

Care of the Aging Patient: From Evidence to Action

Pruritus in the Older Patient

A Clinical Review

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IMPORTANCE Pruritus is a common problem among elderly people and, when severe, causes as much discomfort as chronic pain. Little evidence supports pruritus treatment, limiting therapeutic possibilities and resulting in challenging management problems.

OBJECTIVES To present the evidence on the etiology, diagnosis, and treatment of pruritus in the elderly and, using the best available evidence, provide an approach for generalist physicians caring for older patients with pruritus.

EVIDENCE REVIEW PubMed and EMBASE databases were searched (1946–August 2013). The Cochrane Database of Systematic Reviews and the Agency for Healthcare Research and Quality Systematic Review Data Repository were also searched from their inception to August 2013. References from retrieved articles were evaluated.

FINDINGS More than 50% of elderly patients have xerosis (dry skin). Xerosis treatment should be included in the initial therapy for pruritus in all elderly patients. Calcium channel blockers and hydrochlorothiazide are important causes of pruritic skin eruptions in older patients. Neuropathic pruritus is infrequently considered but may cause localized itching (especially in the genital area) and generalized truncal pruritus (especially in patients with diabetes mellitus). Certain skin conditions are more common in elderly patients, including scabies, bullous pemphigoid, transient acantholytic dermatosis, and mycosis fungoides, and should be considered in elderly patients with pruritus.

CONCLUSIONS AND RELEVANCE It is important to evaluate elderly patients for dermatological, systemic, and neurological etiologies of itch. A simple-to-apply diagnostic and therapeutic algorithm can be used. Xerosis, drug reactions, and neuropathy should be considered when evaluating pruritus.

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The Patient's Story

Mr A is 85 years old and has multiple skin abnormalities with intractable pruritus of the trunk, groin, perianal area, face, and scalp. He cannot sleep for more than 4 to 5 hours per night because of his pruritus. Mr A was diagnosed as having seborrheic dermatitis, lichen simplex chronicus, seborrheic keratoses, tinea pedis, intertrigo, and xerosis (dry skin) in 2000. Treatments included numerous topical steroids and antifungals. None were effective, leaving Mr A significantly stressed.

Mr A lives with his wife in an assisted-living facility. He requires help with dressing, transferring, using the telephone, shopping, and managing medications. His medical history includes type 2 diabetes mellitus, obesity, chronic kidney disease, and significant cardiovascular, cerebrovascular, and peripheral vascular disease. He has had 2 coronary artery bypass graft operations, 2 left carotid endarterectomies, and a left femoral

popliteal bypass operation. He also underwent multilevel lumbar laminectomy for spinal stenosis.

His list of 28 oral and inhaled medications includes rosuvastatin and amlodipine. At one visit to Dr I, his geriatrician, Mr A produced 14 different tubes of topical medications, including multiple steroids and antifungals. He and his wife did not understand when and where to apply these medications.

Mr A's skin was dry, with erythematous patches, seborrheic keratoses, and areas of excoriation on his trunk. He had bilateral inguinal fold and perianal erythema with a few white perianal plaques and several fissures. On monofilament testing, cutaneous sensation in his feet was absent. Screening for depression was unrevealing. His laboratory test results were notable for mild anemia, elevated creatinine, and normal liver function and routine chemistries.

Mr A had several UV-B light treatments, which were minimally helpful. Mr A used over-the-counter diphenhydramine to help him sleep even though Dr I had advised against it because of potential anticholinergic adverse effects. Ultimately, Dr I, in collaboration with

a dermatologist, simplified Mr A's skin care treatment to desonide ointment for perianal dermatitis; ammonium lactate topical lotion, 12%, for xerosis of his trunk and limbs; and triamcinolone cream, 0.1%, for truncal itch.

Perspectives

Mr A: ... [T]his is the thing that is literally driving me out of my mind.

Mrs A: When he gets really itchy he is very, very, very uncomfortable and he gets panicky from needing to scratch ... it happens almost daily.

Dr I: ... [T]here isn't a moment of any day that it doesn't drive him up a wall. At night, when there is no ... distraction, it's unbearable.

