Psoriasis in Older Adults

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Psoriasis is a chronic relapsing skin disease. Age of onset is bimodal with a peak in second to third decades and the sixth decade. Individuals affected by psoriasis usually complain of lower self-esteem. Choice of therapy depends on many factors, including areas affected, extent of disease, patient’s lifestyle, other health problems, and medications. Many effective therapies exist, including topicals, phototherapy, systemics, and biologicals.

Key words: psoriasis, comorbidities, topical steroids, phototherapy, biologicals

Introduction

Psoriasis is a chronic relapsing skin disease characterized by chronic erythematous and scaling plaques, commonly affecting the elbows, knees, scalp, penis, and extensor surfaces. This common skin disease affects 2–3% of Canadians and can severely impair quality of life.1 Psoriasis tends to occur in families, and recent genetic studies suggest that it is hereditary.2 Psoriasis is generally thought to be a T-cell mediated disease in genetically susceptible individuals, but the complete pathogenesis has not been fully established.3

Age of onset is bimodal with a peak in second to third decades and the sixth decade.4 Psoriasis is characterized by remissions and exacerbations, and women and men are affected equally.

There are two types of psoriasis: the first type is characterized by an early onset, more severe disease, and a positive family history; while the second type is characterized by late onset without a family history.

Individuals affected by psoriasis usually complain of lower self-esteem, feelings of being socially outcast, pruritus, and pain, especially if the palms and soles are involved.

Triggering and Exacerbating Factors

Stress, streptococcal infections, certain drugs (including lithium, beta-blockers, and antimalarials) and smoking, alcohol, and obesity may all act as triggering factors.5 Concomitant psoriatic arthritis can also add to the disabling effect of the disease. This comorbidity manifests as a seronegative arthritis with five main variants: oligoarthritis with large joint involvement; symmetrical polyarthritis; distal interphalangeal joint involvement; sacroiliitis/spondylitis; and arthritis mutilans.6

Other Comorbidities

Recent studies are looking more into the complete disease burden of psoriasis, including psychosocial aspects, rather than solely focusing on the skin. A number of diseases have been associated with psoriasis, including obesity, the metabolic syndrome, and general cardiovascular risk.7 Immune-mediated inflammatory disorders such as psoriatic arthritis have also been associated with the condition, along with infections and malignancies (Table 1).

Further studies have linked severe psoriasis with an increased risk of death,7 possibly due to the associated comorbidities. They may have a 50% increased risk of death compared to patients with no psoriasis.7 However, individuals with mild psoriasis do not seem to have an increased risk of death.

Clinical Signs

The classic lesions of psoriasis are sharply demarcated raised erythematous plaques with silvery scales. The Auspitz sign is a specific feature of this disease: mechanical removal of hyperkeratotic scales from a psoriatic plaque causes pinpoint blood droplets to appear within seconds on the erythematous surface. A variety of morphologic forms of psoriasis are described in Table 2, which also includes the possible differential diagnoses. These are also illustrated in Figure 1.

Chronic plaque type or psoriasis vulgaris is the most common form. Chronic, red, scaly plaques are seen with a predilection for the elbows, knees, scalp, and lumbar areas. Guttate psoriasis is characterized by widespread papules that are erythematous, scaly, and small (0.5–1 cm diameter). It is often preceded by a streptococcal throat infection. Inverse psoriasis causes lesions in the axillae, between the buttocks, under the breasts, and on the medial aspects of the thighs, and umbilicus. There is often little scaling; instead, lesions display a glazed reddish appearance. Erythroderma represents the generalized form of the disease affecting >90% of total body surface area, including the face, hands, feet, trunk, and extremities. Erythema is the most prominent feature and scaling is less severe.

Pustular psoriasis can be localized with lesions on the palms and soles, or generalized with more widespread affected areas on the body, accompanied by fever and systemic involvement. Scalp and face psoriasis can occur in association with other body areas or be an isolated type of disease. Although scalp lesions may mat the hair, alopecia does not occur as a result.

