

ALL ASPECTS OF PSORIASIS

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Abstract

Psoriasis is a multifactorial disease of unknown etiology. Psoriasis is a common chronic inflammatory skin disease with a spectrum of clinical phenotypes. It is characterized by sharply-circumscribed erythematous scaly lesions. Psoriasis is a disease with a chronic course. Psoriasis has a significant impact on quality of life of patients. Clinical and basic researchs on psoriasis have solved many of the pathogenic mechanisms underlying disease and facilitate to effective targeted therapies. Currently several new biological therapies have been developed for treatment of psoriasis.

Keywords:

psoriasis, etiology, treatment.

Introduction

Psoriasis is one of the most frequently encountered skin diseases. It is seen in 1-3% of the normal population. The disease is observed in the form of sharply-circumscribed, erythematous-squamous lesions.

Psoriasis is a disease with a chronic course: It continues with disease period and state of well-being. It progresses differently from person to person. Spontaneous remission varying between 1 and 50 years can be encountered in 1/3 of cases.

Psoriasis keeps two genders as equal and can present at any age. It is mostly encountered at the ages of 15-20 and 55-60. In cases with family history, the disease tends to occur early.

Etiopathogenesis

As in many diseases, etiopathogenesis of psoriasis is not known exactly. Psoriasis is accepted as an inflammatory, multifactorial and multi-genetic disease in which “T” cells play the main role. It is believed that through the effect of hereditary background and triggering factors, “T” lymphocytes are activated and subsequently, proliferation, inflammation and vascular changes occur. In pathogenesis, many cells such as T-lymphocytes, as the leading, Langerhans cells, neutrophils, various cytokines play roles. Hyper-proliferation indicator is observed in the form of epidermal turnover’s eight-fold accelerating. For that reason, keratinocytes desquamate without differentiating. White squamas which term the diseases are formed of these undifferentiated parakeratotic cells.

Psoriasis is believed to occur with triggering factors in person having a hereditary tendency. If those factors are analyzed in details:

- **Heredity**

Family history is observed in 1/3 of the cases. It is generally associated with HLA CW6 in familial cases observed at an early age. In familial cases, the disease occurs at an early age, it is more common and its response to medical therapy is also affected. In non-familial cases, the disease occurs at later ages and its prognosis is better. In the literature, there are data related to presence of several genes for the pathogenesis of psoriasis.

- **Triggering factors**

These are the factors such as emotional factors, trauma, infections, medications, seasonal variations and smoking.

1. Emotional factors: These can be efficient upon the occurrence and exacerbation of the disease. Moreover, the disease itself impairs the quality of life in patients and causes serious worries. So, the interaction

continues in the form of a vicious cycle. The cases with psoriasis are generally non-assertive, introvert, not self-expressive and weak in social relationships. Familial problems such as disease or death of one of the family members, divorce of parents, workplace problems such as dismissing, and school problems can cause occurrence or exacerbation of the disease.

2. Traumas: Mechanical, physical, or chemical traumas also can cause occurrence or exacerbation of the disease.
3. Infection groups: Beta-hemolytic streptococcus infections play role upon the occurrence of guttate psoriasis in children.
4. Medications: The medications such as antimalarial drugs, beta-blockers, lithium, iodine, progesterone, and indomethacin trigger the disease. Giving up the systemic corticosteroid treatment can cause exacerbation of the disease.
5. Seasonal variations: The disease is observed less in summer. Therapeutical effect of the ultraviolet has an important role for this.
6. Smoking: It exacerbates the disease.
7. Other factors: Whereas metabolic cases such as hypocalcemia trigger the disease, diet rich in omega-3 plays a therapeutic role.

Clinical types

Psoriasis Vulgaris

It is the mostly encountered form. Sharply circumscribed, erythematous lesions, including white squamas upon which can be different sized from millimeter to centimeters in diameters can be visualized (Figure 1a, 1b) . The lesions have 3 features (phenomenon). Signe de la tache de bougie and sign d'Auspitz findings are important for the diagnosis of psoriasis.

