

Scabies Surrepticius Presenting As Chronic Urticaria - A Case Report and Literally Review of Diagnosis Method and Treatment

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ABSTRACT: Scabies surrepticius represents the non-classic atypical presentation of scabies and diagnosing scabies in these individuals could be difficult. We present a clinical case of a 71-year-old woman with intense body pruritus for about 2 years, unresponsive to oral and topical antibiotics, corticosteroid creams, topical calcineurin inhibitors, as well as antiallergic agents, due to a suspected allergic reaction.

KEYWORDS: Scabies surrepticius, non-classic atypical presentation of scabies, intense body itching, diagnosis of scabies, treatment for scabies

INTRODUCTION

Scabies is characterized by a variety of cutaneous lesions. Patients with classic scabies present with characteristic burrows and intense itching, more pronounced at night, scabies surrepticius refers to the non-classic atypical presentation of scabies and diagnosis in these individuals can be difficult.

PRESENTATION

It concerns a 71-year-old female patient who was admitted for the first time to the Department of Skin and Venereal Diseases. The reason for hospitalization was strong, constant itching on the body for about 2 years. The patient reported pulling, and burning sensation of skin. She was treated repeatedly with anti-allergic agents, oral and topical antibiotics, corticosteroid creams, calcineurin inhibitors – topically, applied anti-mite therapy several times, but only in the areas with intense itching. She worked in a nursing home as a nurse. Social living conditions were good. Her husband had several periods with itching, too.

Dermatological status: Pathological lesions involved the areola area, abdomen, lower 1/3 of the back, upper 1/3 of the thighs and inguinal folds. Tense, erythematous detached urticaria-like papules were visualized in the abdomen, and diffuse papulo-pustular lesions were seen in the upper thighs and inguinal folds. The presence of multiple excoriations was also noted. Visible mucous membranes were intact. Skin appendages and lymph nodes - without changes.

Laboratory tests: complete blood count, glucose, AST, ALT, GGT, creatinine, urea - were within normal limits.

Histological result: a strip of skin lined by stratified squamous epithelium in the superficial dermis - presence of perivascular lymphoplasmacytic inclusions mixed with histiocytes. Immunofluorescence examination: Absent deposits for C3, IgG, IgM and IgA.

Therapy was started with Allergozan - 1 x 1 i.m., Lisamethyl 40 mg. - by a schema.

During the patient's follow-up, solitary papules and linear superficial streaks suspicious for scabies were noted (Fig. 1,2) Upon further discussion, the patient admitted that the itching was more intense in the evening, and shared that the complaints coincided with the admission of a patient at the nursing home where she worked, who was diagnosed with scabies and whom she had been caring for. It was decided to include Akarol lotion - 3 smears every 12 hours. Even after the second application, the patient reported that her itching had significantly decreased and she slept soundly. She was given and thoroughly explained how to disinfect surfaces in the home and how to decontaminate her clothes and bedding. We also invited her husband for an examination and found single lesions on the body that were suspicious for scabies and we made anti-scabies therapy to him. Two weeks later, she reported that she was still itching some days. In connection with these complaints and the long history of the disease, Ivermectin was added to the therapy. Two weeks later, the patient reported no itching and the rash had regressed.

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Fig. 1. Scabies burrow on the hip.



Fig. 2. Scabies burrow on the torso.

DISCUSSION

Scabies is a contagious skin infection caused by the mite *Sarcoptes scabiei* var. *hominis*. The earliest written mention of dermatosis in humans and other animals, which is associated with the modern definition of the disease, appears in Leviticus in the Bible (1200 BC) (1). In recent years, a number of new data have been established, and the knowledge about the life cycle of the mite, its interactions with the host and its ways of adaptation is now extremely detailed (2).

The diagnosis is not a problem in the presence of the typical skin manifestations – tunneling in predilection sites, papular disseminated rash on the body and excoriations. As a rule, at one end of the tunnel and with the naked eye, the female mite is visible as a black dot, which can be reached with a sterile pin and examined under a microscope. The sample is placed on a glass slide, 5 drops of 10% potassium hydroxide or normal saline are added, then the sample is covered with a glass coverslip and observed under a microscope for the presence of mites, larvae or eggs (3;4). Another technique is to inject a dye into the opening of the tunnel, which colors the scabies course. A dermatoscopy may also be performed. If the diagnosis is unclear, a biopsy can be performed to confirm it. Histopathology detects the mite parts, immature forms, or excreta in tissue sections. The exoskeleton is thin and covered with spines that can be visualized with hematoxylin and eosin staining (5). Other pathologic changes are perivascular and interstitial inflammatory infiltration of the dermis, hyperkeratosis, acanthosis, epidermal spongiosis, acantholysis, vasculitis and formation of superficial fibrin thrombi (6). Much less frequently used techniques are serological tests (ELISA)(7), isolation of DNA from samples (8), PCR (9-11), isothermal amplification techniques (12), etc.

