Experiences From Two Cases of Crusted Scabies

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Crusted scabies is a less common but more severe form of scabies, characterized by various distinct clinical and pathological features compared to common scabies. It presents with a more severe disease course, a shorter incubation period, and a prolonged treatment duration.[1] This condition is often observed in predominantly immunocompromised individuals, the elderly, or those with neurological impairment such as Parkinson's disease, or post-stroke limb weakness, and comorbidities such as diabetes mellitus or chronic malnutrition. The clinical presentation of crusted scabies can mimic other dermatological conditions, such as atopic dermatitis, psoriasis, or seborrheic dermatitis. This clinical overlap frequently leads to diagnostic delays, resulting in prolonged patient suffering and significantly diminished quality of life.[2]

Various diagnostic tools are available to aid in identifying crusted scabies, including dermoscopy, potassium hydroxide (KOH) preparations of scabies mites, and skin biopsies from affected areas.[3] However, skin biopsy poses challenges as the preferred sites for infestation, such as the hands, and genitals, are often sensitive and prone to painful, slow-healing ulcers post-biopsy.

Systemic therapy is typically considered the first-line treatment for crusted scabies, with ivermectin being the most commonly used medication. However, systemic treatments can produce adverse effects that may not be well-tolerated, particularly in populations predisposed to crusted scabies.[2]

In this report, we present two cases of crusted scabies, sharing our clinical experience and highlighting an alternative approach to diagnosis and treatment in this challenging condition.

Case one

A 70-year-old male patient presented with erythema on the back and chest, accompanied by small papules on the chest and extremities, which rapidly developed into yellow scaling lesions. Symptoms began approximately one month before presentation in our hospital. The patient had poorly controlled type II diabetes. Initially misdiagnosed with atopic dermatitis, he was treated with topical corticosteroids. However, his condition worsened, with increased itching and scaling (Figure 1A, B).

Based on clinical suspicion of crusted scabies, we performed a KOH preparation of his hand and a skin biopsy of the skin surrounding the umbilical region. Scabies mites were not detected on KOH preparation but were identified in the biopsy specimen (Figure 1C). Dermoscopy for scabies examination is not available at our hospital.

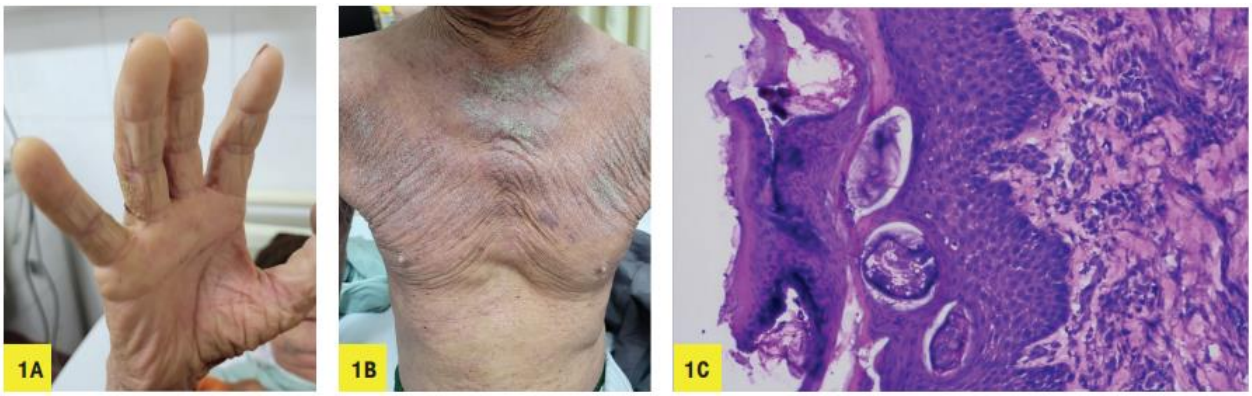

Figure 1: Case 1; **A.** Pruritic, thick hyperkeratotic yellow-crusted plaques are observed in the interdigital spaces (webbing) of the fingers. **B.** Thick, erythematous, diffusely scaling plaques are present on the chest. **C.** Histopathological examination (Hematoxylin and eosin, ×20) reveals marked hyperkeratosis with parakeratosis in the stratum corneum. The epidermis shows acanthosis and spongiosis, with numerous mites and eggs, and a mild superficial perivascular lymphocytic infiltrate.