Nails are quite frequently affected by psoriasis. Fingernails are affected in 50% of cases and toenails in 35%. Changes include pitting, oil spotting, hyperkeratosis, and nail dystrophy.
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Treatment
Despite strong motivation to treat patients with psoriasis, recent data suggest psoriasis patients are undertreated. Results of the National Psoriasis Foundation Survey show that among patients with severe psoriasis 39% are not receiving treatment, 35% are being treated with topical therapy alone, and 26% are being treated with systemic or phototherapy or both.8

Results also indicated that 78% of patients were frustrated with current treatments and 32% of patients felt their treatment was not aggressive enough.8 This level of patient dissatisfaction with traditional therapies further fuels the rationale for developing novel therapies to treat psoriasis.

Choice of therapy depends on many factors, including areas affected, extent of disease, patient’s lifestyle, other health problems, and medications. It is thought that polypharmacy, age-related changes to pharmacokinetics, and existing comorbidities such as hypertension, type 2 diabetes, and hyperlipidemia may limit the use of some therapeutic options.9

Topical Treatment
Topical psoriatic treatments are often prescribed for older adults as first-line therapy since this minimizes drug interactions or potential adverse drug reactions.10 Topical therapies are the mainstay in treatment, and are usually prescribed if <5–10% of the body’s surface is involved. Once the affected area is >10%, these medications become impractical but can still be used to complement phototherapy or systemic drugs. About 75% of individuals with psoriasis are maintained on topical treatments; of these, over 85% receive corticosteroid formulations. Moderate- to high-potency solutions are usually necessary, except for sensitive parts of the body, such as genital or facial regions. Although these drugs generally produce good results, side effects such as skin atrophy and telangiectasia are a serious concern in older adults.

Calcipotriol, a derivative of vitamin D3 available as ointment, cream, and solution, does not cause steroid side effects but a drawback is its slow onset of action. A quicker-acting combination calcipotriol/betamethasone dipropionate derivative product is generally more effective.10 Tazarotene, a topical retinoid in gel form, can be offered to patients with chronic plaque-type psoriasis. It is particularly beneficial in pustular psoriasis of the palms and soles.11 Tars have been used for years but are losing popularity: they are messy and odorous; better alternatives now exist. Likewise, anthralin is being prescribed less frequently, as it is also messy and stains clothing. Salicylic acid is a first-line therapy that is used as a keratolytics for thick, scaly plaques.

Phototherapy
Phototherapy can be an extremely effective therapy and does not interfere with other medications but is poorly studied in older adults.9 The main drawback is accessibility, as patients must attend a phototherapy centre at least twice weekly. Also, patients should be able to stand unsupported in the light boxes, as walkers and wheelchairs often do not fit in the boxes.

Ultraviolet B Phototherapy (290–320 nm) has been used since the 1920s with a proven record of safety and efficacy.12 Narrow band UVB (311 nm) may offer even greater benefit with less risk. Psoralens and ultraviolet A (PUVA) phototherapy involves either ingestion or topical application of a psoralen (methoxsalen) prior to exposure to an indoor source of UVA radiation. This is very effective but carries an increased risk of premature aging, as well as cutaneous and skin malignancies after more than 200 treatments (squamous cell carcinoma and melanoma).

Systemic Therapies
Comorbidities in older adults may limit systemic treatment options. Dose reductions

Table 1: Diseases Associated with Psoriasis

<table>
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<tr>
<th>Diseases Associated with Psoriasis</th>
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<tbody>
<tr>
<td>Obesity</td>
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<tr>
<td>Metabolic Syndrome</td>
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<td>General Cardiovascular Risk</td>
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<tr>
<td>Immune-mediated Inflammatory</td>
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<tr>
<td>Disorders</td>
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<td>Psoriatic Arthritis</td>
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<td>Ankylosing Spondylitis</td>
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<td>Crohn’s Disease</td>
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<td>Ulcerative Colitis</td>
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<td>Infections</td>
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<td>Malignancies</td>
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<td>Social, Psychological and</td>
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<td>Behavioural Disorders</td>
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<td>Depression</td>
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<td>Alcohol use</td>
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<td>Nicotine Use</td>
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<td>Obesity</td>
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Table 2: Differential Diagnosis in Psoriasis

