
 CRUSTED CUTANEOUS LESIONS REQUIRING EARLY DIAGNOSIS AND
 APPROPRIATE TREATMENT

DIAGNOSIS

A diagnosis of crusted scabies (also called Norwegian scabies) was determined based on the patient's cutaneous lesions, although diagnoses of paraneoplastic syndrome, hypothyroidism and psoriasis were also discussed. Indeed, dermatoscopic and microscopic examinations of skin scrapings from the feet and hands revealed mites consistent with *Sarcoptes scabiei*. The crusted scabies were treated with oral ivermectin and 5% permethrin cream. No source of infection was found, and no other case was diagnosed, except for her daughter, who received appropriate treatment. The caregivers and patients in contact with the patient were preventively treated with ivermectin and no one developed the infection while under the care of the hospital's Nosocomial Infection Control Committee. The patient suddenly died a few days later of unknown cause.

Scabies is a common parasitic infestation due to *Sarcoptes scabiei* variety hominis, an obligate ectoparasite.¹ Clinical lesions are produced by female mites that deposit their eggs and fecal pellets in the epidermis, which leads to a delayed-type hypersensitivity reaction. In healthy patients, this condition is transmitted by direct, prolonged skin-to-skin contact or indirect contact through infested bedding and clothing, and also via staff in nursing homes and hospitals with frequent and repeated contact.¹ It usually presents with itching lesions over the anterior aspect of the wrists, interdigital webspaces, nipples, axillae and penis, and can be caused by only a few mites.¹ Conversely, crusted scabies is a hyperinfestation affecting immunocompromised and mentally or physically disabled patients; it rarely affects healthy individuals. Patients present with lack of itching or poorly itching crusted lesions involving the palms and soles, flexor surfaces of the legs and nails and scalp, with hundreds or millions of mites.^{1,2} It is highly infectious and can be transmitted after a brief skin-to-skin contact, and also from contact with bedding, clothing, furniture and floors contaminated with skin scales and crusts containing mites from the patient.^{1,2} Indeed, outbreaks can occur in healthcare and residential facilities.² Diagnosis of scabies can be established upon clinical examination but definite diagnosis relies on

microscopic examination of skin scrapings disclosing mites and eggs. Of note, dermatoscopy can visualize both the burrow and the mite itself, with hang glider-like triangles corresponding to the mite's head and round body corresponding to the mite's abdomen.³ Differential diagnosis includes psoriasis, eczema, hypothyroidism and ichthyosis.

Treatment of common scabies relies on 5% permethrin cream or oral ivermectin and disinfection of the environment including clothes and bed linens in contact with the patient during the previous 72 hours, washed at 60°C or placed into a sealed plastic bag with insecticide.^{1,4} Treatment of close personal contacts including household members, sexual partners, other patients and staff is necessary. For patients with crusted scabies topical permethrin, keratolytics and oral ivermectin should be given for at least 15 days with re-evaluation and additional doses if necessary.^{1,4} It is essential that care providers wear protective garments including gowns, long-sleeve gloves and shoe covers during any contact with patients with crusted scabies.⁵ Visitors should also wear protective garments and be limited to one person per visit. Environmental disinfection is required, in particular, regular room cleaning of the patient to remove contaminating skin crusts and scales. A public health agency can help manage these situations outside the hospital.⁵ In our hospital, the parasitologists, members of the Nosocomial Infection Control Committee, provided information, screened and treated staff, patients and household members and checked contact precautions.

References

1. Chosidow O. Clinical practices. Scabies. *N Engl J Med*. 2006;354:1718-27.
2. Leistner R, Buchwald D, Beyer M, Philipp S. Scabies outbreak among healthcare workers in a German acute care hospital. *J Infect Prev*. 2017;18:189-92.
3. Micali G, Lacarrubba F, Verzi AE, Chosidow O, Schwartz RA. Scabies: advances in noninvasive diagnosis. *PLoS Negl Trop Dis*. 2016;10:e0004691.
4. Salavastru CM, Chosidow O, Boffa MJ, Janier M, Tiplica GS. European guideline for the management of scabies. *J Eur Acad Dermatol Venereol*. 2017;31:1248-53.
5. Crusted Scabies Cases – CDC. Education and information about scabies, for health professionals in institutional settings dealing with crusted scabies cases. [Internet] 2 Nov. 2010. Available from: https://www.cdc.gov/parasites/scabies/health_professionals/crusted.html.