PSORIASIS VULGARIS - THERAPY CHOICE ACCORDING TO SEVERITY

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Summary

Psoriasis is an inflammatory, polygenic, immune-mediated disorder that presents cutaneous and systemic manifestations. Multiple exogenous or endogenous factors can act as triggers for the disease, such as physical or chemical trauma, emotional stress, systemic infections, or some medications, such as beta-blockers.

There are different clinical forms of psoriasis, psoriasis vulgaris is the most commonly form, characterized by the appearance of erythematous plaques, well delimited, covered by coarse scales. Other clinical variants are guttate psoriasis, erythrodermic psoriasis, pustular psoriasis, palmoplantar, inverse psoriasis and nail psoriasis.

The therapeutic management must follow both the psychological stress of the patient, by improving the quality of the patient's life and the part of the physical, multisystemic impairment, so it is desired to obtain a therapeutic conduct adapted and individualized to each patient.

We present the case of a 46-year-old male patient, known with high blood pressure and type II diabetes, who presents in the clinic for an erythematous-squamous rash, spread on the scalp, torso and limbs, evolving for about 5 years, the disease presenting a burst in the last months. The patient underwent homeopathic treatment, but without clinical improvement. The suspicion of disseminated psoriasis vulgaris was raised and a skin biopsy was performed with histopathological examination, where suggestive elements for the diagnosis of psoriasis vulgaris were detected.

We initiated systemic immunosuppressive therapy with subcutaneous Methotrexate 15 mg, in combination with topical therapy and phototherapy, with desired outcome.

The severe cases management of psoriasis can sometimes be a challenge for the clinician. Aggravated forms that associate with different comorbidities and require systemic therapy or even the combination of several topical and systemic therapies.

The current guidelines for the treatment of psoriasis vulgaris can offer us many therapeutic alternatives, so the purpose of the treatment is primarily to improve the quality of the patient life and to improve the symptoms.

Keywords: *psoriasis, methotrexate, biologic therapy, phototherapy, homeopathy.*

Received: 01.11.2019 *Accepted: 05.12.2019*

Introduction

Psoriasis is a chronic, recurrent inflammatory dermatosis, characterized by the appearance of well-circumscribed, erythematous plaques, of various sizes, usually covered by white lamellar scales. The lesions are symmetrical and are distributed on the scalp, nails, extensor surfaces of the limbs, umbilical region and sacrum. They may be accompanied by subjective symptoms, such as burning or itching, which cause discomfort and affect the quality of life. (1)

Psoriasis is a common pathology, affecting about 1-3% of the population. However, there are differences according to race and geographical environment: in northern Europe, the prevalence

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can reach 4.8%, while in China an incidence of 0.3% is estimated; a very small number of cases are registered among Latin American Indians. (2). In Romania, the disease affects about 2% of the population.

In the last ten years, progress has been made regarding the etiology of psoriasis. It has been shown to be an inflammatory disease, affecting more than the skin. Also, recent studies show a high association between psoriasis and the risk of cardiovascular disease.

In the psoriatic plaque, two mechanisms have been identified: hyperproliferation of keratinocytes and a cellular inflammatory infiltrate, in which neutrophils, tumor necrosis factor and T lymphocytes predominate. Each of them can trigger the other, thus leading to a vicious circle of hyperproliferation of keratinocytes and inflammatory reaction, however, not knowing which would be the primary one. Psoriasis is also a disease with an important, complex genetic component, involving polygenic transmission. (3)

The clinical classification of psoriasis includes the following forms: vulgar nonpustulos psoriasis or psoriatic erythroderma and generalized pustular psoriasis Zumbush, Barber palmoplantar, Bloch-Lapiere ring pustulosis and chronic persistent acrodermatitis Hallopeau.

There are also some separate forms of psoriasis: drug-induced, reversed, gut, napkin, seborrheic, nail, psoriatic arthritis, Reiter syndrome (1, 4, 5).

Clinical manifestations in psoriasis differ greatly from patient to patient. The primary lesion is erythematous and scaly. Initially, red macules appear, small, clearly delimited, covered with scabs. Well-vascularized areas may be surrounded by a white area of ??vasoconstriction, known as the "Woronoff Ring" (1926).

Vulgar psoriasis is the most common form, accounting for 65% of cases. It appears with a predilection between 20 and 40 years, equally to both sexes. It is a chronic form that sometimes can be remitting even by exposure to solar UV rays. Apart from acute episodes, the skin has a normal appearance.