The patient was treated with permethrin 5% cream, applied over the entire body and repeated one week later. The response to treatment was excellent, with complete resolution of itching and scaling within two weeks, indicating full recovery.

Case two

A 76-year-old male presented with a two-month history of generalized xerosis, mild desquamation, and thick yellow-green crusted plaques accompanied by malodor localized to the right hand (Figure 2A). The patient had a 12-year history of post-stroke limb weakness and functional dependence, resulting in compromised self-hygiene. Initial misdiagnosis of psoriasis by a primary care clinician led to treatment with betamethasone-salicylic acid ointment, which yielded no clinical improvement.

Dermatological re-evaluation raised suspicion of scabies. Diagnostic workup included KOH preparation and punch biopsies from two sites: the right forearm and peri-umbilical skin. Microscopic examination of the KOH preparation revealed *Sarcoptes scabiei* mites (Figure 2B), and histopathology of the peri-umbilical biopsy confirmed scabies infestation (Figure 2C). No mites were identified in the forearm biopsy.

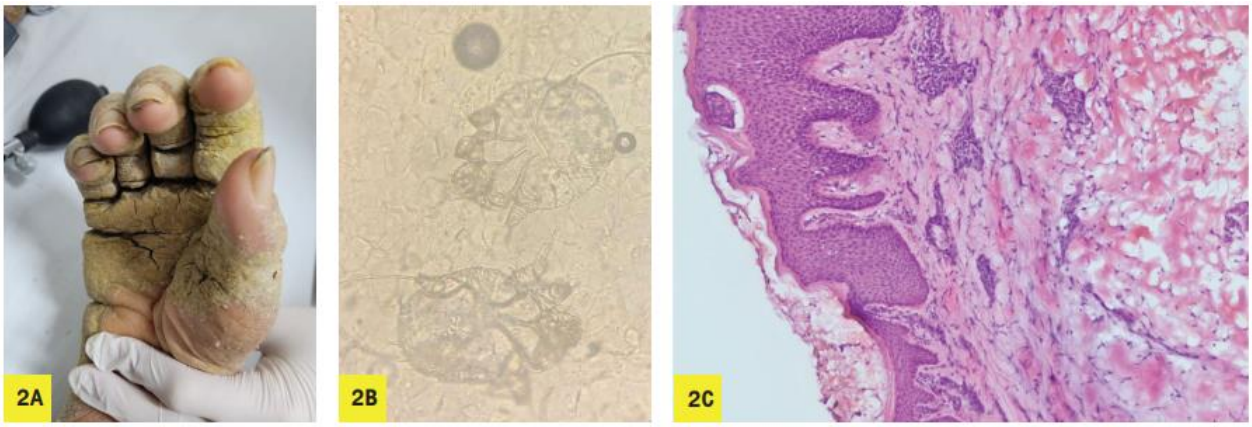

Figure 2: Case 2; **A.** Thick, diffuse hyperkeratotic yellow-green plaques with adherent scales cover both the dorsal and palmar surfaces, including pronounced crusting in the interdigital spaces, areas of fissuring, mild erythema beneath the thick scales, and nail subungual hyperkeratosis. **B.** A KOH preparation at 40× magnification revealed adult scabies mites. **C.** Histopathological examination (Hematoxylin and eosin, ×20) shows significant hyperkeratosis in the stratum corneum. The epidermis exhibits acanthosis and spongiosis, with a mite located just beneath the stratum corneum, accompanied by mild superficial perivascular lymphocytic infiltration.

The patient was initiated on topical permethrin 5% cream applied to the entire body surface, repeated after one week. Adjunctive keratolytic therapy with salicylic acid was administered to reduce hyperkeratosis.

Clinical resolution of scaling and pruritus was achieved within two weeks, with complete eradication of infestation confirmed on follow-up.

Conclusion

Based on these two case reports, we highlight that hyperkeratosis of the palms with thick yellow or yellow-green crusts may serve as a valuable diagnostic clue to distinguish scabies from other generalized desquamating disorders. Additionally, a biopsy of the periumbilical region may be considered a potential diagnostic site for confirming scabies infestation. Finally, topical permethrin 5% therapy represents an effective alternative for managing scabies in patients with contraindications or intolerance to systemic ivermectin therapy.

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