

BEST PRACTICES IN: Approaches to Pruritus

Pruritus is the most common symptom of skin disease and a frequent reason for consulting a clinician.¹ It may occur with or without dermatologic lesions other than excoriations. Careful evaluation of pruritus is essential as many cutaneous and systemic conditions can present with itch. These include cutaneous infestations; thyroid disease; malignancy; hematologic, renal, or hepatic disease; and neuropathies. One study of patients presenting with generalized pruritus reported that systemic illness caused 22% of cases (12/55).² For two thirds of those with systemic disease (8/12), itch was the initial manifestation. Another reason for prompt attention to pruritus is the skin damage that can result from scratching. Scratching damages the epidermal barrier layer, aggravates the itch, and creates a vicious itch-scratch cycle. Therefore, providing symptomatic relief to ease patient discomfort and identifying and treating the underlying cause of pruritus are both important.¹ This article discusses general evaluation and management of a patient reporting itch without cutaneous manifestations other than scratch marks. A list of questions to consider asking appears in Table 1.

Table 1. Patient History

- How long have you had the itch?
- Where does it occur on the body?
 - Is it all over or restricted to a specific area?
- What time of day does it occur?
 - Does the itch awaken you from sleep?
- Please characterize the sensation (eg, intermittent, sharp, continuous, burning).
- Do persons with whom you live or have close contact report itch?
- What makes it worse/better (eg, heat, dryness, exertion)?
- Do you have allergies?
 - If yes, to what?
- Rate your stress, anxiety, and depression levels on a scale of 0 to 10.

Source: Yosipovitch 2003.¹

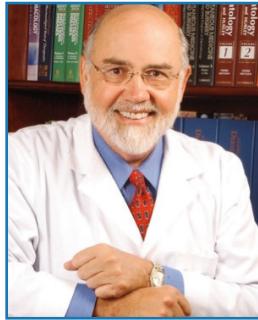
Impact of pruritus on quality of life. Similar to the impact of chronic pain, chronic itch can have a significant effect on quality of life.³ A leading authority on pruritus has characterized the effect of chronic itch as “a complex network of suffering” potentially involving³:

- Depression
- Somatic preoccupation
- Sleep disturbance
- Physical limitation
- Work disturbance

Screening for psychogenic causes. Itch can be psychogenic or organic in origin. Asking whether itch awakens a patient from sleep offers a clue to etiology. Psychogenic itch rarely disrupts sleep, whereas itch due to skin inflammation or systemic disease tends to worsen at night.¹ Consider asking all patients to rate their stress, anxiety, and depression levels on a scale of 0 to 10 (SAD evaluation), with 0 as none and 10 as most severe. Stress and anxiety may lead to scratching in some individuals; answers to these questions can offer diagnostic clues.

Palpation. Dermographism, or “skin writing,” occurs in approximately 5% of the population and is a frequent cause of itch without obvious cutaneous manifestations. Stroking the skin with a pen cap or tongue blade produces a raised welt or wheal in patients with this condition. Patients may report pain or itch during towel drying. The condition generally resolves spontaneously.⁴

Medication history. Pharmacologic agents can cause pruritus. To obtain a complete list of substances that patients use but may not view as drugs, consider asking about materials entering the body using the mnemonic of the six “ins”: instilled (in the eye), inhaled, ingested, injected, inserted (into orifice), and in secret (eg, herbal substances, nutritional supplements, mints, recreational drugs). Antimalarials, opioids, aspirin, and cholesterol-lowering drugs are examples of medications that can cause or aggravate itch. Drugs that lead to skin dryness or release antihistamines also have



Joseph B. Bikowski, MD
Clinical Assistant Professor
Dermatology
Ohio State University
Columbus, OH
Director
Bikowski Skin Care Center
Sewickley, PA

Cutaneous infestations. These include scabies, Pediculus capitis (head lice), and Pediculus pubis (crabs). Asking if family members or close contacts also report itch can point to scabies or lice. The mite causing scabies, *Sarcoptes scabiei* var *hominis*, should be isolated to make the diagnosis. Head lice are found most commonly in children 3 to 11 years of age. Pruritus in the occiput of the scalp suggests head lice. Crabs, or pubic lice, occur most often in sexually active adults and are transmitted by sexual activity or close contact. A majority of those with pubic lice also are infested on other hair-bearing areas.⁸