This form of psoriasis consists of the appearance of well-delimited plates, prominent to the surrounding tegument, covered by white-silvery scales. The skin around the lesion is intensely erythematous. The plates are located with a predilection on the knees, shoulders, scalp, umbilicus, back, pretibial region, dorsal part of the hands. Usually the disease leaves hyperpigmented spots after an acute episode. When they are large, they are usually symmetrical. In most cases, the plates present pruritus. (6, 7, 4, 5).

Psoriasis is a dermatological disease with various therapeutic options. However, it does not heal because it has the genetic component and presents numerous remissions. There are no prophylactic methods to prevent the onset of the disease, but only to prevent relapses and aggravation of certain forms: avoidance of stress, intense physical activity, trauma, infections, correction of hypocalcemia. At present, we have so many topical therapies (keratolytics, emollients, corticosteroids, topical calcineurin derivatives, calcitriol), phototherapy, systemic treatment (methotrexate, acitretin, cyclosporine, systemic therapies) and biological therapies (6).

Case presentation

We report the case of a 46-year-old male patient, known with high blood pressure and type II diabetes, who presents in the clinic for an erythematous-squamous rash, spreading around the scalp, torso and limbs, evolving for about 5 years, the patient presenting a burst of activity of the disease in the last months. From the personal history of the patient, we note that he has undergone homeopathic treatments and acupuncture for 5 years, but the lesions did not improve. From family history we note that the patient's mother had pustular psoriasis.

At the hospitalization, a series of laboratory tests were performed which revealed: inflammatory syndrome (CRP, VSH, fibrinogen↑), hyperglycemia with HbA1c% ↑ and mixed dyslipidemia. Paraclinical examinations, cardiopulmonary radiography and abdominal-pelvic ultrasound were within normal limits.

The general objective examination revealed type II obesity and pain of the RCC and MCF joints and dactylitis when performing the rheumatological maneuvers of challenge. During the dermatological clinical examination, we observed multiple erythematous plaques, covered by white-silvery scales, with regular, well-defined margins, with variable dimensions

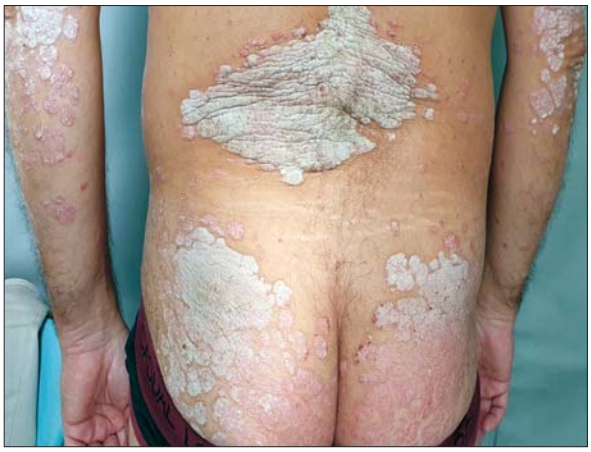

Figure 1

(2-25 cm) spread to the head, trunk and limbs. (Fig. 1, Fig. 2)

We raised the clinical suspicion of psoriasis vulgaris and performed an excision cutaneous biopsy type punch of 6 mm, under local anesthesia with xylene 1%. The piece was sent to the department of pathological anatomy, where the histopathological examination revealed compact hyperortokeratosis, parakeratosis, occasional neutrophilic collections at the level of the corneal layer, epidermal acanthosis, suggestive elements for the diagnosis of vulgar psoriasis.

Corroborating the clinical, paraclinical and histopathological data, we established the diagnosis of psoriasis vulgaris.

Because the patient presented with articular manifestations, we requested a specialized rheumatological consultation; the diagnosis of psoriatic arthritis is made the patient meeting the CASPAR criteria (score 3/6): active psoriasis lesions, family history of psoriasis and dactylitis.

During the hospitalization, we initiated topical treatment with keratolytic and emollient preparations, accompanied by 311nm UVB phototherapy. Considering the severity and extent of the lesions (PASI = 19.7; DLQI = 22) we decided to combine systemic immunosuppressive therapy with Metotrexat 15 mg / week. inj. and Folic Acid 15mg /week.

The patient returned to control 4 weeks after discharge; the lesions were significantly improved with a PASI = 10.3; DLQI = 13. (Fig. 3, Fig. 4).