Pruritus may cause significant distress, as it has in Mr A.¹⁻³ When severe, pruritus may be as disabling as chronic pain.¹ Pruritus is caused by a multitude of factors and physiological changes that occur with aging, including impaired skin barrier function, immunosenescence, neuropathies, and medication use.⁴

This article outlines a 2-office-visit strategy applying diagnostic testing and therapeutic interventions in parallel to determine the cause(s) of pruritus and, most importantly, to provide a patient with relief while the evaluation is ongoing. Establishing achievable treatment goals based on the cause of a patient's pruritus is critical for successful management of pruritus.

Prevalence and Consequences of Pruritus in Older Adults

Itching is reported as a symptom by patients in more than 7 million outpatient visits per year in the United States. Of these, 1.8 million visits (25%) are by patients aged 65 years or older.⁵ Population-based prevalence studies of pruritus in the geriatric population are lacking. Most studies in adult populations are limited by small sample sizes and unrepresentative populations. The overall prevalence of pruritus in the United States is not known. In one study,⁶ pruritus was the most common skin problem, affecting nearly one-third of nursing home patients. The largest study of pruritus in a geriatric population was conducted in Turkey in a single dermatology clinic and found a prevalence of chronic pruritus of 12% in 4099 patients aged 65 years or older. Nearly 20% of patients aged 85 years or older reported pruritus.⁷

Chronic pruritus is often refractory to therapy, resulting in feelings of helplessness and desperation in patients. These problems are exacerbated by the significant sleep disturbance that chronic pruritus may cause.⁸ Inadequate support networks and coexistent depression can result in increasingly frequent and more severe pruritus.⁹

Methods

We conducted 2 systematic searches of PubMed and EMBASE for all English- and Spanish-language randomized clinical trials on treatment and management of the symptom of itch in adults using the key words *pruritus, itch, elder, senior, geriatric, or octogenarian*. The first search was for randomized trials and included articles published between 1946 and August 2013, yielding 797 studies. Of these, only 3 were randomized trials.

Because the initial search yielded few studies, we repeated it using the same search terms but relaxed the inclusion criteria to any primary study of treatment or management of pruritus published

between 2005 and August 2013. This strategy yielded 773 articles, of which 6 were included. The Cochrane Database of Systematic Reviews and the Agency for Healthcare Research and Quality Systematic Review Data Repository were also searched. A manual search of bibliographies was also conducted. Search details can be found in the eAppendix in the Supplement.

Aging, the Skin, and the Immune System

A combination of 3 age-related biological processes contribute to itching: loss of barrier function, immunosenescence, and neuropathy. Understanding these age-related changes in skin physiology can help primary care clinicians effectively treat many cases of pruritus.

Loss of Barrier Function

One of the skin's most important functions is to retain water. A superficial layer of complex lipids on the skin helps it retain water. This layer is so thin that applying a strip of adhesive tape 10 to 20 times removes it entirely. This epidermal water barrier can repair itself, but with age, both the rate of repair and the function of the epidermal barrier are reduced (Figure).^{10,11} This causes xerosis (dry skin) to be the most common skin concern in elderly people, affecting more than 50% of those aged 65 years or older.¹²

Immunosenescence

Immunosenescence is a proinflammatory state of the skin.^{13,14} It may contribute to the high frequency of eczematous and other inflammatory skin reactions in older patients.

Neuropathy

Age-associated neurological disorders contribute to pruritus in 2 ways: (1) sensory neuropathy (most commonly due to diabetes mellitus) can cause generalized itch¹⁵⁻¹⁷ and (2) neural impingement can cause localized pruritus, a problem especially common in the genital area.¹⁸ If a pruritic condition (such as pruritus ani) develops concomitant to impaired neural function, the pruritus may be exacerbated and is frequently poorly responsive to trials of anti-inflammatory medications.