Systemic diseases. Pruritus occurs in severe renal (chronic renal failure) and hepatic (eg, cholestasis, intrahepatic cholestasis of pregnancy) conditions, sometimes as the manifesting symptom (eg, primary biliary cirrhosis, hepatitis C). Hyperthyroid and hypothyroid are both associated with itch, with prevalence of up to 60% reported in hyperthyroidism. Itch in hypothyroidism likely results from the dry skin associated with this condition. More than half (58%) of patients hospitalized for anorexia nervosa had itch and dry skin in one series. It resolved upon weight restoration.¹

Iron deficiency anemia has been associated with, and sometimes manifests as, pruritus.² Nearly half of patients with polycythemia vera experience itch, often triggered or intensified by a hot shower or bath.¹ Human immunodeficiency virus infection and multiple sclerosis are examples of other systemic conditions associated with pruritus.⁶

Malignancy. Roughly 25% to 35% of patients with Hodgkin's disease report itch.^{1,9} Pruritus occurs less frequently in non-Hodgkin's lymphoma, cutaneous T-cell lymphoma, leukemia, and breast and gastrointestinal cancers.⁹ Consider cancer as a cause of itch after eliminating other possible etiologies.⁹ The rate of malignancy in patients presenting with generalized pruritus ranges from <1% to 8%.⁶ Conducting a review of systems, including questions about loss of weight or appetite, night sweats, and fatigue along with lymph node palpation, may yield clues suggesting malignancy or another systemic condition.

Neuropathic pruritus. Some cases of itch appear to stem from nerve compression or spinal abnormalities. Notalgia paresthetica, localized pruritus medial to the scapula, is thought to involve compression of spinal nerve roots T2 to T6. Brachioradial pruritus involves itching restricted to the brachioradial area of the upper extremity. It has been linked to cervical root compression. Postherpetic pruritus can accompany postherpetic neuralgia as a sequela of herpes zoster.¹

Atypical causes. Absence of cutaneous lesions does not rule out autoimmune-initiated vesiculo-bullous eruptions. Pruritus is often the first symptom of dermatitis herpetiformis and rarely is the initial symptom of bullous pemphigoid, appearing before the blisters that are characteristic of these conditions.¹

Diagnostic workup. If findings of the history and physical examination exclude dermatologic conditions, then consider obtaining the laboratory and diagnostic tests listed in Table 2 to rule out systemic causes.

been implicated.^{1,5} Drug-induced pruritus can occur without a rash.⁶

Xerosis (dry skin). This is the most common reason for itch in older adults and affects at least 75% of those >65 years of age.⁵ It also is the most frequent reason for itch without a rash. Xerosis can be associated with other causes of pruritus, such as atopic dermatitis and systemic diseases.⁷ It can produce intense pruritus and often occurs or is exacerbated in the winter because of dry heat. Using a humidifier and moisturizer can alleviate the condition.

Table 2. Diagnostic Workup*

- Complete blood cell count with differential
- Comprehensive metabolic profile
- Urinalysis
- Erythrocyte sedimentation rate
- Thyroid-stimulating hormone
- Chest radiograph

*If dermatologic causes are excluded, base choice of tests on symptoms and clinical judgment.

Sources: Yosipovitch 2003¹; Butler and Lund 2009.⁶

Managing pruritus. Treating any underlying cause identified is mandatory. Symptomatic relief of the itch also is important because it can disturb sleep and reduce quality of life. Emollients can alleviate dry skin by restoring the skin's barrier function. Patients with dry, excoriated skin may especially benefit from use of cleansers and moisturizers containing ceramides or from emollient creams or lotions with a high lipid content. Cleansing with a mild soap of low pH helps preserve the skin's barrier function.⁷ Cooling agents such as menthol, camphor, or phenol create a counterirritation and essentially distract patients from the itch sensation.¹ Topical anesthetics such as pramoxine and a mixture of lidocaine and prilocaine offer value in mild to moderate pruritus.⁷ I find these topical agents most beneficial for localized rather than generalized pruritus. Topical corticosteroids may alleviate itch due to inflammation but are not directly antipruritic.¹

Summary. Identification of the cause of pruritus is important because it may signal the presence of serious systemic disease and lead to skin excoriation, sleep disruption, and reduced quality of life. Symptomatic treatment can restore skin damage due to scratching as well as relieve the patient's sensation of itch and immediate discomfort. Therapy for any underlying cause identified also should be undertaken.

