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LETTER TO THE EDITOR

Acquired ichthyosis unmasked by severe malnutrition

Ictiose adquirida revelada por desnutrição grave

Sofia El Haitamy[1], Meryem Soughi[1], Zakia Douhi[1], Sara Elloudi[1], Hanane Baybay[1], Layla Tahiri-Elousrouti[2], and Fatima Zahrae-Mernissi[1]*

[1]Department of Dermatology; [2]Department of Pathology. Hassan II University Hospital, Biomedical and Translational Research Laboratory, Faculty of Medicine and Pharmacy, Sidi Mohamed Ben Abdellah University, Fez, Morocco

Dear Editor,

Ichthyosis is a skin condition recognized since antiquity, characterized by persistently dry, rough skin with marked, fish-scale-like scaling.[1] The name itself comes from the Greek word ichthys (fish), which aptly describes the thickened, plate-like scales on the skin surface.[2] The condition may be hereditary or acquired.[3] Acquired ichthyosis (AI) is a rarer form that typically appears in adulthood and is frequently associated with underlying inflammatory, neoplastic, systemic diseases, or nutritional deficiencies.[3,4] We report a case of AI in a young male secondary to severe malnutrition.

A 26-year-old male from South Africa, with no significant medical history, consulted our department for a persistent ichthyosis-like eruption that had been evolving for 2 years. He reported no chest or abdominal pain, muscle weakness, or general health deterioration. There was no personal or family history of ichthyosis or atopy, nor any history of medication use. On clinical examination, the patient appeared cachectic, with diffuse, symmetric scaling characterized by rhomboidal, fish-like scales predominantly affecting the arms and lower limbs while sparing the flexures, palms, soles, and face (Fig. 1). Lymph nodes were not enlarged. Laboratory and radiological investigations for autoimmune, neoplastic, infectious, and endocrine diseases were unremarkable. However, tests revealed anemia with iron and ferritin deficiency, along with low levels of protein and fatty acids. A skin biopsy showed compact orthohyperkeratosis, a completely absent stratum granulosum, and normal thickness of the spinous layer, without inflammatory infiltrate in the dermis (Fig. 2). No granulomatous reaction or atypical lymphocytes were observed. A diagnosis of AI secondary to severe malnutrition was established. The patient was prescribed an emollient cream containing urea and was advised to follow a balanced, protein-rich diet supplemented with iron. At the 5-week follow-up, a noticeable reduction in scaling was observed. The skin lesions had almost completely resolved after 4 months of treatment. At the 6-month follow-up, the patient maintained good

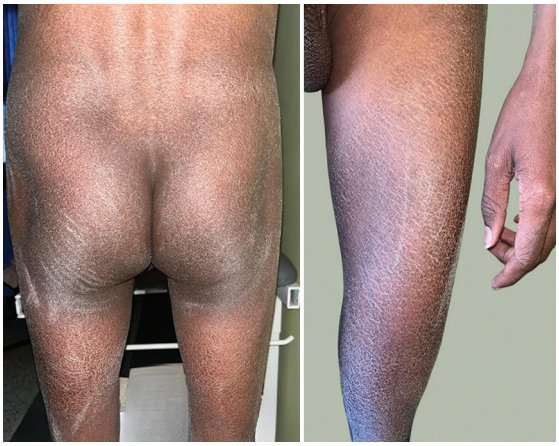

Figure 1. Large scaly ichthyosiform patches on the lower limb.