Evaluation and Management of Pruritus in Elderly Patients

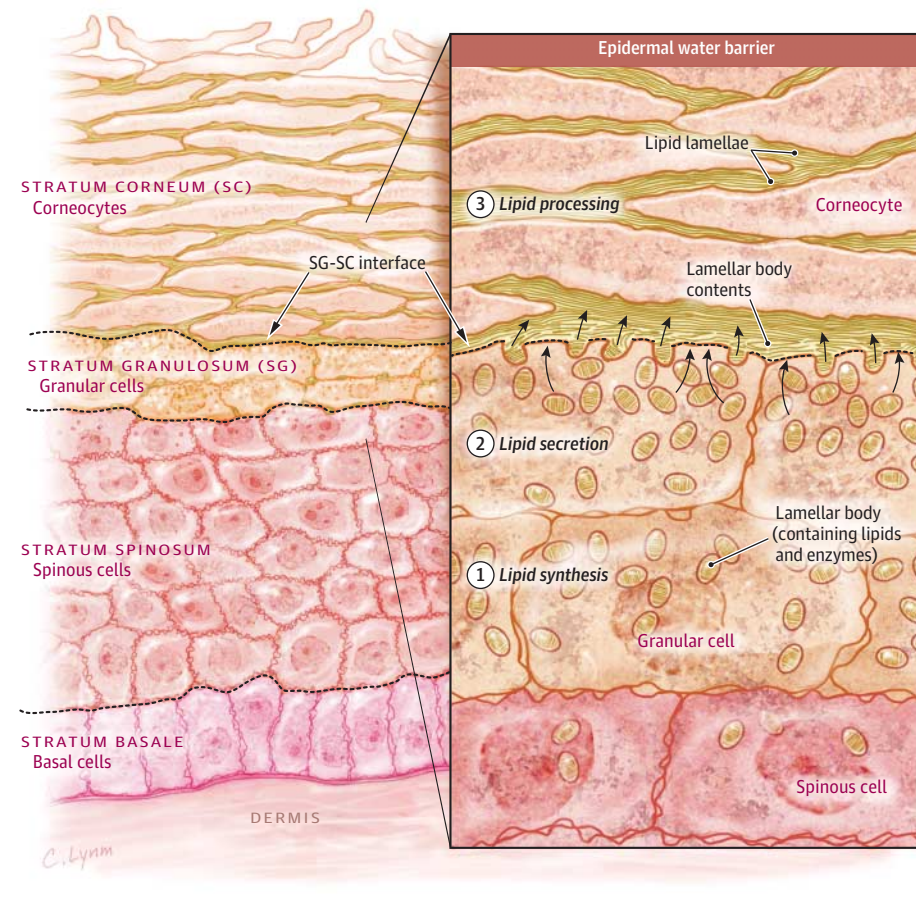
The elements of a proposed 2-office-visit plan for evaluation and management of pruritus in elderly patients are summarized in Box 1. The first visit for an elderly patient with pruritus emphasizes common, treatable causes of pruritus. Age-related xerosis is addressed and most patients improve. The second visit is more detailed and integrates the patient's basic laboratory measurements and medical conditions into the evaluation.

Initial Visit

Patient Evaluation

Dr I: I remember in that first visit just ... thinking about his blood pressure, ... glucose, and the fall he had ... and at the end he and his wife just looked at me and asked, "What about the itching?" ... Itching is now the number one thing I put on my problem list ...

Figure. The Epidermal Water Barrier



The keratinocytes of the granular cell layer make and secrete lipid into the spaces between corneocytes, the anucleate keratinocytes of the stratum corneum. This lipid is processed by enzymes into lipid bilayers that are an effective water barrier. Individuals of advanced age (>80 years) have reduced lipid synthesis and secretion. Moderately aged individuals (50-80 years) make and secrete lipid normally but have a defect in lipid processing. Patients of advanced age and, to a lesser extent, moderate age both form a less effective water barrier and repair a damaged barrier (caused by irritants such as detergents and soaps) less effectively.

It is essential to recognize the profound effect pruritus can have on a patient's function and quality of life. As with other symptoms in this age group, pruritus evaluation requires integration and consideration of all of the patient's medical conditions. Finding one potential cause for pruritus does not eliminate the need to complete a full evaluation because the cause of itch in older patients is frequently multifactorial. For instance, in Mr A's case, we speculate that his spinal stenosis contributed to his genital pruritus while sensory neuropathy from his diabetes played a role in his generalized itch.¹⁸

