Psoriasis

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Definition

Psoriasis is a chronic, recurrent disease of the skin that is characterized by scaling and inflammation.

Introduction

Psoriasis is a common condition that affects 1-2% of the population of the United States – about 5 million people. It may occur at any age, but it most commonly begins between 15 and 35 years of age. There seems to be a genetic predisposition to this disease. About 1/3 of patients report another family member has the disease. It appears to be related to the immune response. Research has shown an association between psoriasis and certain white blood cell types called HLA antigens (histocompatibility antigens.) (These are not the same as the red blood cell types (A, B, AB and O.) White blood cell typing is done if you volunteer to become a marrow or organ donor or if the doctor is ruling out certain autoimmune diseases.) External factors may make the condition worse or trigger outbreaks including cold weather, physical trauma to the skin (rubbing, cuts, burns, rashes, insect bites), infections (Strep throat, upper respiratory infections, HIV), stress and medications (oral corticosteroids, lithium, antimalarials, beta-adrenergic blockers like Inderal, and anti-depressants.)

The most common form of psoriasis (called plaque psoriasis or psoriasis vulgaris) causes patches (or plaques) of thick, red skin covered with silvery scales. The patches are most often found on the elbows, knees, scalp, lower back, face, palms and soles of the feet, but they can be found anywhere on the skin. These patches itch and burn. It may affect the nails and mucous membranes of the mouth and genitalia. About 15% of individuals with psoriasis also have arthritis (psoriatic arthritis.)

Other types of psoriasis include:

- Eruptive (guttate) psoriasis in which tiny lesions appear on the trunk, limbs and scalp. It is often triggered by a Strep throat infection.
- Pustular psoriasis in which there are blisters of noninfectious pus on the skin. This may be generalized or localized. Medications, infections, exposure to chemicals and emotional stress may be triggers to this type of psoriasis.
- Psoriatic erythroderma in which there is widespread reddening and scaling of the skin. Severe sunburn, use of steroids or other drugs may be triggers.

Prevention and Treatment

Unfortunately, there is no known way to prevent psoriasis. It makes sense to avoid known triggers.

Treatment of psoriasis depends on the severity of the disease, how large an area is involved, type of psoriasis and how well the individual responds to initial treatment.

Topical Treatment

These are treatments that are applied directly to the skin and include:

- Sunlight – daily, regular short doses of sunlight that do not burn the skin can clear psoriasis in many individuals

- Corticosteroids – short-term treatment may often improve but not completely clear the lesions. Long-term use of corticosteroids, especially high potency forms, can make psoriasis worse, cause thinning of the skin, and systemic side effects.
- Calcipotriene – a form of vitamin D3 (Dovonex) controls excessive production of skin cells. Potential side effects include skin irritation and elevated serum calcium.
- Coal tar – messy and less effective than steroids but safer in terms of side effects.
- Anthralin – an older form of therapy which may irritate the skin, stain skin and clothing and is unsuitable for acute eruptions
- Topical retinoid – Tazorac is a clear gel that is applied to the skin. Because of the risk of birth defects, women of childbearing age should use birth control when using this medication.
- Salicylic acid – removes scales and is usually used in combination with topical steroids, anthralin or coal tar.
- Bath solutions – bath oil, moisturizers, Epsom salts, Dead Sea salts, oiled oatmeal, tar solutions may soothe the skin, reduce itching and help remove scales.
- Moisturizers

Phototherapy

Ultraviolet (UV) light from the sun kills activated T cells in the skin and thus reduces inflammation and slows the over production of cells that cause scales to form. As noted above, daily exposure to non-burning sunlight often clears or reduces psoriasis. More controlled treatment can be achieved using artificial sources of light (UVB). These sources emit the part of the ultraviolet light spectrum that is most helpful for psoriasis. This form of therapy can be administered alone or in combination with other medications like anthralin- salicylic acid paste. It is usually done in the doctor's office three times a week for 2 or 3 months. PUVA is a combination of psoralen and ultraviolet A light. It is a quicker form of treatment but is associated with more short-term side effects like nausea, headache, fatigue, burning and itching. In the long-term there is an increased risk of squamous cell and melanoma skin cancers.

Systemic Therapy

For severe forms of psoriasis medication is taken internally.

1. Systemic corticosteroids – high doses of steroids can cause improvement but side effects are serious and this treatment is oven followed by a severe flare of the disease. Therefore, systemic steroids are seldom used to treat psoriasis.
2. Methotrexate –can be given by mouth or by injection. This treatment suppresses the immune system. Individuals taking this medication must be followed closely because it can cause liver damage and decrease the production of blood cells. Pregnant women, or women who are planning to become pregnant and their partners must not take Methotrexate as it can cause birth defects.
3. Retinoids (Soriatane)– are derivatives of Vitamin A. They are used in severe cases of psoriasis that have not responded to other treatments. Retinoids may cause birth defects so women must take birth control precautions for 1 month before and 3 years after treatment is discontinued.
4. Cyclosporine (Neoral)– is taken by mouth and suppresses the immune system. It can cause kidney damage and high blood pressure. It is not recommended for individuals who have low immune systems already, who are pregnant or breast feeding or for those who have had a lot of exposure to UVB or PUVA.
5. Hydroxyurea (Hydrea) – is less toxic than Methotrexate or Cyclosporin but is also less effective. It is sometimes combined with UVB or PUVA. It can cause damage to blood cells and must not be taken by women who are pregnant or plan to become pregnant.
6. Antibiotics – are used when an infection like a Strep throat triggers an outbreak of psoriasis.

Emergency Situations – What can go wrong?

Psoriasis is a chronic skin condition and is not associated with emergency situations. It makes sense to avoid triggers for the individual with psoriasis including cold weather, physical trauma to the skin (rubbing, cuts, burns, rashes, insect bites), infections (Strep throat, upper respiratory infections, HIV), stress and certain medications (oral corticosteroids, lithium, antimalarials, beta-adrenergic blockers like Inderal, and anti-depressants.)

Conclusion

Psoriasis is a common, chronic, recurrent skin condition. The skin lesions are usually so characteristic that the diagnosis can be made by careful examination of the patient. Although there are several forms of the disease, the most common form is called plaque psoriasis because patches (plaques) of thick, red skin covered with silvery scales are found on the elbows, knees, scalp, lower back, face palms of the hands or soles of the feet. These itch or burn. The skin around joints may crack. The mucous membranes of the mouth and genitals may be involved and so may the nails. Cold weather, trauma to the skin, infections, stress and certain medications may trigger flares. Treatment depends on the severity of the disease and consists of a three-step approach beginning with topical treatments. The second step is phototherapy. The third step includes systemic medications.

References

Fitzpatrick, T.B., et al: Dermatology in General Medicine McGraw-Hill, Inc. 1993. pp 489-511.

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