References

1. Yosipovitch G. Pruritus. *Curr Probl Dermatol.* 2003;15:143-164.
2. Polat M, Oztas P, Ilhan MN, Yalçin B, Alli N. Generalized pruritus: A prospective study concerning etiology. *Am J Clin Dermatol.* 2008;9:39-44.
3. Yosipovitch G. Itch questionnaires as tools for itch evaluation. In: Yosipovitch G, Greaves MW, Fleischer AB Jr, McGlone F, eds. *Itch. Basic Mechanisms and Therapy.* New York, NY: Marcel Dekker, Inc; 2004: Chapter 17. Available at: http://books.google.com/books?id=ATik5D6S0u8C&pg=PA170&dq=itch+AND+impact+on+quality+of+life&source=bl&ots=qVmqB_YEPs&sig=rq7EmNdeajFo-jnaN61UsXpDtf8&hl=en&ei=ovHISreRN5Ox1AfganoCg&sa=X&oi=book_result&ct=result&resnum=4&ved=0CBcQ6AEwAzgK#v=onepage&q=itch%20AND%20impact%20on%20quality%20of%20life&f=true. Accessed October 26, 2009.
4. Habib TP. Urticaria and angioedema. In: Habib TP. *Clinical Dermatology: A Color Guide to Diagnosis and Therapy.* 4th ed. Mosby Inc; 2004: Chapter 6. Available at: http://www.mdconsult.com/das/book/body/167633842-3/908904960/1195/106.html#4-u.1.0-B0-323-01319-8.50008-X--cesec56_479. Accessed October 19, 2009.
5. Roberts WE. Dermatologic problems of older women. *Dermatol Clin.* 2006;24:271-280.
6. Butler DF, Lund JJ. Pruritus and systemic disease. Updated January 2, 2009. Available at: <http://emedicine.medscape.com/article/1098029-overview>. Accessed October 14, 2009.
7. Yosipovitch G, Hundley JL. Practical guidelines for the relief of itch. *Dermatol Nurs.* 2004;16(4). Available at: http://www.medscape.com/viewarticle/488914_3. Accessed October 19, 2009.
8. Jacobson CC, Abel EA. Parasitic infestations. *J Am Acad Dermatol.* 2007;56:1026-1043.
9. Pipkin CA, Lio PA. Cutaneous manifestations of internal malignancies: An overview. *Dermatol Clin.* 2008;26:1-15.

This supplement was produced by INTERNATIONAL MEDICAL NEWS GROUP, a division of ELSEVIER MEDICAL INFORMATION, LLC. Neither the editor of SKIN AND ALLERGY NEWS, the Editorial Advisory Board, nor the reporting staff contributed to its content. The opinions expressed in this supplement are those of the faculty and do not necessarily reflect the views of the supporter or of the Publisher.

Copyright © 2009 Elsevier Inc. All rights reserved. No part of this publication may be reproduced or transmitted in any form, by any means, without prior written permission of the Publisher.

Elsevier Inc. will not assume responsibility for damages, loss, or claims of any kind arising from or related to the information contained in this publication, including any claims related to the products, drugs, or services mentioned herein. The opinions expressed in this supplement do not necessarily reflect the views of the Publisher.

Editorial support provided by Eileen McCaffrey, MA.

Faculty Disclosure: **Dr Bikowski** has received honoraria from Allergan, Inc., Coria Laboratories, Ltd., Galderma Laboratories, L.P., Intendis GmbH, Medics Pharmaceutical Corporation, OrthoDermatologics, Quinova Pharmaceuticals, Inc, Stiefel laboratories, Inc., and Warner Chilcott; served on advisory boards for Coria, Galderma, Intendis, Ranbaxy Pharmaceuticals Inc., Stiefel, and Warner Chilcott; has been a speaker for Allergan, Coria, Galderma, Intendis, Promius Pharma, LLC, Ranbaxy, and Stiefel; has a consulting agreement with Allergan, Coria, Galderma, Intendis, Medics, Promius, OrthoDermatologics, and Stiefel; and is a stockholder for Quinova.