History | The medical history should detail the severity and location of pruritus and document all medication use. As is done with pain assessment, the patient should be asked to rate itch severity on a scale of 0 to 10 ("no itch" to "worst imaginable itch").¹⁹ If the severity is greater than 6 or 8 or awakens the patient from sleep, the pruritus usually has significant effects on quality of life and should be managed aggressively. A diagnosis of scabies should be high on the differential diagnosis for patients with severe pruritus, particularly if the onset of pruritus was sudden or spared the scalp or if the patient recently resided in a long-term care facility.^{20,21}

The effect of bathing on generalized pruritus provides an important diagnostic clue. Pruritus that improves with bathing or showering strongly suggests xerosis. This is especially true if the pruritus reappears minutes to hours after bathing and is again relieved by

bathing. Repeated washing and scrubbing to alleviate pruritus exacerbates xerosis. Dry-skin itch is worse in winter and in low-humidity environments. Pruritus mostly affecting the extremities and flanks and sparing moist areas such as the groin, axilla, face, and scalp strongly suggests xerosis as the cause.

A medication history should include a review of topical treatments and their effect on a patient's itch. As occurred with Mr A, it is common for patients to be unaware of the proper use of topical medications. Contact dermatitis may complicate some topical medications, worsening a patient's pruritus.

The role of systemic medications in pruritus, especially in the older population, in whom polypharmacy is common, is poorly understood. Pruritus is commonly listed as a medication complication and can be due to several different mechanisms as described herein.^{22,23} However, it is important to not delay treatment of the itch while awaiting a response from medication cessation.²³

Pruritus attributable to systemic medications can be classified into 3 categories: (1) pruritus with a transient eruption (like urticaria) or with no rash; (2) pruritus due to drug-induced cholestasis; and (3) pruritus with a skin eruption or rash. Several medications reportedly cause pruritus with no or only a transient eruption, including angiotensin-converting enzyme inhibitors, salicylates, chloroquine, and calcium channel blockers (CCBs).²⁴⁻²⁷ If pruritus begins within a few weeks of starting a new medication, discontinuation should be considered.

Box 1. Evaluation and Management of Elderly Patients With Pruritus

1. Take directed history detailing severity (on a 0-10 scale), location (localized vs generalized), and modifying factors for the patient's itch (bathing).
2. Review medications (topical and systemic).
3. Perform physical examination for evidence of scabies (burrows, genital lesions) and dry skin (fissured, red patches on legs, flanks, and arms).
4. Order basic laboratory evaluation (complete blood cell count, fasting plasma glucose, thyrotropin, liver function tests, serum urea nitrogen/creatinine, calcium, phosphorus).
5. Treat for xerosis.
6. Treat for scabies if found.
7. If rash is present, initiate topical therapy, obtain potassium hydroxide preparation, order skin biopsy, or refer to a dermatologist if initial therapy does not improve the rash.
8. If no rash is present, initiate metabolic workup (thyroid, parathyroid, iron deficiency) and evaluate for malignancy or for neuropathy. If no rash is present and skin changes are due to scratching, assess for scabies, obtain a potassium hydroxide preparation, consider skin biopsy, pursue a metabolic workup, and evaluate for malignancy or neuropathy.

Two well-designed studies compared elderly patients with pruritus and eczema with age-matched patients without these conditions. The affected patients were 2 to 4 times more likely to be taking a CCB and twice as likely to be taking a thiazide.^{28,29} To confirm this association, CCBs were stopped in a subset of these patients and in 83%, dermatitis and pruritus resolved in an average of 3.4 months. Rechallenge with the medication led to recurrence of the eczema in 8 of 9 cases in an average of 4 days.²⁷ Eczema with pruritus due to CCBs can begin years after the medication is initiated. The medication must be discontinued for up to 1 year to ascertain whether it is the cause of the rash and pruritus.²⁸ Stopping Mr A's amlodipine would have been a reasonable consideration.

Medications in combination with UV light (even through window glass) can cause pruritus and a rash. Accentuation of a skin eruption in areas of light exposure and sparing of double-covered areas (covered by undergarments) suggest photodermatitis. Thiazides, tetracycline, angiotensin-converting enzyme inhibitors, CCBs, nonsteroidal anti-inflammatory drugs, quinine, and amiodarone are among the common photosensitizers used in the older population.³⁰ Many other medications can induce pruritic skin eruptions with various clinical and pathological features. Any medication begun within 6 weeks prior to the onset of a new skin eruption should be stopped if possible. At times, skin biopsy may suggest the offending medication because some reaction patterns (eg, lichenoid dermatitis) are much more commonly caused by medications and the number of medications causing this reaction pattern is relatively few.