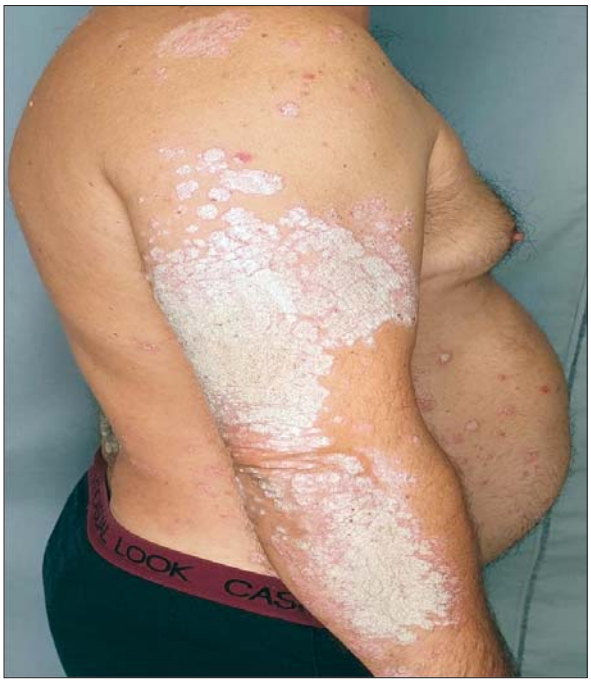

Figure 2

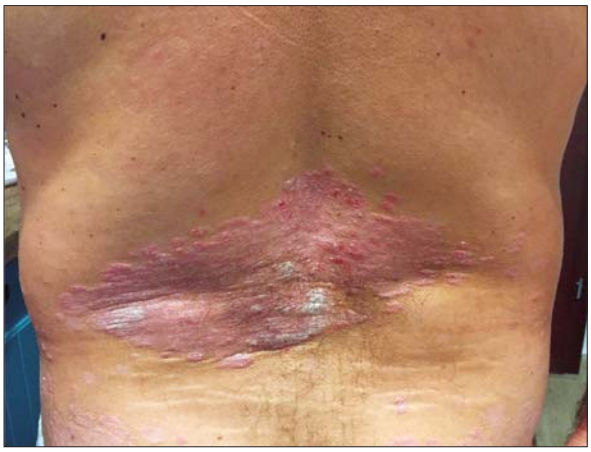

Figure 3

Discussions

Managing a patient with vulgar psoriasis and comorbidities is a challenge. Keratolytics are used to remove scars and "bleach the lesion". Salicylic acid is a commonly used, easy-to-apply keratolytic agent, as it can be introduced into creams of 3-6% concentration, or in ready-made form, with propylene glycol, in 6% concentration. (8)

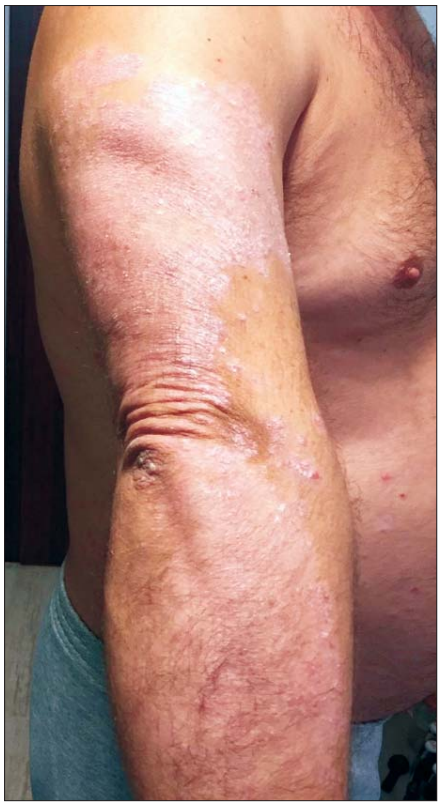

Figure 4

Corticosteroids are indicated in mild forms or localized by psoriasis. They are in the form of oils, lotions, shampoo, gel, cream, foam, spray. This class of medicines can also be used in moderate forms of psoriasis, as monotherapy or in combination with other drugs (vitamin D3, retinoids, anthralin). Due to their efficacy, approximately 80% of patients with mild forms of psoriasis, treated with corticosteroids, heal in two weeks. Unfortunately, relapses are common, with injuries recurring, on average, after three months.

Tacrolimius and pimecrolimus, topical calcineurin derivatives, act by inhibiting proinflammatory cytokines. They are prescribed in intertriginos psoriasis because they are effective and avoid the many adverse effects of corticosteroids.

