

# Common Skin Disorders in the Elderly

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*Skin diseases commonly seen in the elderly are more often than not the effects of sun damage or vascular disease. The effects of a lifetime of even casual sun exposure can be dramatic. Chronically sun-exposed skin becomes thin, loses collagen, and has disrupted elastin and decreased glycosaminoglycans. The result is skin that breaks easily, bruises, sags, irritates easily, and itches. The spots and bumps that patients associate with age are all sun-induced. Consider how lesionless a 60-year-old's buttock is compared to the extensor forearm. The reason that bruising attributed to anticoagulation seems to occur exclusively on the extensor forearm and not the volar aspect of the arm is that sun-induced elastin degradation is greatest on the extensor forearm. Even trivial trauma will cause unsupported capillaries to shear and bleed whether the patient is anticoagulated or not. This article reviews the primary skin disorders associated with the elderly and some of the management approaches that the primary care physician can use.*

## SPOTS AND BUMPS

Most skin lesions in elderly patients are either seborrheic keratoses or cherry angiomas. Cherry angiomas are small, bright red papules commonly seen on the trunk and are considered medically insignificant. Seborrheic keratoses are usually described in textbooks as being “greasy,” an observation that is baffling, for they are not greasy at all and do not involve sebaceous glands. They are superficial keratotic growths that are usually most numerous on the trunk of the body. Color varies among lesions from pink to tan to black. In no sense are they premalignant. The cause of these lesions is unknown, but I am convinced that we will one day find them to be caused by an as yet undiscovered papillomavirus. “Sebs” carry 2 risks: irritation due to trauma and confusion for the phy-

### KEY POINT

The vast majority of skin lesions of medical significance in the elderly patient are seborrheic keratoses.

sician. The latter poses a danger. On many occasions I have viewed the keratosis-filled back of a senior patient and found a melanoma hiding among the keratoses. Look carefully at every lesion.

## ACTINIC KERATOSES

The nature of actinic keratoses (AKs) is a hotly debated subject in dermatology. The question is

whether AKs are premalignant or a carcinoma in situ. Since this debate centers on what is essentially a philosophical issue, the point at which a cell or lesion becomes cancerous may never be completely resolved. However, it is clear that AKs progress unequivocally to squamous cell carcinoma (SCC) with great frequency—some studies show 10% and others much more. The difficulty in getting reliable follow-up hinders the performance of a definitive study.

AKs are typically seen on the head, upper trunk, and arms of fair-skinned, sun-damaged adults >40 years of age. In their earliest stages, AKs are more easily felt than seen, having a sandpaper-like texture. Under a magnifying glass, AKs are flat to slightly depressed keratotic lesions with a distinct border. More developed lesions are pink raised plaques with plentiful, tightly adherent hyperkeratosis. AKs on the lips, termed *actinic cheilitis*, and on the ears are of greater concern since SCC in these areas is particularly aggressive.

### KEY POINT

**AKs progress unequivocally to SCC with great frequency—some studies show 10% and others much more.**

## Treatment Approach

AKs should be destroyed in a manner that is efficient, effective, and cosmetically pleasing. The 2 most commonly used means are cryotherapy with liquid nitrogen and the application of topical 5-fluorouracil (5-FU). Cryotherapy has the advantage of rapid results; typically lesions are healed within 1 week. Topical chemotherapy will treat many lesions at once but it takes  $\geq 2$  weeks of treatment and 1 or 2 more weeks to recover from the significant dermatitis that is induced. The newer preparations of 5-FU minimize the irritation somewhat. A further concern with topical therapy is that the patient will apply the medication to an established malignancy. In that situation, the top of the tumor will get treated but not the bottom, leading to greater problems.

### KEY POINT

**Pruritus is common in the elderly; the natural attrition of adnexal glands that moisturize the skin plus the effects of sun exposure combine to make dry, irritable skin.**

## PRURITUS

Pruritus, or itch, is a very common complaint among the elderly. The natural attrition of adnexal glands that moisturize the skin plus the effects of sun exposure combine to make dry, irritable skin. Excessive bathing and harsh soap also contribute to the problem. In addition, preexisting skin disease such as atopic dermatitis can persist into old age and cause itching. Drug rashes, connective tissue diseases, and mite infestation are less common but potential causes.