Physical Examination | The physical examination must first identify if there is a skin eruption (redness, bumps, blisters, hives, scaling). This is called *itch with rash* and contrasts with a skin examination showing only normal skin or changes from scratching (called *itch with no rash*). If a primary skin rash (ie, skin changes caused directly by the disease process) is present and no potentially contributing medications are identified, diagnosis and treatment directed at the skin

Box 2. Xerosis: Basic Principles of Management

1. Restrict soap to axilla, groin, scalp, and soles.
2. Perform less frequent (less than once per day) bathing with warm, not hot, bath or shower water.
3. Avoid topical alcohol (astringents) and high-concentration lactic acid (>5%).
4. Apply petrolatum or petrolatum-containing moisturizer (cream or ointment, not lotion) immediately after bathing.

eruption (skin biopsy/dermatology consultation/topical anti-inflammatory treatment) are recommended. A substantial proportion of new scabies cases occur in patients aged 65 years or older, especially those in their 80s and 90s.³¹ Severe pruritus and skin lesions in the finger-webs, wrists, soles of the feet, genitalia, and breasts (in women) suggest scabies. On close examination, there may be linear or tortuous skin lesions representing burrows. Scabies in this age group is often acquired in long-term care facilities.³¹

Xerosis or a neuropathic, systemic, or malignant cause for the pruritus is strongly suggested when evidence exists of scratching in the absence of a rash and there are no skin lesions where the patient cannot reach. Mr A had dry skin, cutaneous eruptions, and truncal excoriations, suggesting that his pruritus was caused by multiple factors. These correspond to pruritus due to xerosis, a primary skin eruption not defined, and possibly truncal pruritus due to diabetes mellitus (excoriations with no rash).

Laboratory Evaluation | If there is no primary skin rash as noted herein, then laboratory testing for diabetes mellitus, iron deficiency, hyperthyroidism/hypothyroidism, liver inflammation, cholestasis, severe renal failure, and hyperparathyroidism is recommended.³² Pruritus caused by these conditions occurs without visible skin eruptions or with only excoriations.

Treatment

Mr A: *Well, they've changed [my topical medications] so many times that sometimes I get confused.*

Dr I: *He came with an entire bag full of creams and ointments. I ... told them I was completely overwhelmed and didn't understand how they had been dealing with it.*

When first addressing new or refractory pruritus, treat for xerosis (Box 2) by applying soothing topical agents and treat any underlying inflammation (Table 1).^{4,38}

For refractory pruritus, aggressive hydration with a modified "soak and smear" or wet wraps effectively reduces itch from dry skin or inflammatory dermatoses.^{39,40} For the soak-and-smear technique (Box 3), after soaking for 10 to 20 minutes in a tub of water of a comfortable temperature, pat dry and, while still moist, apply an effective moisturizer. After applying the moisturizer, occluding the skin with kitchen plastic wrap or a vinyl suit enhances moisturization. For frail patients and those at high fall risk,⁴¹ wet wraps are preferred (Box 4). The utility of lactic acid is unclear; it does enhance dry skin-related scale removal and may improve pruritus, but high-concentration lactic acid (12% ammonium lactate) can irritate inflamed dry skin and worsen pruritus.⁴² Bath oils can be beneficial but increase the tub's slipperiness and can increase the risk of falls.

