CASE REPORT

Norwegian scabies mimicking rupioid psoriasis*

Sarna norueguesa mimetizando psoríase rupioide

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Abstract: Norwegian scabies is a highly contagious skin infestation caused by an ectoparasite, Scarcoptes scabiei var. Hominis, which mainly affects immunosuppressed individuals. Clinically, it may simulate various dermatoses such as psoriasis, Darier's disease, seborrheic dermatitis, among others. This is a case report of a 33-year-old woman, immunocompetent, diagnosed with generalized anxiety disorder (cancer phobia), who had erythematous, well-defined plaques, covered with rupioid crusts, on her neck, axillary folds, breast, periumbilical region, groin area, besides upper back and elbows, mimicking an extremely rare variant of psoriasis, denominated rupioid psoriasis.
Keywords: Anxiety; Mite infestations; Psoriasis; Sarcoptes scabiei

Resumo: A sarna norueguesa é uma infestação cutânea altamente contagiosa causada pelo ectoparasita Sarcoptes scabiei var. hominis, que atinge principalmente indivíduos imunossuprimidos. Clinicamente, pode simular várias dermatoses, tais como psoríase, doença de Darier, dermatite seborréica, entre outras. O artigo relata o caso de uma mulher de 33 anos, imunocompetente, porém com diagnóstico de transtorno de ansiedade generalizada e cancerofobia, que apresentava placas bem delimitadas, sobre base eritematosa, recobertas por crostas rupioides, nas regiões cervical, axilar, mamária, umbilical, inguinal, além de dorso superior e cotovelos, mimetizando uma variante extremamente rara de psoríase, denominada psoríase rupioide.
Palavras-chave: Ansiedade; Infestações por ácaros; Psoríase; Sarcoptes scabiei

INTRODUCTION

Crusted or Norwegian scabies is an uncommon, highly contagious, ectoparasitic infection transmitted by *Sarcoptes scabiei*, mainly affecting immunosuppressed patients. [1] Immunocompetent individuals rarely develop crusted scabies. [2] As a reaction to the massive infestation, the horny layer thickens, mimicking other dermatoses such as psoriasis, seborrheic dermatitis, Darier's disease, dermatitis herpetiformis and drug- induced eruptions. [3,4] Rupioid or ostraceous psoriasis is an extremely rare variety of psoriasis with few publications in the literature. This form of psoriasis is characterized by sharply demarcated, erythematous, well-defined plaques, covered with scales and crusts, sometimes in a cone-shaped appearance. [5] We describe the case of a 33-year-old woman, immunocompetent, with improper hygiene habits, diagnosed with generalized anxiety disorder (cancer phobia), who had erythematous, well-defined plaques, covered

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with rupioid crusts, on her neck, axillary folds, breasts, periumbilical region, groin area, upper back and elbows, mimicking rupioid psoriasis.

CASE REPORT

A 33-year-old woman presented with a 9-month history of a painful erythematous scaly eruption on her trunk and extremitites, associated with slight pruritus. Despite these symptoms, she did not seek medical help due to an extreme fear of being diagnosed with a malignant disease.

Besides the anxiety disorder, the patient had no other medical problems, such as underlying immunosuppression. She also denied systemic complaints and similar cases among family members.

Physical examination revealed sharply demarcated, erythematous, well-defined plaques covered with crusts, producing a wart-like appearance, on her neck, chest, periumbilical region, axillary folds, elbows, upper back and groin area (Figures 1 and 2).

At first, the eruption was misdiagnosed as generalized ostraceous psoriasis and the patient was initially treated with methotrexate 7.5mg/week and the application of 6% *liquor carbonis detergens*, 3% salicylic acid and 0.05% clobetasol cream. A couple of weeks later, unexpected histopathological findings were revealed: epidermal hyperparakeratosis and acanthosis; numerous adult mites transected in the stratum corneum; the dermis showed superficial perivascular infiltrate, predominantly by lymphocytes (Figure 3). These findings supported the diagnosis of crusted Norwegian scabies.