Suspect drug rash if itch coincides with a recently prescribed medicine. In all nonurticarial drug rashes, biopsy is usually diagnostic of a drug reaction. Elimination of the drug will resolve the rash but not necessarily immediately; weeks may be required before itch and lesions subside. Antibiotics, diuretics, nonsteroidal anti-inflammatory drugs (NSAIDs), and calcium channel blockers are at the top of the list of drugs to suspect.

Consider drug reaction or a disease in the lupus spectrum if there is a prominent photodistribution of symptoms or lesions. The extensor forearms, upper trunk, and face are most commonly involved with photosensitive diseases. NSAIDs, thiazides, and calcium channel blockers are the most frequent causes of drug-induced photosensitivity. Pruritus, particularly of the upper back and scalp, is sometimes the presenting sign of dermatomyositis. Patients with this condition often have little or no muscular complaints and may have normal muscle enzyme levels. Diagnosis is based on histopathology, serologies, and clinical presentation.

Patients whose itch is worst at night may well have scabies. In my experience, the classic axillary, interdigital, genital distribution of lesions is uncommon at any age but especially in the elder-

ly. Dramatic itch that wakes the patient from sleep is an indication of scabies. Since the patient's allergic response to the mite is responsible for the itch and the lesions, it is possible that others in the household may also be infested although they may not have a response.

### Treatment Approach

Treating itch in the elderly is not much different from treating itch in younger patients, with 2 major exceptions. First, antipruritic pills will cause more sedation in the elderly. I always start slowly with potential sedatives such as antihistamines. Second, corticosteroid atrophy occurs much more quickly on sun-damaged skin. Many cases of chronic itch are actually due to steroid overuse. Although the original cause of the itch may have long departed, continued steroid application has so thinned the skin that any irritant will provoke itch.

In addition to removing instigating factors, the most important measure is to moisturize the skin well. Ammonium lactate moisturizers are best, but old-fashioned emollients also work. Antipruritic creams that have low or no corticosteroid such as topical doxepin or pramoxine are very helpful. The addition of 10% coal tar, 0.25% phenol, or 0.25% menthol to a moisturizing lotion can also be a good adjunct in resistant itch. If all else fails, ultraviolet B phototherapy is a great antipruritic. The itch of liver and renal disease is particularly responsive.

#### KEY POINT

The primary circulation-related skin problems in the elderly are venous ulceration and chronic stasis dermatitis.

### VASCULAR SKIN DISEASE

The primary circulation-related skin problems in the elderly are venous ulceration and chronic stasis dermatitis. Both develop from the intermittent ankle swelling that is so common in the elderly. Edema fluid is inflammatory; if not drained by lymphatic and venous circulation, it causes a persis-

tent swelling, woody induration, and itchy eruption. Because chronic edema impairs healing, trivial wounds may develop into chronic ulcerations. Patients at particular risk for these problems are those who have had venous thrombosis, leg trauma, or surgery.

### Treatment Approach

Control of edema is paramount to resolving or limiting any skin disease related to circulation problems. Since the problem is vascular, diuretics are of little use (eg, venous edema). Compressive dressings are central to decreasing swelling. Although there are excellent prescription stockings available, I begin with elastic bandages. The patient is instructed to apply the bandages immediately on awakening in the morning and to rewrap the legs or ankles several times a day to keep the pressure on. After most of the fluid is gone, I have the patient fitted for prescription stockings to keep the legs at the new "dry" diameter. Not all patients are strong enough to put on the stockings themselves and prefer to keep using the bandages. I am often amazed at the spectacular improvement that simple compression can bring to chronically swollen legs.

Cellulitis often begins in swollen legs but is not as common as thought since it is difficult to distinguish infection from acute stasis dermatitis. When in doubt, judicious use of oral or even intravenous antibiotics is sensible.

Intermittent use of topical steroids will help calm an itchy, swollen stasis dermatitis, but their use must be minimized to prevent skin atrophy and other related problems.