Table 1. Treatments for Pruritus and Their Costs

Pruritus Treatment by Etiology	Cost, \$ ^a
Xerosis	
Moisturizers	
White petrolatum, 13 oz	5
Moisturizing cream (tub-style container), 16 oz	10-15
Soothing topical lotions or creams	
Anti-itch lotions, 7 oz	8-11
Inflammation	
Topical steroids	
Triamcinolone ointment, 0.1%, 80 g/1 lb	18/49
Fluocinonide ointment, 0.05%, 60 g	50
Renal pruritus	
γ-Aminobutyric acid analog ³³	
Gabapentin, 300 mg, 90 pills	20
Pregabalin, 75 mg, 30 pills	95
UV-B phototherapy, per treatment ^{34b}	50-100
Hepatic pruritus	
Opiate antagonists ³⁵	
Naltrexone, 50 mg, 30 pills	105
Butorphanol nasal spray, 2.5 mL	57
UV-B phototherapy, per treatment ^{36b}	50-100
Neurogenic pruritus	
Topical capsaicin, 1.5 oz	9-15
Capsaicin patches, 3-4 patches	6-12
Topical lidocaine ointment, 5%, 35 g	38
Lidocaine patch, 5%, 30 patches	221

^a All costs are from <http://www.drugstore.com>, either online or through Epocrates.

^b Cost estimated based on the Medicare physician fee schedule.³⁷

Lotions or creams containing menthol, camphor, and phenol can be soothing and are safe when applied to limited areas repeatedly or more generally once or twice daily.³⁸ If these cooling agents are kept in the refrigerator, their application can be quite effective, as cold itself reduces the sensation of pruritus. Applying cold packs to spots of severe pruritus is helpful, especially in neuropathic pruritus.

If a rash is present, its cause should be established. Evaluation of rashes include office procedures such as potassium hydroxide examination to exclude fungal infection or skin scraping for scabies. Primary care physicians should either prescribe treatment based on the most likely clinical diagnosis, conduct additional diagnostics (such as a skin biopsy), or refer the patient to a dermatologist.

Even when erythema is not prominent, significant skin inflammation may still be present. Topical steroids may help patients with pruritic erythematous skin conditions refractory to moisturization therapy. The least expensive initial approach is to use a medium-strength topical steroid such as triamcinolone acetonide, 0.1%, applied after bathing, covered with a moisturizer, and then occluded with wet wraps or plastic wrap.⁴³ Response should be achieved in several days. The prolonged (months) use of topical steroids on areas of thin skin, such as the face, scrotum, and perianal area, can lead to a syndrome of "steroid addiction" wherein the skin no longer has a primary inflammatory process but withdrawal of topical steroids leads to redness, burning, and pruritus. This is treated by complete avoidance of topical steroid to the area.⁴⁴ Avoidance of all topical

Box 3. Soak-and-Smear Method

1. Soak for 10 to 20 minutes in a tub of comfortably warm (not hot) water.
2. Pat dry.
3. Apply moisturizer to affected skin.
4. Occlude the moisturizer with kitchen plastic wrap or vinyl suit for at least 4 hours.
5. Frequency is twice daily for severe cases, once daily otherwise.

Box 4. Wet Wraps

1. Bathe or apply a thin film of water onto affected skin.
2. Pat dry.
3. Apply moisturizer.
4. Put on a moist garment (eg, light sweat suit, soft long underwear, pajamas).
5. Apply over moist garment a similar dry garment.
6. Frequency is twice daily for severe cases, once daily otherwise.

medications except petrolatum can be considered in such cases. Topical calcineurin inhibitors can be substituted for topical steroids where concern about local adverse effects from steroids (skin thinning, steroid addiction, stretch marks, etc) exists, such as in the genital area.⁴⁵

Second Visit

Many patients improve within 2 to 3 weeks after the initial visit because of treatment. The second visit escalates evaluation and treatment for patients who do not improve after treatment of xerosis, scabies (if identified), and/or medication-induced pruritus. The targeted history is repeated during the second visit, with emphasis on the response to pruritus treatment as measured on the 0-to-10 severity scale.¹⁹ More intense investigation directed by the physical examination occurs at this visit.

When a pruritic rash is present, the patient most likely has a dermatological disease, and if a rash is absent, the pruritus is probably due to systemic or neurological disease. In the absence of primary skin lesions, if secondary skin lesions only from scratching are present, dermatological, systemic, or neurological disorders may be causing the patient's pruritus. As occurred with Mr A, patients may have more than 1 cause of pruritus and, therefore, several etiologies to consider.

Dermatological Disease

If the patient has a rash, treatment is focused on the underlying inflammatory skin condition. If not already performed, a skin biopsy or consultation with a dermatologist should be considered. The differential diagnosis should include skin conditions that appear more commonly in older patients (Table 2).

