

## A man with psoriatic lesions in plaques and guttate

*Um homem com lesões psoriáticas em placas e em gotas*

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### Abstract

Psoriasis is a chronic inflammatory condition of variable severity, which may occur in up to 11.8% of global population, and has significant effect on the quality of life of the affected individuals. Resources of primary health care attention are usually enough to control milder cases of disease. Severer cases cause psychosocial impact because of the visible lesions on the face, scalp, and nails. Th-1 and Th-17 pathways can play a role in the pathogenesis of the plaque and the guttate psoriasis; however, both phenotypes of plaque and guttate psoriasis can be concurrent in a same flare-up. Cardiovascular and rheumatologic involvement should be also evaluated by specialists; moreover, the increased morbidity and mortality that is related to cardiovascular causes, obesity, and diabetes. Time constraints and low awareness can play adverse role in primary care attention to patients with psoriasis; therefore, case reports may be of practical utility for health care workers.

**Keywords:** Guttate psoriasis; plaque psoriasis; primary health care; treatment

### Resumo

A psoríase é uma condição inflamatória crônica de gravidade variável, que pode ocorrer em até 11,8% da população global e tem efeito significativo na qualidade de vida dos indivíduos afetados. Os recursos da atenção primária aos cuidados de saúde são geralmente suficientes para controlar casos mais leves da doença. Casos graves causam impacto psicossocial devido às lesões visíveis no rosto, couro cabeludo e unhas. As vias Th-1 e Th-17 podem desempenhar um papel na patogênese da psoríase em placa e em gotas; no entanto, tanto fenótipos de psoríase em placa e em gotas podem coexistir em um mesmo episódio. O envolvimento cardiovascular e reumatológico também devem ser avaliados por especialistas; além disso, o aumento da morbidade e mortalidade relacionadas a causas cardiovasculares, obesidade e diabetes. As limitações de tempo e a baixa conscientização

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podem desempenhar um papel adverso na atenção primária aos pacientes com psoríase; portanto, os relatos de caso podem ser de utilidade prática para os profissionais de saúde.

**Palavras chave:** psoríase em gotas; psoríase em placas; cuidados primários de saúde; tratamento

## Introduction

Psoriasis is a chronic inflammatory disease with a variable range of severity affecting up to 11.8% of world population, estimated in 2.5% in Brazil, with impairment in quality of life.<sup>1-7</sup> Accurate primary care attention allows efficient control of limited disease, which also may have marked psychosocial impact because of the lesions on the genitalia, face, scalp, and nails.<sup>1,2,4,6</sup> The inflammatory phenomena associated with psoriasis are mediated by immune alterations.<sup>3</sup> Laboratory determinations show high levels of interleukins (IL), C-reactive protein, and TNF- $\alpha$ .<sup>4</sup> Circulating and tissue T-helper (Th)-1- and Th-17-related cytokines - IL-1RA, IL-2, IL-12p40, IL-17A, IL-22, IL-23, and IFN- $\gamma$  were studied in patients with different manifestations of psoriasis; and Th-1 and Th-17 pathways play a role in the pathogenesis of psoriasis in plaques and guttate.<sup>3</sup> Treatment of psoriasis may be topical with corticosteroids, calcipotriol, tacrolimus, tazarotene, anthralin; or systemic with methotrexate, cyclosporine, retinoids, and biological agents.<sup>1,2,4-7</sup> Cardiovascular and rheumatologic involvement should be also evaluated by specialists; increased morbidity and mortality have been related to

cardiovascular causes, obesity, and diabetes.<sup>1,2,4,6</sup>

## Case report

A 45-year-old man was followed in primary health care attention because of recurrent dermatological changes due to psoriasis. With 15 years of duration, topic treatment was effective. Two weeks before the current episode, he had progressive difficulty to perform daily activities, and social embarrassment related to the aspect of visible lesions. He was a tobacco smoker (30 pack-years) and denied use of illegal drugs and alcohol abuse. There was no other significant pathological medical antecedent. Except for the control of recurrent episodes of the cutaneous manifestations, he did not utilize other kind of medicines. He denied personal and family antecedent of atopy, photo-sensibility, as well as arthralgia. Physical examination showed BMI: 22.93 kg/m<sup>2</sup> and normal vital signs. Remarkable findings were cutaneous: scaly erythematous lesions on the neck, abdomen, elbows, hands, thighs, knees, legs, and on the trunk. There were dystrophic changes in fingernails, fissures in the extensor surfaces of the hands, elbows and knees; and scaling plaques on the

palms and soles (Figure 1: A, C, E, G, I, and K). Worthy of note was the lack of lesions in

inguinal and flexor areas of the limbs.