Venous ulceration is frequently the result of untreated edema. Venous ulcers fail to resolve because of the healing impairment caused by edema. The issue is not a lack of growth factors or blood flow but rather a chronic inflammation that retards reepithelialization. Besides controlling edema, which is vital, protective hydrocolloid dressings have great benefit in venous ulceration. Debridement is occasionally helpful if fibrinous debris persists.

An allergic reaction to topical antibiotics, especially polymyxin, polymyxin B sulfate, and bacitracin, is common when these medications are applied to leg ulcers and can be difficult to diag-

**TABLE.**

**DIFFERENTIAL DIAGNOSIS OF LEG ULCERS IN THE ELDERLY**

**Inflammatory**

Chronic trauma, pyoderma gangrenosum, sarcoidosis, panniculitis

**Neoplastic**

Squamous cell carcinoma, basal cell carcinoma, lymphoma, angiosarcoma

**Infectious**

Atypical mycobacteria, deep dermatophyte infection

**Vascular**

Chronic edema due to lymphatic or venous disease, arterial insufficiency, diabetic neurovascular disease

nose. I have seen a patient develop anaphylaxis when topical antibiotics were applied to the leg ulcer by a well-intentioned nurse. As a rule, avoid the use of these drugs in leg ulcers.

**KEY POINT**

**It is important to be certain that a presumed vascular ulcer is not actually a skin cancer.**

It is important to be certain that a presumed vascular ulcer is not actually a skin cancer. SCCs that arise in leg ulcers have a nearly 30% metastatic rate. Lymphoma nodules frequently ulcerate, especially on the leg. Indications that an ulcer is cancerous include ulcers that are heaped up, partially keratinized, and have a prominently raised border or simply fail to heal in a timely manner. Complete healing is required; good wound care and control of edema can produce apparent healing of ulcerated SCC or basal cell carcinoma. When 3 ulcers heal and 1 does not, obtain a biopsy specimen from the nonhealing ulcer. Do not be afraid to arrange for a generous biopsy of an ulcer on the grounds that it will not heal well; it is already ulcerated and you must rule out malignancy. The **Table** summarizes the differential diagnosis of leg ulcers in the elderly.

**HERPES ZOSTER**

Herpes zoster, also known as shingles, is frequently seen in the elderly. Its onset is preceded by pain or paresthesia, and it eventually develops clusters of

papulovesicles in a dermatomal distribution. The disease usually runs its course in a week or two.

When active, zoster can be very painful. In younger patients, the pain usually resolves along with the vesicles. As many as 20% of the elderly will have pain lasting for weeks or months after resolution of the active infection. The discomfort may be described as a stabbing pain, burning, or dull ache.

Early treatment of the active infection with oral antiviral drugs such as acyclovir or famciclovir has been shown to substantially decrease the incidence of postherpetic neuralgia. Topical antiviral drugs are ineffective. In the past, prednisone was given to decrease perineural inflammation and thereby limit neuralgia; however, definitive published support for this practice is lacking.

When neuralgia is established various measures may be helpful, but more than anything, passage of time is required. Topical doxepin cream is sometimes very effective. Injection of triamcinolone acetonide into trigger points identified by the patient is effective for some patients. Oral therapy with an antidepressant or codeine may also be helpful.

**SUMMARY**

Skin diseases in the elderly are the effects of sun damage or vascular disease. Over time, sun-exposed skin becomes thin, loses collagen, and has disrupted elastin and decreased glycosaminoglycans, which results in skin that bruises, sags, and itches. The primary circulation-related skin problems are venous ulceration and chronic stasis dermatitis. All skin lesions in elderly patients should be looked at carefully to detect any potential skin cancers, which present by far the most danger to the elderly.



## Dialogue Box

### ADVISORY BOARD

**How do you decide which suspected AKs can be immediately treated with cryotherapy or 5-FU and which require biopsy?**

### WEBSTER

The treatment of AKs hinges on how certain you are that what you're seeing is an AK as opposed to an SCC lesion. The trick, which should be guided by experience, is to decide if there's substance to the lesion or whether you're dealing with a flat atrophic patch. The thicker the suspected AK is, the more mass it has and the more you should be concerned that it may be SCC. Now some areas of the skin are more prone to the AK being hypertrophic. For example, the back of the hand can have an AK that is quite large without reaching the point where a pathologist will say it's an SCC lesion. AKs on the forehead tend to be relatively flat, but when they start rising even a little bit, that's often a sign that they may be SCCs. The ear is another noteworthy site because the ear has a high rate of AKs turning into SCC with metastatic potential—around 20%. As a result, you should have a very low threshold for biopsy on the ear because you don't want to be wrong. Although it's not a hard and fast rule, it's safe to say that you tolerate a little more mass under the AK on the back of the hand than you do on the forehead and that you'll accept even less mass on the ear than on the forehead.