1. Signe de la tache de bougie phenomenon: The squamas erupt as lamellas similar to erupting of the wax in the form of lamellas during scratching the squamas over the lesions with an obtuse.
2. Punctate (Auspitz) phenomenon: It is the clinical finding of capillary dilatations and papillomatosis observed pathologically in psoriasis. It is visualized as punctate bleeding focus on scratched psoriatic lesion.
3. Koebner phenomenon: It is forming of a new lesion on trauma area subsequent to performing trauma upon the skin without any lesions.

Lesions can be encountered at any areas of the body. The mostly encountered areas are scalp, knee, and elbows. Moreover, it can be accompanied by nail involvement (Figure 1c). Sometimes, only one nail involvement can be accompanied by a small lesion which cannot be noticed by the patient. For that reason, the patient should be examined nakedly and in details.

Lesions can be in different forms: Punctate, guttate (small lesions), plaque (big lesions), annular (Figure 1d), erythrodermic (covers 80% of the body) (Figure 1e). If there are lesions on palms and soles, it is called as palmoplantar psoriasis (In this form, erythema is not very specific and its differential diagnosis should be made from hyperkeratotic type tinea pedis).(Figure 1f,1g) When psoriasis is located upon intertriginous regions, it is observed in the form of sharply circumscribed, erythematous lesions (inverse psoriasis). (Figure 1h) It can rarely be encountered with only lip involvement and it can be tried to be treated with different disease diagnosis for years if not cared. Genital region involvement can also be encountered alone or with other body lesions (Figure 1i). Squamas can have a fatty appearance on seborrheic regions such as scalp and breast: In this case, it is called as sebopsoriasis (Figure 1j). It is always not possible to diagnose psoriasis only with a clinical appearance due to various lesion views of cases with psoriasis.

Nail involvement can be seen alone or can be accompanied by skin findings. On the nail, findings like marks on yellowy-reddish fatty appearance, subungual hyperkeratosis, and small oily drop like appearance on the nail are observed. Subungual hyperkeratosis can be clinically misdiagnosed as superficial fungal infection. Sometimes these two diseases can also occur together.

Erythrodermic Psoriasis

Erythroderma, is the name given to the common form of lesions covering 80% of the body. As it can start on a sudden, it can also appear with the triggering factors in cases with psoriasis. The lesions are observed in the form of common erythema and squamas are not specific. If there is no previous psoriasis diagnosis or lesions characteristic to psoriasis and the lesions occurs on a sudden, it is hard to diagnose psoriasis. In erythrodermic psoriasis, because of the rapid loss development with desquamation from lesions, metabolic disorders especially such as albumin and protein decrease occur. These patients should be treated as in-patient and followed in terms of systematic disorders. Lymphadenopathy and enteropathy can be present in erythrodermic patients. In the presence of lymphadenopathy, differentiation of the disease from malignancy should be carried out. Enteropathy is a factor increasing the metabolic imbalance.

Pustular Psoriasis

It is a disease accompanied by the sterile pustular. It has clinically localized and common forms. (Figure 1k, 1l) Generalized pustular psoriasis is accompanied by pustular attacks. While appearing pustulars fade in a few days, the new ones occur. It is accompanied by high fever, weakness, etc. Generalized pustular psoriasis observed in pregnant women is called as “impetigo herpetiformis.” The disease is observed in the last trimester of pregnancy and can reappear in subsequent pregnancies. Acrodermatitis continua is a rarely encountered disease starting with sterile pustulars on distal phalangeal skins of dactyls. Pustular generally appears firstly from the nail sides, they are combined and pustule deposit occurs. When pustulars are located on nail fold, nail loss can be possible.

Psoriatic Arthritis

Psoriatic arthritis is sometimes encountered as solitary and sometimes is accompanied by the psoriatic skin lesions. Its frequency is reported in different numbers in various articles. Nail involvement is present in most of the cases with psoriatic arthritis. It has five different appearances: the most frequently encountered is asymmetric oligoarthritis. In this form, big joints such as ankle and knee and a few interfalangial joints are involved. Other forms are symmetric polyarthritis, distal interfalangial type, and mutilans-type. Psoriatic arthritic can be insidious. For that reason, the cases should be questioned in terms of arthritis symptoms and if it is suspicious, the patient should be examined by the relevant clinic.