Systemic Disease

Laboratory evaluations may have identified an underlying cause of the pruritus, and treatment is directed accordingly; pruritus of hyperparathyroidism and thyroid disease responds to correction of these imbalances and iron deficiency-induced pruritus resolves with supplementation.⁴⁶⁻⁴⁹

Table 2. Key History and Physical Examination Elements in the Diagnosis of Pruritic Skin Conditions Common in Elderly Persons

Condition	History	Physical Examination
Xerotic eczema	Improves with bathing, worse when dry; primarily affects lower legs and arms; spares the armpits, groin, face, and scalp	Can have minimal changes; fissured, slightly scaly, poorly defined patches
Scabies	Severe pruritus; recent stay in long-term care facility	Small papules and linear lesions of the axillae, groin (vulva and scrotum), navel, finger-webs
Photodermatitis	Photosensitizing medication; worse after sun exposure (eg, long car trip)	Confluent patches favoring dorsal hands, brachioradial arms, "V" upper chest area, posterior neck, and face
Grover disease	Worse after sweating (even in winter)	2- to 4-mm slightly scaly red papules of the inframammary chest/upper abdomen and central back
Bullous pemphigoid	Severe pruritus	Urticarial plaques or bullae favoring the inner aspects of proximal arms and thighs and flanks; surrounding erythema may or may not be present
Drug-induced skin eruption	New medication (eg, calcium channel blocker or hydrochlorothiazide)	Many morphologies; widespread symmetrical erythema
Cutaneous T-cell lymphoma (mycosis fungoides type)	Long duration; pruritus minimal to severe	Slightly scaly large patches with atrophy at times with pigment change; loss of hair in lesions; often begins on lower back, buttocks, upper thighs (bathing trunk distribution)

Patients with end-stage renal disease who are undergoing hemodialysis commonly have chronic pruritus. Initially, dialysis should be optimized and the patient treated for xerosis. If this is ineffective, gabapentin, 300 mg, or pregabalin, 75 mg, after each dialysis session are equally effective in treating the pruritus of end-stage renal disease.³³ In refractory renal pruritus, UV-B phototherapy is often beneficial.³⁴

Many patients with cholestatic complications of liver disease have pruritus, likely related to dysregulation of endogenous opioids. Treatment with opioid antagonists such as naltrexone or bupropion can be effective.³⁵ Ultraviolet B phototherapy at times improves cholestatic pruritus.³⁶

When refractory pruritus presents with discomfort levels exceeding 7 to 9 on a 10-point scale and the systemic workup is unrevealing, an evaluation for malignancy, especially lymphoma or polycythemia, is indicated. Evidence is limited regarding the most appropriate means for establishing a diagnosis of malignancy-related pruritus. A limited evaluation includes a history elucidating possible "B" symptoms (fevers, night sweats, weight loss) of lymphoma, a physical examination for lymphadenopathy and hepatosplenomegaly, laboratory testing including complete blood counts and liver function tests (including lactate dehydrogenase), and a chest radiograph. The decision to pursue a malignant cause of pruritus beyond this initial evaluation should include consideration of a patient's life expectancy, goals of care, and risks of harm. If malignancy is detected, paroxetine may provide some relief for pruritus, but the evidence supporting this is weak.^{50,51}

Neurological Disease

Mr A: *I also have a serious problem that has never been resolved with my rectal area. ... I've gone to the proctologist and they say it's the skin, and I go to the skin doctor and they say it's the other ...*

Neurological disease can present with either generalized or localized pruritus. On physical examination, a patient usually has either no rash or only secondary changes caused by scratching. Neuropathic itch tends to be refractory to the standard treatments discussed above. The most common clinical scenario of neuropathy as a cause of generalized pruritus is with diabetes mellitus, in which the prevalence of truncal pruritus is 4 times higher in patients with diabetes than in those without it.¹⁵ Patients

with diabetes with dysesthesia of the toes and soles, absence of the Achilles tendon reflex bilaterally, and impaired change in blood pressure with a head-up tilt test are 1.5 to 2 times more likely to report truncal pruritus.¹⁵