### ADVISORY BOARD

**How many times would you freeze an AK before you would get suspicious and perform a biopsy?**

### WEBSTER

If you did an adequate freeze on an AK and it grew back, you should perform a biopsy.

### ADVISORY BOARD

**How do you choose between treating an AK with cryotherapy and treating it with 5-FU?**

### WEBSTER

Well, I usually don't use 5-FU since it fails what I call the "grandmother test," that is, you wouldn't do it to your grandmother. The new 5-FU preparation with microspheres theoretically isolates the 5-FU to the AK. It's definitely better tolerated, but you still get a lot of erythema. As far as efficacy is concerned, 5-FU and cryotherapy are equivalent.

### ADVISORY BOARD

**To treat pruritus, do you prefer H<sub>1</sub> or H<sub>2</sub> antihistamines?**

### WEBSTER

For urticaria, H<sub>2</sub> antihistamines alone are fairly ineffective so I always treat initially with an H<sub>1</sub> antihistamine. For the patient with urticaria refractory to an H<sub>1</sub> antihistamine, I combine it with an H<sub>2</sub> antihistamine. It should be noted that doxepin has both H<sub>1</sub> and H<sub>2</sub> activity and is arguably the most potent antihistamine for resistant urticaria.

### ADVISORY BOARD

**What ammonium lactate moisturizer do you favor?**

### WEBSTER

Of the ammonium lactates, there's *AmLactin*<sup>®\*</sup> and Lac-Hydrin<sup>®</sup>. Although I prefer Lac-Hydrin because I think it's formulated better, *AmLactin*<sup>\*</sup> is acceptable.

### ADVISORY BOARD

**How do moisturizers work?**

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\*Not FDA-approved.



## Dialogue Box

### WEBSTER

Contrary to what many people think, moisturizers don't work by adding moisture to the skin. Moisturizers work by either changing how the skin matures, which is how the alpha-hydroxy acids work, or by plugging up holes through which irritants can enter. For example, although it's generally thought that dermatitic skin itches because it's dry, that's a misconception. A scale is really not indicative of dryness—it represents a different maturation of skin that has been inflamed. When you look at sunburned skin and see it's scaling, you don't say it's dried out, you say it has been damaged. And the same thing happens in inflammatory disease—the skin gets scaled. Some moisturizers work by plugging up microscopic holes to keep irritants from entering, which in turn allows the skin to repair itself. Other moisturizers, like Lac-Hydrin, work by trying to convince the skin to mature in a normal way so that you don't get chunky skin.

### ADVISORY BOARD

**What advice do you give your patients who itch in the winter because of xerosis?**

### WEBSTER

Since bathing takes out natural emollients in the skin and exposes the skin to irritants such as soap, I tell such patients to bathe as little as possible. Instead, I advise them to take short, cool showers.

I also advise them to refrain from lathering up with soap and use it primarily under the arms, in the groin area, and on the feet—areas where it is needed the most. I also tell them to apply moisturizer or other emollients several times a day along with an appropriate anti-inflammatory agent to treat the underlying inflammation responsible for the itch.

### ADVISORY BOARD

**Do you see any value in using topical calamine lotion or topical benadryl lotion in the management of pruritus?**

### WEBSTER

I generally don't use topical antihistamines because they barely work and they hold the potential for irritation. Calamine lotions are also ineffective—I view them as antiquated agents from the days when there was really no medicine in the medicine.

### ADVISORY BOARD

**What about topical doxepin?**

### WEBSTER

Topical doxepin is great. It's a wonderful anti-itch for someone you don't want to sedate. Occasionally a patient can take a little sedation but not usually. In addition, there are data that suggest doxepin may be of value to patients suffering from postherpetic neuralgia.