As a result, a microscopic examination was made. Scrapings of the lesions showed an abundance of adult mites, eggs and faecal pellets of *Sarcoptes scabiei* by KOH mount (Figure 4).

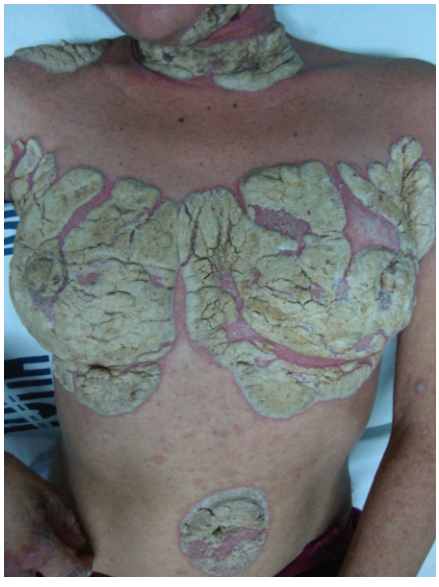

Figure 1: Erythematous, well-defined zplaques, covered with rupioid crusts, on the neck, chest and periumbilical region

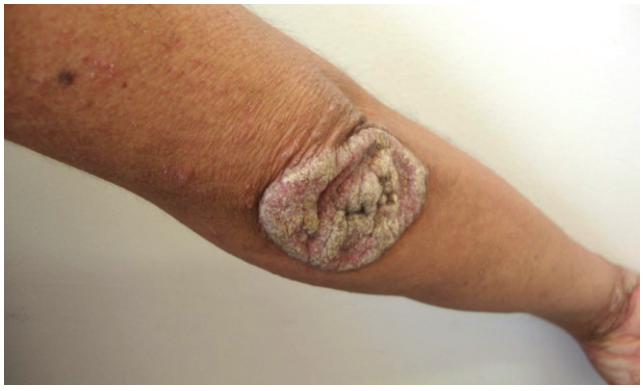

Figure 2: errucous plaque on the elbow

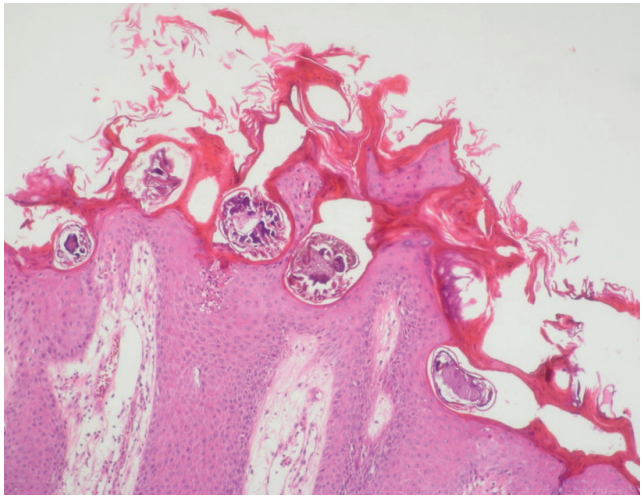

Figure 3: Numerous scabies mites transected in the stratum corneum

Laboratory tests were requested in order to exclude severe systemic diseases and immunosuppressive disorders. A white blood cell count showed 20110/mm^3, with 56% neutrophils, 11% eosinophils, 30% lymphocytes. HIV, antinuclear antibodies and rheumatoid factor were negative.

The previous treatment was discontinued. Aggressive therapy was performed with three doses of 200mcg/kg oral ivermectin 1 week apart in combination with topical permethrin 5% lotion applied once daily for three days in a row, one week apart for three weeks. This extensive treatment cleared the crusted skin lesions (Figure 5).

