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Short Communication

Severe acquired ichthyosis due to autoimmune thyroiditis: therapeutic response to thyroxine replacement therapy

Sir, a 30-year-old female presented with a 2-year history of generalized dryness, hyperpigmentation and scaling of the skin. Initially she noticed the scaling on the legs which gradually extended to involve trunk, upper limb and face over a period of one year. She also gave history of hoarseness of the voice, decreased appetite, fatigue, irregular menstrual cycles, and breathlessness. There was no history of similar complaints in past or in the family members. General physical examination and systemic examination revealed pallor, facial puffiness, macroglossia, delayed relaxation of deep reflexes and muffled heart sounds. On detailed cutaneous examinations there was symmetrical involvement of lower limbs, upper limbs, trunk and face in the form of fine adherent dark scales (**Figure 1**). Shins were severely affected showing plate-like scales. There was relative sparing of flexures. Palms and soles were uniformly thickened and fissured. Scalp, oral mucosa, genital mucosa and nails were unaffected. Histology of the skin biopsy specimen showed compact orthohyperkeratosis, absent granular layer in the epidermis and mild superficial perivascular mononuclear inflammatory infiltrate in the papillary dermis. Based on the history, clinical examination and histological findings a diagnosis of acquired ichthyosis was made. The patient was referred to the department of general medicine for the systemic complaints, where she was extensively investigated and diagnosed to have autoimmune thyroiditis on the basis of elevated thyroid-stimulating hormone (TSH) and raised antibodies directed against thyroid peroxidase (TPO). Patient was started on 100µg of l-thyroxine per day and after 5 months of regular treatment, ichthyosis had completely resolved (**Figure 2**) with dramatic improvement in the systemic complaints.

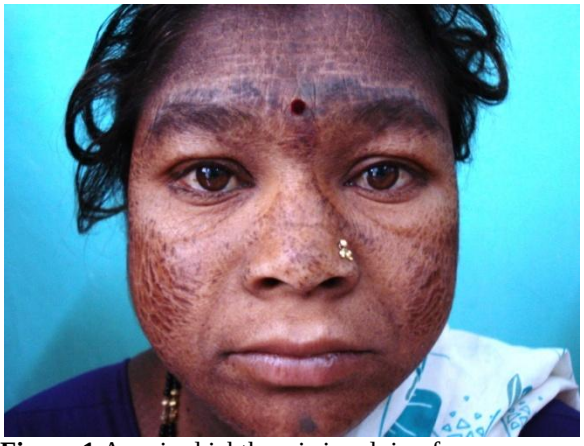

Figure 1 Acquired ichthyosis involving face.

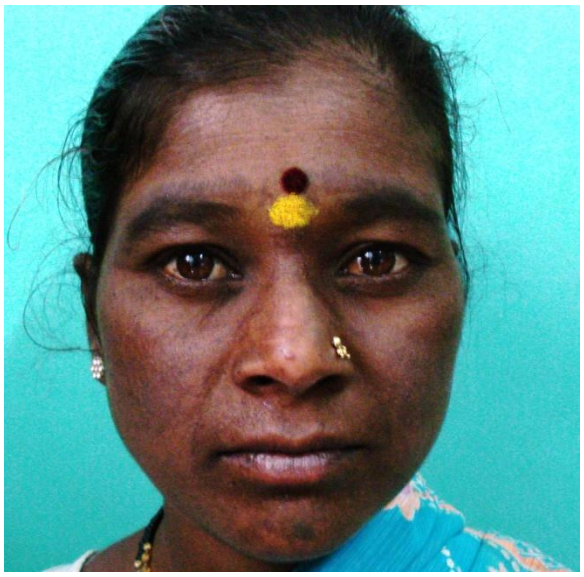

Figure 2 Response to the hormone replacement therapy.

Discussion

The term ichthyosis is derived from the Greek word 'ichthys' and in general refers to a group of scaly skin disorders. It can be hereditary or acquired. The hereditary form is an autosomal dominant disease first evident in early childhood.[1] It is the most common form of scaling disease, representing over 95% of ichthyosis cases.[2] Acquired ichthyosis, on the other hand, is nonhereditary and extremely rare.[3] Clinical manifestations of acquired ichthyosis include symmetric scaling, which ranges in severity from minor roughness and dryness to dramatic desquamation of platelike scales.[1] The color of the scales varies from white to gray to brown, with a diameter ranging from less than 1 mm to greater than 1 cm.[4] It primarily affects the trunk and limbs, typically being accentuated on the extensor surfaces and relatively sparing the flexures. Acquired ichthyosis usually affects the lower extremities more significantly than the upper extremities.[5] It usually emerges during adulthood and has been associated with large number of diseases, medications, malignancies, infections, metabolic and endocrine diseases.[6] Cutaneous manifestations can present either before or after identification of the associated disease.[5] The severity of AI may depend on the severity and acuteness of the internal disease.[3] The ichthyosis typically regresses once the underlying disease goes into remission.[7] Our patient had severe acquired ichthyosis due to autoimmune thyroiditis and responded dramatically to hormone replacement therapy. Pubmed search showed only two case reports of acquired ichthyosis in association with hypothyroidism[3,8] and this is the first case to be reported from Indian subcontinent and we are reporting it for its rarity.

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