Dermoscopy of Norwegian scabies in a patient with acquired immunodeficiency syndrome
Dermosкопия ды сарны кростоса ассоциированной с симптомом ды имунодефиций адьнуринда

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Abstract: The authors report here on the case of a female patient with Norwegian (crusted) scabies and acquired immunodeficiency syndrome whose compliance with antiretroviral therapy was poor. Definitive diagnosis was confirmed by direct microscopic examination, which revealed numerous Sarcoptes scabei. Dermoscopy showed pathognomonic scabetic burrows and brownish structures in the shape of a hand-glider with a millipede-like appearance. The latter constitutes a diagnostic feature in the pathology of Norwegian scabies that has not yet been described. The patient responded well to oral ivermectin and topical vaseline with sulphur at a proportion of 10%. There was a simultaneous improvement in dermoscopic parameters.

Keywords: dermoscopy; Sarcoptes scabiei; acquired immunodeficiency syndrome.

Resumo: Os autores relatam o caso de uma paciente com sarna norueguesa e síndrome da imunodeficiência adquirida com baixa adherência à terapia antirretroviral. O diagnóstico definitivo foi confirmado pelo exame parasitológico direto. A dermatoscopia mostrou sulcos escabióticos e estruturas acastanhadas em asa-delta já descritas, além de uma estrutura morfologicamente semelhante a um gongolo (diplopoda-símile). Esta última representa um elemento patodiagnóstico da SN não previamente descrito. Houve boa resposta clínica ao uso oral da ivermectina e ao uso tópico da vaselina com enxofre a 10%, com concomitante melhora dos parâmetros dermatoscópicos.

Palavras-chave: Dermoscopia; Sarcoptes scabiei; Síndrome de imunodeficiência adquirida

INTRODUCTION

Crusted or Norwegian scabies is a rare and severe form of infestation by the Sarcoptes scabiei var. hominis, characterized by a large number of parasites in the skin. Crusted scabies is commonly seen in immunocompromised patients with conditions such as lymphoma, leukemia, acquired immunodeficiency syndrome, graft-versus-host disease and in patients undergoing treatment with immunosuppressors or corticosteroids. Immune response failure, particularly in the case of cell-mediated immunity, has been considered in the possible pathogenesis of this disease. The condition also occurs in institutionalized patients and in those with neurological abnormalities such as hanseniasis and syringomyelia. Lesions are crusted, thick, greyish, squamatous and extend beyond the circle of Hebra, affecting the scalp, the palms of the...
hands, the soles of the feet and the subungual region. Dermoscopy is an extremely useful and highly sensitive method for diagnosing this parasitosis.\textsuperscript{1,2} Dermoscopy permits diagnosis to be made based on the evidence of parasites and scabetic burrows and is also useful in monitoring the efficacy of therapy.

**CASE REPORT**

A female patient, 58 years of age, an alcoholic with acquired immunodeficiency syndrome (AIDS), whose compliance with antiretroviral therapy was poor, was hospitalized in February, 2008 in the AIDS ward of this institute with diarrhea, malnutrition and crusted, pruriginous lesions disseminated all over her body and scalp, including the palms of her hands and the soles of her feet, with pruritus principally at night (Figure 1). Initially, these lesions were located predominantly on the scalp with intense desquamation and pruritus. The patient had already taken an oral dose of ivermectin. She was placed in isolation in view of the clinical suspicion of crusted scabies. Concomitantly, she had a herpes lesion on her lip and oral candidiasis. Immunological parameters showed a reduction in CD4 lymphocytes (480 cells/mm\textsuperscript{3} in October 2007 compared to 22 cells/mm\textsuperscript{3} in March 2008). Viral load was undetectable. As soon as she was admitted, antiretroviral therapy was reinitiated with lamivudin, efavirenz and DDI. Dermoscopy was performed (Dermalite Pro II) at a magnification of 10x, and showed the presence of scabetic burrows and browish structures with a millipede-like appearance and the shape of a hand-glider (Figure 2). Diagnosis was confirmed by direct microscopic examination of the skin lesions using a 10% solution of potassium hydroxide, which revealed numerous parasites and eggs (Figure 3). The patient was treated with oral ivermectin and vaseline containing 10% sulphur. She responded well to treatment and a simultaneous improvement occurred in the dermoscopic parameters of the infestation (Figure 4). Azythromycin was used to treat the secondary bacterial infection, fluconazol to treat the candidiasis and acyclovir to manage the herpes infection. The patient was released from hospital 15 days later with instructions to continue therapy on a outpatient basis.

**DISCUSSION**

The fact that the patient had abandoned antiretroviral therapy and suffered a resulting sharp fall in her immunological parameters, together with her alcoholism and malnutrition, were factors that contributed towards scabies infestation, a form of para-

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Dermoscopy of Norwegian scabies in a patient with acquired immunodeficiency syndrome

The pruritus caused by the HIV infection, the dryness of the skin and the exuberant lesions of seborrheic dermatitis may hamper the diagnosis of crusted scabies, emphasizing the importance of the dermoscopic finding of millipede-like structures, possibly representing a new dermoscopic standard in the diagnostic pathology of crusted scabies. Prompt isolation of the patient avoids dissemination of the infestation. In crusted scabies, thousands of parasites are present and the finding of millipede-like structures probably correlates with larger excavations than the classically described scabetic burrows. The good response of the patient to therapy coincided with an improvement in the patterns of scabiosis and a reduction in the number of parasites found at dermoscopy.

REFERENCES


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