Scrape or Perish: The importance of skin scraping in erythroderma

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Sir,

Scabies can present in various forms. A highly contagious form is the crusted and hyperkeratotic variant (‘Norwegian’ scabies).[1,2] This form can often present as erythroderma[3] and can be missed if a simple investigation like skin scraping is not undertaken.

A 65-year-old woman presented with itchy lesions all over the body since 15 years. She had been diagnosed as a case of psoriasis at another center and given topical steroids and emollients. Of late, after an apparent flare of psoriasis, she was also given methotrexate. However, the lesions continued to increase and were accompanied by fever.

The patient had extensive erythroderma with crusted plaques on her scalp, ears, trunk, buttocks, genitals, palms, and soles [Figure 1]. The nails were thickened, dystrophic with subungual hyperkeratosis, debris, and paronychia [Figure 2]. It was revealed that there were several cases of ‘itching’ in close family members. A clinical diagnosis of psoriatic erythroderma with superimposed crusted scabies was made.

A potassium hydroxide mount of skin scrapings from various sites revealed numerous live mites, eggs, and scybala, thus confirming our diagnosis of crusted scabies [Figure 3]. Other routine investigations were within normal limits, except for ESR, which was 80 mm at the end of one hour. Specifically, an Enzyme-linked immunosorbent assay (ELISA) test for anti-human immunodeficiency virus (HIV) antibodies was negative.

The patient was advised a skin biopsy, but she was not willing to undergo the procedure. She showed remarkable improvement after two doses of Tab ivermectin 12 mg, two weeks apart, and topical application of 5% permethrin.
for three consecutive days along with topical emollients and antihistaminics. All the family members were simultaneously treated.

The patient was followed up for the next two months with complete clearance of the lesions and no recurrence. The lesions mistaken to be psoriasis regressed. She was subsequently lost to follow-up.

Scabies, including the crusted form has been reported iatrogenically in patients using topical steroids for a long time[4] as well as after use of methotrexate.[5]

Following are the two possibilities in our case:
1. The patient had psoriasis and later developed crusted scabies. However, if this were so, the lesions of psoriasis should have been apparent soon after the crusted scabies was treated. This did not happen during the two months of follow-up.
2. The patient had scabies from the very outset. Scabies is known to persist for several years ‘seven-year itch’ and the presentation could be worsened by the long-term use of immunosuppressants like topical steroids as well as short-term use of methotrexate. We feel that the latter situation is more likely, although we admit that a biopsy could not be taken to confirm whether there was underlying psoriasis or not.

Thus, in any case of resistant erythroderma, the underlying disease should be properly diagnosed by investigations like scrapings and skin biopsy. KOH smears should be done in cases of erythroderma not responding to topical or oral steroids to rule out such occasionally seen diseases. A high index of suspicion should be kept for treatable infections like scabies or tinea because in absence of that diagnostic and therapeutic dilemmas are bound to arise.

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Cite this article as: Kamath MV, Gupta RA, Nadkarni N, Sonavane S. Scrape or Perish: The importance of skin scraping in erythroderma. Indian Dermatol Online J 2011;2:107-8.

Source of Support: Nil, Conflict of Interest: None declared.