—such as diphenhydramine, chlorpheniramine, and hydroxyzine—can be very effective, particularly in acute cases. Diphenhydramine and chlorpheniramine are available over-the-counter and are relatively inexpensive. Hydroxyzine still requires a prescription, and it is thought to be more potent than diphenhydramine and chlorpheniramine.

The sedation experienced with these agents may help reduce pruritus, but it may also be a danger when a patient is driving or operating machinery. Because people respond to these medicines differently, you must weigh the bene-

fits and risks for each person based on their response to the medicine.

### Second-generation antihistamines

Second-generation H<sub>1</sub> antihistamines—such as astemizole, loratadine, desloratadine, and cetirizine—cause less sedation and are better for long-term daytime use. While more expensive, they are valuable in the management of chronic urticaria.

In the most refractory cases, combinations of various antihistamines may be useful in suppressing symptomatology. A nonsedating H<sub>1</sub> antihistamine in the daytime can be combined with a sedating H<sub>1</sub> antihistamine and doxepin at night. An H<sub>2</sub> antihistamine can be added to this regimen before starting oral prednisone (level of evidence=5 for all the treatment regimes cited, based on expert opinion without explicit critical appraisal and based on physiology).

### ■ THIS PATIENT'S TREATMENT

The patient understood that he must stop taking the trimethoprim-sulfamethoxazole tablets and was given a fluoroquinolone for his chronic prostatitis. He took 1 dose of diphenhydramine (Benadryl, in this case) in the office, and the itching and wheals began to subside.

He was also told he could purchase diphenhydramine over the counter to continue to relieve his itching and wheals. He was advised that if it made him sleepy, he could call the office for a prescription for a nonsedating antihistamine.

### ■ THIS PATIENT'S OUTCOME

The patient was significantly better the next day and never needed additional medications for urticaria. His chronic prostatitis did resolve with a 2-month course of fluoroquinolone.

# THE JOURNAL OF FAMILY PRACTICE

## Evidence-based medicine terms

The Journal of Family Practice uses a simplified rating system derived from the Oxford Centre for Evidence-based Medicine. More detailed definitions may be found at its website: <http://minerva.minervation.com/cebm/>.

**Level of Evidence** characterizes the validity of a study while making no specific practice recommendation

- 1a Systematic review of randomized controlled trials
- 1b Individual randomized controlled trial with narrow confidence interval
- 1c All or none—all patients died before therapy was available, but now some survive; or, some patients died before therapy was available, but now all survive
- 2a Systematic review of cohort studies
- 2b Individual cohort study, or low-quality randomized controlled trial
- 2c "Outcomes" research
- 3a Systematic review of case-control studies
- 3b Individual case-control study
- 4 Case series, or poor quality cohort or case-control studies
- 5 Expert opinion

**Strength of Recommendation** translates a given level of evidence into a practice recommendation

- A Includes 1a–c levels of evidence
- B Includes levels 2a–c and 3a, b
- C Includes levels 4 and 5

Strength-of-recommendation ratings do not always reflect a direct one-to-one correspondence with levels of evidence, as depicted above, but may take into account such variables as intervention cost, ease of use, and impact of the disease in the population.

Expert

## Answers

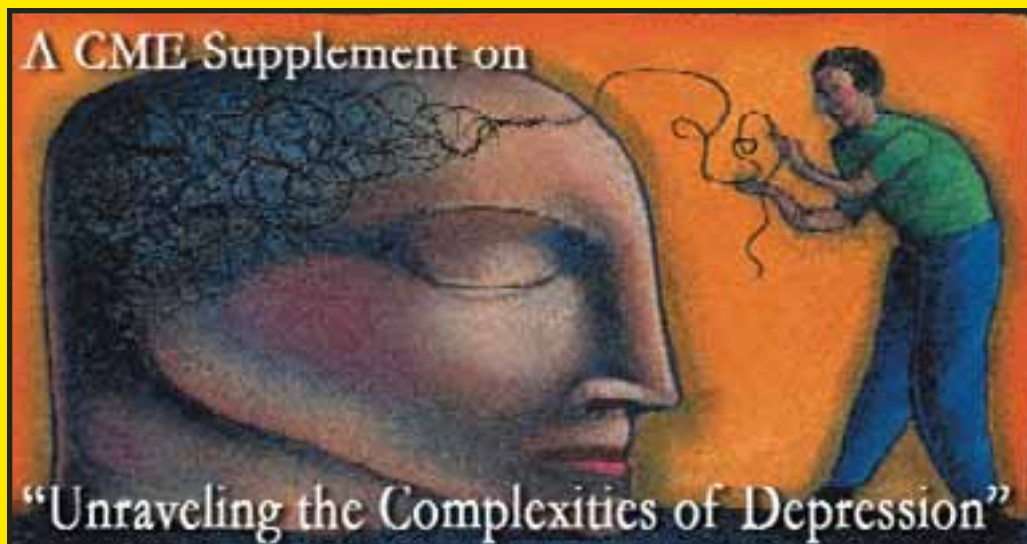
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