Diagnosis

The disease has no characteristic laboratory finding. The disease is diagnosed after histopathologic analysis and occurrence of the lesions. Depending upon the mitosis increased histopathologically, hyperkeratosis, parakeratosis, regular acanthosis, and suprapapillary thinning are encountered. Deposit of neutrophils on parakeratotic region of the stratum corneum and/or deposit in stratum spinosum can be observed. These micro-abscesses, especially Munro micro-abscess, are pathognomonic for psoriasis. If the lesions are common, findings such as albumin, decreased total protein level can be concomitant. If there are triggering factors such as infection, the findings related to that can be seen.

Treatment

The factors such as the presence of physiologic situations as patient's gender, age, pregnancy-breast feeding, the weight, current diseases (cardiovascular disease, hyperlipidemia, liver and kidney disease, tuberculosis, etc.), alcohol and smoking use, the medications taken for another diseases, frequency of lesions, the previous treatments and response to those should be evaluated all together. It must be known that it is a disease with a chronic course and its exact course cannot be predicted. The treatment should be arranged considering the benefits and losses carefully and adverse effects of the treatment agents should be followed carefully, as well.

Cardiovascular disease and metabolic syndrome findings are frequently encountered in cases with psoriasis. Weight, alcohol use, and smoking of the patients are important factors increasing the metabolic syndrome. Besides providing treatment to cases, life style peculiar to the disease should also be taught to patients. They should be organized to give up alcohol and smoking, lose weight, and be away from other risk factors.

In the treatment, topical agents, phototherapy, systemic agents, and biological agents are used.

In order to remove squamas used frequently in topical treatment, salicylic acids, or preparates including urea, topical steroids, signolin, and calcipotriol are used. Topical corticosteroids are frequently used treatment agents. But, especially in the use of potent corticosteroids to wide areas adverse effects are unavoidable. Systemic steroid treatment is not preferred in psoriasis. Topical signolin prevents the DNA synthesis and is an agent which has less adverse effects than the steroid. It is easy to apply. It is used as starting from low doses and increasing gradually. It is contacted to the skin with lesion for half an hour in a day and washed after cleaning with a paper napkin. The patient should be warned that his/her clothes are possible to be painted and the drug can be irritant. Topical calcipotriol is another choice of treatment. This treatment agent can also cause irritancy. It should be used carefully in child patients due to its effects upon the calcium metabolism.

Phototherapy: Narrow band UVB and PUVA are the frequently used phototherapy techniques. Narrow band UVB shows its effects affecting the T-cells. PUVA (psoralen and UVA) treatment has the effect of decreasing the cell reproduction. In PUVA treatment, the patients should wear ultraviolet glasses during the treatment day. Moreover, they should be followed up in terms of skin and systematic adverse effects. For phototherapy, the patients should come to the hospital for two or three times. Some patients cannot take time for this treatment.

The most frequently used method among the systematic treatments is methotrexate, cyclosporine, and retinoids. Systemic treatments are preferred in cases with severe psoriasis vulgaris or not responding to topical treatment or phototherapy, in erythroderma and generalized pustular psoriasis, and psoriatic arthritis. The agent that will be used is chosen considering the factors such as laboratory findings of the patient, previously used agents and response, total period of use and dose. The patients should be followed up carefully in terms of the adverse effects.

Another choice of treatment for cases resistant to systemic treatments is biological agents. They affect by antagonizing the TNF-alpha. Due to its having several serious adverse effects such as tuberculosis, it should be used carefully and the patients should be made aware of the adverse effects.

One of the factors that trigger psoriasis is emotional factors. It seriously affects the life quality of patients due to its being noticed by the outer surrounding and chronic course of the disease. The patients should be supported after being evaluated in terms of their psychological situations.

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