***Correspondence:**
Sofia El Haitamy
E-mail: elhaitamy16@gmail.com

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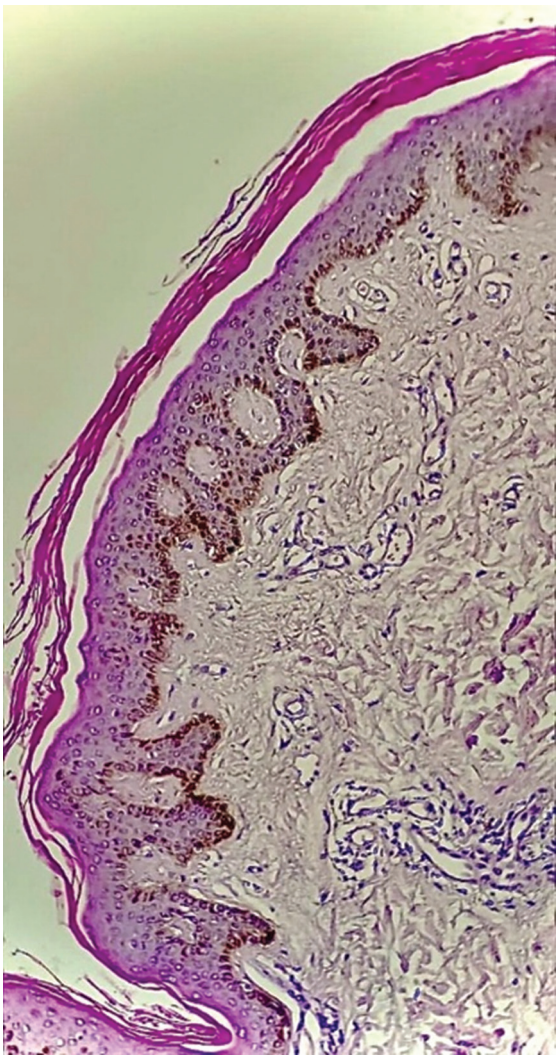

Figure 2. Histopathology of the thigh biopsy showing marked compact orthokeratotic hyperkeratosis without a granular layer, mild acanthosis, and continuous basal layer hyperpigmentation (hematoxylin and eosin staining, 100×).

nutritional status and showed no recurrence of the ichthyosis.

AI is a non-hereditary skin disorder characterized by hyperkeratosis resulting from disrupted epidermal cornification.[2] The underlying mechanism of AI remains a matter of debate. Impaired lipogenesis has been proposed as a key factor, given the critical role of fatty acids in epidermal barrier formation and keratinocyte cornification.[4,5] AI is frequently associated with underlying malignancies, such as Hodgkin lymphoma, multiple myeloma, and cutaneous T-cell lymphoma, as well as with systemic disorders, including systemic lupus erythematosus, acquired immunodeficiency syndrome, and various conditions causing lipid or vitamin deficiencies.[5,6] The severity of AI in this setting is closely related to the degree of malnutrition and the extent of nutritional deficiency, ranging from mild roughness and dryness to extensive desquamation with large, plate-like scales.[4,7] Clinically, it typically presents with symmetric fish-like scaling, predominantly affecting the trunk and extensor surfaces of the limbs, with relative sparing of flexural areas, palms, and soles.[7] Histological examination is valuable in excluding other conditions, such as mycosis fungoides, where epidermotropism of atypical lymphocytes is a key finding.[8] Treatment primarily targets the underlying cause, while lipid-rich emollients and keratolytic agents serve as useful adjunctive therapies to improve skin hydration and reduce scaling.[5]

AI closely resembles its inherited forms clinically. Its management remains challenging because of its frequent association with systemic diseases and medication-related causes, which must always be thoroughly investigated. The association between AI and malnutrition is rarely reported. We present this case to highlight this uncommon presentation.

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Conflicts of interest

None.

Ethical considerations

Protection of humans and animals. The authors declare that no experiments involving humans or animals were conducted for this research.

Confidentiality, informed consent, and ethical approval. The authors have followed their institution's confidentiality protocols, obtained informed consent from patients, and received approval from the Ethics Committee. The SAGER guidelines were followed according to the nature of the study.

Declaration on the use of artificial intelligence. The authors declare that no generative artificial intelligence was used in the writing of this manuscript.

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