A definitive diagnosis of scabies can be made when mites, eggs or feces (also called scybala) are identified. In 2018, the International Alliance for Scabies Control (IACS) proposed criteria for the diagnosis of scabies in order to facilitate the clinician, they introduced criteria for confirming the diagnosis of scabies, clinical diagnosis of scabies and suspected diagnosis of scabies. Diagnostic criteria are recognized and it is recommended that doctors use them during the examination of patients suspected of having scabies (13-17). A confirmed diagnosis of scabies requires visualization of mites, eggs or feces. The clinical diagnosis of scabies can be made by finding either genital lesions or scabies or classic lesions in individuals with two history features: presence of pruritus and close contact with an individual who has pruritus and classical scabies lesions. The IACS criteria for a suspected diagnosis of scabies require either one history feature and typical lesions with a typical distribution, or two history features and the presence of atypical lesions or an atypical distribution of skin lesions. Anti-scabies therapy can be initiated when a diagnosis of scabies is suspected (16).

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Incorrect diagnosis and subsequent incorrect treatment, especially with the use of steroids, can change the clinical presentation of scabies. In these cases, the term scabies incognito is used. It is considered a subspecies of hidden scabies (non-classic/atypical scabies). Non-classic manifestations of scabies also occur. Therefore, in 2017, the term scabies surreptitious was proposed to cover all atypical manifestations of scabies. Scabies surreptitious includes crusted scabies, hidden, incognito, bullous, nodular, and other less common morphologies that may mimic dermatitis, ecchymoses, Langerhans cell histiocytosis, dermatitis herpetiformis, systemic lupus erythematosus, urticaria, urticaria pigmentosa, pityriasis rosea, and prurigo nodularis (18-21).

Scabies surreptitious is not characterized by the usual clinical symptoms, the lesions can mimic other skin diseases. The clinical presentation of the disease may resemble infections caused by other sources such as parasites, viruses, bacteria, and fungi (3). It is also very commonly misdiagnosed as eczema, dermatitis, lupus erythematosus and prurigo nodularis (22).

Often, this form occurs in patients with scabies who are treated with corticosteroids, which leads to an improvement in clinical symptoms, a reduction in the patients' skin complaints, but the mites remain and the patients continue to be infectious. This form is also common in people with good hygiene (23). Also, prolonged use of topical corticosteroids affects the immune system by reducing the inflammatory response and leading to a decrease in the cellular immune response, resulting in worsening of the lesions. The use of topical corticosteroids inhibits phagocytosis and cell membrane stabilization of phagocytic lysosomes, with the result that the proinflammatory and phagocytic response is inhibited and patients remain infectious (24). Misdiagnosis is associated with serious complications such as spread of infection and superinfection of lesions, which in turn can lead to life-threatening consequences (25).

The classic treatment for scabies is benzyl benzoate in castor oil 10-30% depending on age. The treatment lasts for 3 days, and the patient is smeared twice a day from the neck to the toes and bathed after the 3rd day. Benzyl benzoate is odorless and well tolerated. Another treatment option is with sulfur ointment - Ung. Sulfuri praecipitati 10-30%, depending on the age of the patient. The therapy is carried out on 5 consecutive days - in the evening, the sulfur ointment is smeared again from the neck to the toes. This treatment option lasts for a relatively long time, the sulfur smells, which is unpleasant for the patient and stains the clothes. Relatively often after treatment with sulfur, post-scabies dermatitis develops, which requires the corresponding treatment.

Another agent of choice is oral ivermectin. It is used in patients over 10 years of age, with a single dose, if symptoms persist, another dose is taken after 2 weeks. Two doses are necessary because the second treatment kills the mites that have hatched after the first treatment. Oral ivermectin is recommended because of its convenience, favorable side effect profile, safety, and reduced potential for abuse or inappropriate administration that could occur with topical ivermectin (26). Adequate therapy is extremely important for the treatment of contacts such as in nursing homes, homeless shelters, prisons, and health care facilities (27).

Treatment is unsatisfactory and unsuccessful when all contacts are not treated, when surfaces are not disinfected and bedding and clothing are not decontaminated.

The finding of scabies in a patient who has been appropriately treated (locally and/or systemically) could be due to reinfection. Therefore, not only the given individual should be treated, but also the family and close contacts (17).

Another reason for persistent scabies after treatment could be resistance of the mite to the applied therapy (28).

CONCLUSION

We present a clinical case of a 71-year-old woman with intense body pruritus for about 2 years, unresponsive to oral and topical antibiotics, corticosteroid creams, topical calcineurin inhibitors, as well as antiallergic agents, due to a suspected allergic reaction. It was the detailed physical examination and thorough anamnesis that helped us to visualize the individual scabies courses, to establish the typical localization of the rash units in adult patients, and to specify the temporal appearance of the rash and the causal relationship (after caring for a patient with scabies), as well as the intensity of itching - in the evening.

Scabies surreptitious represents the non-classic atypical presentation of scabies, and diagnosing scabies in these individuals could be difficult. To facilitate diagnosis, the International Alliance for Scabies Control (IACS) has proposed criteria. They are intended for the investigation of scabies, but can nevertheless be used by clinicians to establish a confirmed diagnosis, a clinical diagnosis, or a suspected diagnosis of scabies.

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