

Case Report

A CASE-REPORT OF SARCOPTES SCABIEI VAR. HOMINIS IN A 55-YEAR-OLD MALE SHEEPHERDER IN TABRIZ, IRAN

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ABSTRACT

The prevalence of *Sarcoptes* in rural areas has been investigated by many investigators. *Sarcoptes* infestation in areas with poor education and hygienic is higher than urban areas. Human scabies is an intensely pruritic skin infestation caused by *Sarcoptes scabiei* var. *hominis*. Crusted scabies (previously known as Norwegian scabies) is a rare form, very contagious and transmitted by direct contact with the skin. Despite being readily treatable, a delayed diagnosis often leads to widespread infestation of contacts, and therefore difficult to restrain. This case concerns a patient where dermoscopy (with scabetic burrows and a visible hand-glider structure), together with direct microscopic examination, allowed a prompt diagnosis, thereby reinforcing the increasing importance of this technique in daily practice. Control programs should be put in place and implemented in an integrated manner, by reducing overcrowding, and by improving health education, personal hygiene, treatment and surveillance among high-risk populations.

Keywords: *Shepherd, Sarcoptes Scabie, Skin Diseases, Tabriz, Iran*

INTRODUCTION

Most human ectoparasites live on the surface of their host and depend on host to complete their life cycle. The most common ectoparasitic infestations of medical importance in humans include pediculosis, scabies, myiasis, and tungiasis (Bornstein *et al.*, 2001). Scabies is a contagious skin disorder and one of the most common itching dermatoses in the world especially in less developed countries. Epidemiologic survey of scabies periodically done in many countries is a reflection of general status of public health in the community. Their hosts are invertebrates as well as vertebrates (Bornstein *et al.*, 2001).

CASES

A 55-year-old male Shepherd in Tabriz city of Iran with a prior history of diabetes and hypertension presented with hyperkeratotic, erosive nodules scattered over the trunk and limbs, scratching lesions and marked scaling, with two months of evolution. The palms, bilaterally, presented honey-colored crusting and burrow (Figure1).



Figure 1: Burrows and honey-colored crusting in the hands with marked scaling and scratching lesions

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Figure 2: Dermoscopy (Dermalite Pro II, magnification 10x) of a burrow



Figure 3: Mite identified by light microscopy (100x amplification) in skin scrapings of a burrow (after 10 % KOH)

He complained of pruritus, mainly at night, but there was no epidemiological context of infestation. He was hospitalized to treat a cellulitis in the right leg. On dermoscopy (Dermalite Pro II) we observed burrows in the palm of the hand, with identification of a mite in its extremity (Figure 2). Light microscopy of skin scrapings (after 10% potassium hydroxide) of one of the burrow allowed a better view of the agent (Figure 3).

DISCUSSION

Crusted scabies is a very contagious skin infestation caused by the mite *Sarcoptes scabiei* var. *hominis*, an obligate human parasite, spreading by direct skinto-skin contact (Guldbakke, 2006). Pruritus, with typical nocturnal exacerbation, is the main symptom. Clinically, crusted scabies involves larger areas than common scabies, with hyperkeratotic, crusted lesions, and marked scaling (Johnston *et al.*, 2005; Elgart, 1990). It affects mainly patients with immunosuppression, neurological disorders or institutionalized (Guldbakke, 2006). Definitive diagnosis is made by ex vivo identification of mites, eggs or feces, with microscopic examination of skin scrapings, performed at appropriate sites. Noninvasive, in vivo mite identification can be achieved by "epiluminescence microscopy", a broad term in which standard dermoscopy is included, with observation of pathognomonic scabietic burrows and hand-glider characteristic images (Dupuy *et al.*, 2007; Towersey *et al.*, 2010).

The author present a case where standard dermoscopy offered a fast, easy and viable method to identify the burrows and the parasite, as brownish, triangular structures in the shape of a hand-glider (these corresponding to the anterior portion of the *Sarcoptes scabiei*), later confirmed by light microscopy of skin scrapings. Our patient began treatment with topical sulphur ointments (6%), oral ivermectin 3mg/Kg on days 1 and 15, and sedating antihistamines (Aubin and Humbert, 1995). Isolation measures were taken in the ward, as well as treatment of all household members and close personal contacts. Re-evaluation of the patient, three weeks later, confirmed the disappearance of the symptoms and cutaneous lesions. Infestation of close contacts was not detected.

Our case report supports previous studies, confirming standard dermoscopy as an easily accessible, less time-consuming, approach. As a high sensitivity tool for the diagnosis of hyperkeratotic scabies, it is also better accepted by the patients (Dupuy *et al.*, 2007; Garedaghi, 2011). This allowed the prompt and correct treatment not only of the patient, but also of all his close contacts, in this case in a hospital ward, thereby preventing an outbreak of scabies in the hospital environment.

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