

Hyperkeratotic scabies in an immunocompetent infant: An unusual case

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Sir,

Crusted scabies (also known as *Norwegian scabies*) is a highly contagious variant of scabies, characterized by abundant mite proliferation in the skin [1]. Typically, itching is minimal or absent. This condition is rarely reported in immunocompetent infants and generally occurs in immunocompromised individuals [2,3]. Herein, we report the case of a four-month-old immunocompetent infant affected by this severe form of scabies.

A four-month-old infant was admitted to our department with extensive crusted dermatosis evolving progressively over the past three months. He had received potent topical corticosteroids (0.05% clobetasol propionate) for suspected atopic dermatitis, which according to the mother, exacerbated the infant's symptoms. Detailed history-taking also revealed pruritus in the mother. A dermatological examination revealed widespread erythema covering over 70% of the body surface area, with hyperkeratotic lesions having a flour-like appearance, primarily on the trunk, back, and palmoplantar region, along with impetiginized papular lesions on the limbs (Figs. 1a and 1b), and unguinal hyperkeratosis (Fig. 2). Additionally, he exhibited a moon face with telangiectasias (Fig. 3), truncal obesity, limb muscle atrophy, and generalized skin atrophy suggestive of adrenal insufficiency. Urgent laboratory investigations revealed an inflammatory syndrome, anemia, markedly elevated neutrophils and basophils, decreased cortisol levels, severe malnutrition (hypoalbuminemia at 16.1 g/L), severe hypokalemia, and hyponatremia (2.54 mmol/L and 157 mmol/L, respectively). HIV serology was negative, and primary immunodeficiency screening was unremarkable. The



Figure 1: (a and b) Generalized erythema with floury-appearance hyperkeratosis.



Figure 2: Unguinal hyperkeratosis.

scotch test revealed numerous live *Sarcoptes* mites, confirming the diagnosis of hyperkeratotic scabies associated with adrenal insufficiency. Treatment included benzyl benzoate, keratolytic, hygiene

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Figure 3: Moon face and telangiectasias.

measures, and hydrocortisone, along with concurrent family treatment.

The hyperkeratotic form of scabies is primarily described in immunocompromised children. Few cases have been reported in immunocompetent infants [4]. In our case, the infant was treated with topical steroids iteratively, with the hypothesis of possible atopic dermatitis, leading to the emergence of hyperkeratotic scabies associated with adrenal insufficiency [1]. Prolonged application of topical corticosteroids may predispose to crusted scabies, as the iatrogenic suppression of the immune response partly contributed to this unusual presentation, misleading for over three months. Additionally, the absence of scratching due to the patient's very young age adds to diagnostic challenges [5]. A lack of pruritus leads to the inability to mechanically eliminate mites [6]. Furthermore, it may induce adrenal insufficiency due to systemic absorption of topical corticosteroids, high body surface area relative to weight, increased permeability of infant skin, and systemic drug accumulation [7]. To our knowledge, this was the first case of an immunocompetent infant developing hyperkeratotic scabies and cortico-induced adrenal insufficiency.

This case underscores the importance of always considering all differential diagnoses with atopic dermatitis and conducting a thorough skin examination, especially in cases of corticosteroid therapy failure. It also highlights the risks associated with diagnostic errors and the excessive or prolonged use of corticosteroids, which may lead to serious complications.

Consent

The examination of the patient was conducted according to the principles of the Declaration of Helsinki.

The authors certify that they have obtained all appropriate patient consent forms, in which the patients gave their consent for images and other clinical information to be included in the journal. The patients understand that their names and initials will not be published and due effort will be made to conceal their identity, but that anonymity cannot be guaranteed.

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