Except for allergic contact dermatitis, dermatological and systemic diseases tend to cause generalized or multifocal itch, so a report of unifocal pruritus (pruritus localized to a single discrete area of the body) increases the likelihood of a neurological etiology. Unifocal pruritic neuropathic syndromes include brachioradial pruritus (itch over the brachioradial area), notalgia paresthetica (central back itch), and post-zoster pruritus.⁵²⁻⁵⁴ These diseases respond to capsaicin (which may burn) or lidocaine applied as topical preparations or patches to intact skin only. Physical modes such as physical therapy and acupuncture to correct identifiable neural impingements can also help this form of pruritus. In many cases of anogenital pruritus, there is an associated impingement in the lumbosacral area, as occurred in Mr A.¹⁸ Treatment of the spinal impingement can lead to improvement of genital pruritus.

General Measures for Management of Pruritus in Elderly Patients

Phototherapy

Mr A had several UV treatments, and although his were unsuccessful, UV light phototherapy can be effective for certain pruritic conditions—especially eczematous dermatoses, pruritus associated with renal failure, and pruritus of unknown cause. Phototherapy should be undertaken in consultation with a dermatologist. Areas of long-term sun exposure (eg, head and neck, dorsal hands) can be protected to avoid increasing skin cancer risk in these regions.

Oral Antihistamines/Antipruritics

Limited evidence exists on the efficacy of antihistamines for treating chronic pruritus in elderly patients. Our systematic review found only 1 small randomized trial of oxatamide, an older first-generation antihistamine, showing some benefit in the treatment of pruritus.⁵⁵ The sedating properties of first-generation antihistamines are considered beneficial for pruritus. However, antihistamine use in older patients is not recommended because of their anticholinergic effects, including confusion, dry mouth, and

constipation.⁵⁶ There is little evidence that standard-dose, second-generation non-sedating antihistamines are effective in the management of pruritus in elderly patients, except in urticaria.⁵⁷ Instead of oral antihistamines, gabapentin can be used, starting at 100 mg to 300 mg nightly depending on the frailty of the patient and increasing to 1800 mg in divided doses.⁵⁷

Management of Mr A

Mr A has 2 forms of pruritus: generalized pruritus and pruritus ani. These are separate conditions with distinct management strategies and should be listed separately on his problem list. At each visit, the severity of both types of pruritus should be recorded in the chart to document the efficacy of treatment (for example, "generalized itch is now 6/10 and pruritus ani 9/10"). Patient report usually correlates well with the degree of scratching noted on physical examination and the effects on quality of life.

For Mr A's generalized pruritus, aggressive moisturizing directed at barrier repair (soak and smear) should be instituted. Because he also had primary skin lesions, dermatological evaluation and/or biopsy would be appropriate to identify any inflammatory conditions commonly seen in older patients. Simultaneously, evaluation for systemic causes of pruritus should be undertaken. Because diabetic neuropathy may be contributing to his truncal pruritus, gabapentin could be added, initially at night, then as tolerated in divided doses during the day. For his pruritus ani, overaggressive

cleansing and application of nonprescription topical medications should be discouraged. Evaluation should exclude anogenital malignancy, including rectal cancer and extramammary Paget disease. Management of Mr A's lumbosacral spine disease should be optimized and emphasized because it is likely a significant reason why his pruritus ani is refractory to treatment. All possible topical allergens (such as baby wipes) should be avoided. Given Mr A's history of prolonged topical steroid use in the genital area, avoidance of topical steroids and application of only petrolatum in the area for at least 2 months should be considered. Topical soothing agents such as menthol, camphor, or pramoxine can be recommended. For patients who have not previously used topical steroids, 1% hydrocortisone ointment twice daily is a reasonable initial treatment. Topical tacrolimus ointment can also be effective but may burn with initial application. If Mr A's pruritus ani remained refractory, evaluation for anatomical irregularities such as hemorrhoids; evaluation for perianal group A beta-hemolytic streptococcus infection, condyloma acuminata and pinworm infection; and dietary interventions (less coffee, more fiber) could be considered.⁵⁸⁻⁶⁰

Conclusions

Chronic pruritus can be debilitating and difficult to treat; however, as in Mr A's case, focusing on the basic principles of skin care can lead to safe and effective treatment of itch in the majority of elderly patients.

ARTICLE INFORMATION

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