**Figure 1.** Silvery scaly plaques with well-demarcated boundaries affecting extensor areas of extremities, soles, and abdomen; small papules with guttate pattern in the dorsum; and cuticle atrophy, subungual thickening and crumbling in the proximal nail plates (A, C, E, G, I, K); and comparative features of the same regions, after fifteen days of successful therapy (B, D, F, H, J, L).

The results of routine laboratory determinations were normal, including blood counts, glucose, lipid profile, serum proteins, and thyroid, renal, hepatic, and pancreatic functions. The tests for hepatitis B and C, HIV, and other sexually transmitted diseases were negative. He successfully underwent

oral immunosuppressive and folic acid schedule, with significant clinical improvement within three weeks of treatment (Figure 1: B, D, F, H, J, and L). The patient was further referred to dermatologic and rheumatologic complementary follow-up.

## Discussion

This eutrophic middle-aged Brazilian male without antecedent of atopy, photosensitivity, or osteoarthropathy, presented with classical psoriatic plaques in concomitance with guttate lesions. Skin biopsy is seldom needed to confirm diagnosis and may show irregular hyperplasia of epidermis, hyperkeratosis and parakeratosis, apoptosis of keratinocytes; edema, vasodilation and congestion, with lymphohistiocytic and eosinophilic perivascular infiltrates in superficial derma.<sup>5</sup> His diagnosis was established in primary health care attention, but the effective adherence to the treatment and follow-up had been difficult because of his current low-income social condition. Worthy of note, his growing economic difficulties probably have influenced this psoriasis flare up. Main external triggers of psoriasis include cutaneous trauma, infections, alcohol, tobacco, stress, and drugs as NSAIDs, beta-blockers, antimalarials, ACE-inhibitors, lithium, and salts of gold.<sup>1,4,6</sup> The classical presentations of psoriasis are chronic plaque, erythrodermic, guttate, and pustular.<sup>3-5</sup> The differential diagnosis of psoriasis may include atopic and contact dermatitis, pityriasis rubra pilaris, ichthyosis, lichen planus, secondary syphilis, tinea corporis, cutaneous T-cell lymphoma, Norwegian scabies, Sézary syndrome and adverse drug reactions.<sup>5</sup>

Additional concern may be about the development of exfoliative erythroderma after rapid tapering of corticosteroids in psoriasis.<sup>5</sup>

He never used methotrexate (MTX), corticoids or antimalarials, or TNF- $\alpha$  inhibitors,<sup>2,4-7</sup> and the lesions of the flare-up were controlled by MTX 15 mg weekly and folic acid 5 mg daily.<sup>7</sup> MTX adverse-effects can affect hematopoiesis, gastrointestinal mucosa, and epiderme.<sup>7</sup> As the structure of MTX is similar to the folic acid, it links to dihydrofolate reductase, induces antiproliferative activity and promotes anti-inflammatory and immunoregulatory actions.<sup>7</sup> Folic and folinic acids are used to prevent and control skin and mucosa toxicity due to MTX, which can mimic lesions of psoriasis flare-ups or of the pustular psoriasis; and more often occur if this immunosuppressive drug is used continuously and without the simultaneous intake of folic acid.<sup>7</sup> Infliximab acts as anti-TNF- $\alpha$ , a biomarker that reduces appetite and the body mass Index (BMI). This substance decreases if immunologic response and inflammation improve by anti-TNF- $\alpha$  drugs. Anti-TNF- $\alpha$  may change BMI, as well as HDL and leptin levels; therefore, the overweighted and obese patients using infliximab should have accurate control of body weight and of lipid profile.

Moradi et al. done a cross-sectional study of 62 Iranian patients with psoriasis, and clinical types were: chronic plaque

(66.1%), palmoplantar (27.4%), inverse (25.8%), guttate (19.4%), erythrodermic or arthritic (4.8% each), and pustular (3.2%). The mean age was 40.40 ( $\pm$  17.53) years, and 75.8 % were males; 38.7% had normal weight and 48.4% were overweight or obese. Thirty participants used only topical therapy and 24 underwent systemic non-biological therapy.<sup>2</sup> The authors concluded that the impairment of quality of life is considerable, and major problems are most frequently detected in the anxiety/depression and pain/discomfort dimensions; and disease severity, treatments, and culture-specific differences can lead to variation in outcome measures.<sup>2</sup>

The present report seems to strengthen the concept that phenotypes of plaque and guttate psoriasis can coexist in a flare-up, despite of specific activation of Th-1 or Th-17 pathways.<sup>3</sup> Considering that time constraints and low knowledge about psoriasis may play a role in primary care attention to this group of patients,<sup>6</sup> case reports can be useful for the primary health workers.

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