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<th>Types of psoriasis</th>
<th>Differential diagnosis</th>
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<tbody>
<tr>
<td>Chronic plaque type</td>
<td>Nummular eczema; Tinea corporis; Mycosis fungoides (T-cell lymphoma)</td>
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<tr>
<td>Guttate type</td>
<td>Pityriasis rosea; Secondary syphilis; Tinea corporis</td>
</tr>
<tr>
<td>Inverse psoriasis</td>
<td>Contact dermatitis; Candidiasis; Tinea cruris</td>
</tr>
<tr>
<td>Erythroderma</td>
<td>Atopic dermatitis; Drug reaction; Contact dermatitis</td>
</tr>
<tr>
<td>Pustular psoriasis</td>
<td>Folliculitis; Dyshidrotic eczema</td>
</tr>
<tr>
<td>Scalp and Face</td>
<td>Seborrheic dermatitis</td>
</tr>
<tr>
<td>Nail psoriasis</td>
<td>Onychomycosis; Nail dystrophy</td>
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Figure 1: Morphologic Forms of Psoriasis and Their Locations on the Body

- **Erythroderma**
  - face, hands, feet, trunk and extremities

- **Psoriasis Vulgaris**
  - elbows, knees, scalp and lumbar areas

- **Guttate Psoriasis**
  - widespread distribution

- **Pustular Psoriasis**
  - palms of hands and soles of feet, or generalized distribution

- **Scalp and Face Psoriasis**
  - scalp, face, or can occur in association with other body areas

- **Inverse Psoriasis**
  - axillae, between the buttocks, under the breasts, on the medial aspects of the thighs and umbilicus
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Key Points

Think about psoriasis in all patients with an erythematous scaly plaque: psoriasis in older adults rarely presents with a family history.

Topical therapy may be challenging in an older adult who already has atrophic skin.

Phototherapy may be inaccessible/impractical.

Increased comorbidities may limit systemic therapies in the older adult.

Be aware of polypharmacy when treating an older adult with psoriasis.

should be considered for certain drugs if there is renal or hepatic impairment.

Systemic treatment should be considered if topical therapies have been unsuccessful, if psoriasis involves > 10% of the body’s surface area, if it appears in pustular or erythrodermic forms, or if the disease is causing significant psychological distress.

Although usually prescribed by dermatologists, primary care physicians should be aware of the modalities available, such as systemic retinoids, methotrexate, and cyclosporin. Systemic retinoids (e.g., acitretin) are vitamin A derivatives that are thought to normalize keratinocytes turnover. They are taken as a daily oral medication and are useful in generalized plaque, pustular, and erythrodermic psoriasis. Minor but common side effects include skin dryness, reversible hair loss and musculoskeletal stiffness. Serious but rare side effects include anemia, hepatoxicity, and hypertriglyceridemia.

Methotrexate is a folic acid antagonist taken either orally or as an intramuscular injection once weekly. It is generally well-tolerated when combined with folic acid supplementation. However, long-term use leads to hepatic fibrosis and requires monitoring. Bone marrow toxicity can occur early in therapy, and dosing should be started low and increased as tolerated.

Cyclosporin can be effective for severe psoriasis but is not effective in psoriatic arthritis. It should be used with caution in older adults as it induces hypertension and renal insufficiency.

Biologics

These novel agents are less often used in older adults as there are a number of limitations such as monitoring requirements, cost, infection risk, and administration. Multiple agents are available and include alefacept, etanercept, infliximab, adalimumab, and ustekinumab, which target specific receptors on antigen-presenting and T-cells and cytokines. Alefacept and etanercept are well-tolerated and effective in older patients. 

Conclusion

Psoriasis is a fairly common disease affecting 2–3% of the population. It is bimodal and often presents for the first time in older patients, usually without a family history. Treatment modalities include topicals, phototherapy, systemics, and biologics. Each modality has its advantages and disadvantages. Topical therapy may be challenging in an older adult who already has atrophic skin. Phototherapy may be inaccessible or impractical. Increased use of medication in older patients can limit options for systemic therapy.

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References