

Topical Ivermectin for Permethrin-Resistant Scabies: A Useful Application

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Case Presentation

A two-year-old child presented with multiple erythematous papulo-nodular lesions on axillary folds and palms. Mites were noted with dermoscopy, confirming a diagnosis of scabies. The patient was initially treated with permethrin 5% cream for three consecutive days and again one week later, without efficacy. Therefore, topical benzyl benzoate 25% was applied thrice over a 24-hour period and repeated after a week. At physical examination, no mites were noted on the body, except for the scalp. Thus, an off-label administration of ivermectin cream 1% was prescribed, once a week for two weeks. Improvement was evident immediately after the first application, with complete remission of scalp lesions. No side effects or irritation were referred by the parents, and no relapse occurred at one-month follow-up.

Teaching Point

Scabies is a highly contagious infection by *Sarcoptes scabiei* var. *hominis*. Permethrin 5% cream is the first-line therapy; however, the emergence of permethrin-resistant scabies is a growing concern. Alternative topical treatments for children, including benzyl benzoate 25%, sulfur preparations, and crotamiton 10% cream, may cause irritation or systemic toxicity [1]. Ivermectin selectively targets and binds to glutamate-gated chloride channels in the nervous system of scabies mites; this interaction leads to increased permeability of chloride ions, hyperpolarization of nerve and muscle cells, and ultimately, paralysis of the parasite [1]. The use of oral ivermectin was contraindicated since our patient weighed less than 15 Kg [1]. It is important to consider drug resistance or the involvement of "unusual" sites such as the

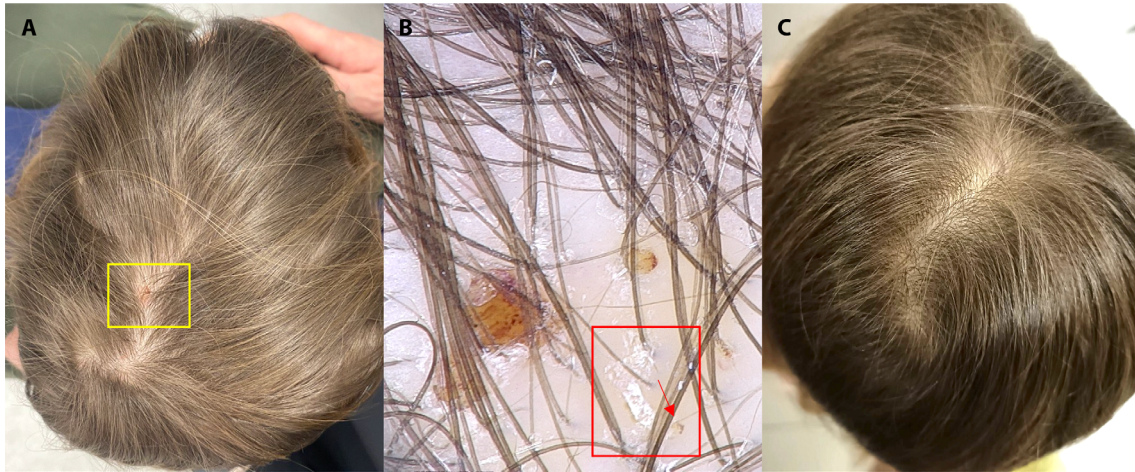


Figure 1. (A) A crusted lesion on the scalp was visible during physical examination (yellow box). (B) Trichoscopy revealed the delta-wing jet sign (red arrow) at the end of the contrail sign (red box), which identified the female mite head and burrow, respectively. (C) Clinical resolution of scalp scabies observed 1 month after treatment.

periungual area or the scalp, when recalcitrant scabies is suspected. Although there are limited studies on the safety and efficacy of topical ivermectin 1% cream for classic scabies in adults, successful treatment has been reported in a few infants [2].

References

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