DISCUSSION

Crusted or Norwegian scabies is a highly contagious, ectoparasitic infection transmitted by *Sarcoptes scabiei*, mainly affecting immunosuppressed patients, such as individuals with human T-cell lymphotropic virus 1, human immunodeficiency virus, leukemia, lymphoma, organ transplant recipients, and during the use of immunosuppressive therapy. [1,6,7,8,9,10] Among

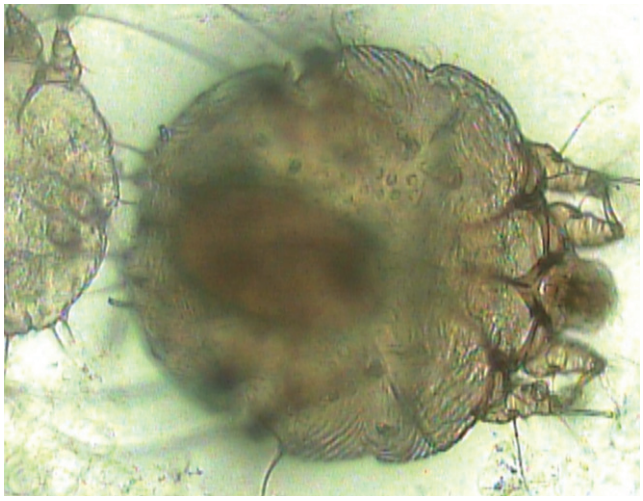

Figure 4: Adult mites of *Sarcoptes scabiei* by KOH mount

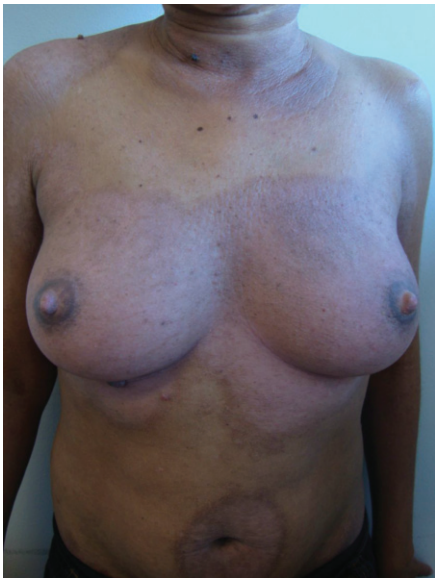

Figure 5: Clinical results four weeks after treatment

this group, the weak immune response fails to contain the disease and there is no impulse to scratch, resulting in fulminant hyper-infestation. [2,4,6]

Additional non-immunosuppressive conditions like neuropathy, severe arthropathies, mental retardation and psychiatric disorders are also risk factors because of the inability to scratch in response to itch. [1,7] Scratching is important to remove scabies mites and to destroy its burrows. [4,7]

As a reaction to the massive infestation, the horny layer thickens, forming crusted and warty hyperkeratotic lesions, mimicking other dermatoses such as psoriasis, seborrheic dermatitis, Darier's disease, dermatitis herpetiformis, and drug- induced eruptions. [3,4]

Given the large number of mites in the epidermis and the hyperkeratotic skin, the Norwegian scabies can be very difficult to treat, especially if the patient is immunosuppressed. Therefore, this condition generally requires repeated application of topical and systemic scabicidal agents. [2,4]

Rupioid or ostraceous psoriasis is an extremely rare variety of psoriasis, with few publications in the literature. This form of psoriasis is characterized by sharply demarcated, erythematous, well-defined plaques, covered with scales and crust, sometimes in a cone-shaped appearance. [5]

In our case, although immunocompetent, the patient had generalized anxiety disorder and skin cancer phobia. Therefore, since she started to present the first lesions, nine months ago, she ended up not being well-cleaned and not manipulating the injuries, which caused the exuberant and unusual presentation. Due to the presence of rupioid crusts and lesion distribution in a few areas traditionally affected in psoriasis, the eruption was misdiagnosed as ostraceous psoriasis.

Our case highlights the importance of keeping an open mind about Norwegian scabies in the differential diagnosis of skin diseases coursing with hyperkeratotic and verrucous plaques, even in immunocompetent individuals with no obvious risk factor for the disease.

A high index of suspicion and early diagnosis help in successfully curing and containing the spread of this highly contagious and deceptive form of scabies. [2] ❑

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