Vitamin D (calcitriol) and its derivatives (calcipotriol and tacalcitol) inhibit cell differentiation, reduce proliferation of various cells, including keratinocytes, and modulate the function of T cells and dendritic cells. Therefore, vitamin D derivatives are recommended for people with moderate psoriasis, as the first line of treatment, alone or in combination. (1, 6, 9, 7, 4, 10)

Phototherapy is the treatment of choice in moderate and severe forms of psoriasis. Most patients notice an improvement in the disease during the summer by exposure to ultraviolet rays. This therapeutic method is generally associated with topical preparations. There are several types of phototherapy. UVB phototherapy uses artificial UVB radiation, which is absorbed by endogenous chromophores, thus initiating a series of photochemical reactions that will ultimately lead to therapeutic effects. The most important chromophore is nuclear DNA. The absorption of UV rays by nucleotides results in the formation of DNA photoproducts, pimeridine dimers. In psoriasis, UVB acts on epidermal keratinocytes and cutaneous lymphocytes. Immune suppression altered keratinocyte expression, and "cell cycle arrest" contribute to the suppression of disease activity. In addition, a subtype of T cells, Th 17, which appear to play a defining role in the pathogenesis of psoriasis, are also influenced by UVB rays. Recently, keratinocyte apoptosis has been shown to be one of the key mechanisms in healing psoriatic plaques. (11,12)

PUVA associates psoralen with longwave UV radiation (UVA). Psoralen can be given orally or topically, in the form of solutions, creams or baths. The most commonly used psoralen is 8-methoxypsoralen. In some countries, 5-methoxypsoralen is indicated in systemic therapy.

Methotrexate was introduced in the treatment of psoriasis in 1971, due to its effect on lymphocytes, which is a defroster reductase inhibitor. It is used as the first line of treatment in severe forms. In pustular psoriasis there is an improvement in the evolution of the disease between weeks 1-7, with a peak after 8-12 weeks of treatment. Methotrexate is administered weekly, usually a single dose per week, orally (rare intramuscularly or subcutaneously), and less frequent every 12 hours, 3 doses per week. Most patients receive between 15 and 30 mg per week. To reduce the risk of adverse effects,

especially nausea, doses of 1-4 mg/day folic acid are recommended. (1, 6, 10, 13)

Cyclosporine is an inhibitor of calcineurin, preventing the inhibition of pro-inflammatory epidermal cytokine activation. Can be used, but only following therapeutic guidelines. Doses of 2-5 mg/kg/day are recommended and the plaque disappears rapidly. Unfortunately, the lesions recover quickly, and the treatment needs to be changed. Because of the nephrotoxic effects, cyclosporine is prescribed for up to one year, alternating with other therapies. Treatment over six months is associated with a low incidence of renal complications. This treatment is indicated in severe forms of psoriasis. (1, 6, 14, 10)

Biological treatment was introduced in medical practice in 2000, for the treatment of psoriatic arthritis and for the moderate and severe forms of psoriasis. They are drugs obtained through genetic engineering. It acts on two pathogenetic mechanisms: it inhibits the increased activity of T cells by reducing their number and bypassing the immune response pathway; it also blocks the pro-inflammatory activity of cytokines, especially TNF-alpha. (1, 14, 15). Biologic therapy is reserved for patients who have not responded to other types of treatment or to whom other treatments are contraindicated. Their cost is extremely high. (6, 10, 15). There are three drugs that inhibit TNF-α: Etanercept (Enbrel), Infliximab (Remicade) and Adalimumab (Humira). Their efficacy in the treatment of psoriasis and psoriatic arthritis is well documented, which is why they are widely used. (6, 16).

Ustekinumab is a human monoclonal antibody that antagonizes interleukin-12 (IL-12) and IL-23. It is indicated in the treatment of moderate to severe psoriasis, as well as in Crohn's disease.

Secukinumab is a human IgG1 monoclonal antibody that selectively binds to IL-17A. It is indicated in the treatment of moderate-severe psoriasis, as well as in psoriatic arthritis and ankylosing spondylitis.

Ixekizumab is a humanized recombinant monoclonal antibody. It is indicated in the treatment of chronic psoriasis in plaques with moderate or severe damage or in psoriatic arthritis.

Biological therapy is generally well tolerated and usually used as a monotherapy. The main adverse reactions are infections, allergic reactions, mielo-degenerative diseases, lupus, reactivation of tuberculosis. Medicines in this class have already been widely used, confirming their safe profile. However, it is advisable to exclude a bacterial infection by pulmonary radiography before starting treatment and to perform a tuberculin test. (6,18)

Biological therapy is recommended individually and according to the existing comorbidities of the patient.

For our patient, we can choose Adalimumab, Etanercept, Infliximab, Sekukinumab or Ustekinumab.

Conclusions

Vulgar psoriasis is one of the most common skin pathologies. Currently, studies are being developed in all major university centers on the etiology of the disease. Thus, knowing the stages of production of the disease, we can develop new therapies that will target the molecules involved.

We must keep in mind that the patient with psoriasis is complex with multiple comorbidities, so it is always recommended to choose the trapezoidal behavior according to the associated pathologies.

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Conflict of interest
NONE DECLARED

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