A 32 year old male diagnosed as a case of rheumatoid arthritis five years back and presently on weekly methotrexate and prednisolone 10 mg daily presented with complaints of progressive weight loss and tremors of hands over last 4 months. Patient also complained of occasional palpitations. There was no history of fever, cough, expectoration, diaphoresis, malaise, lethargy, seizures, unconsciousness, headache or vomiting. Examination revealed a conscious, oriented patient with resting tachycardia, temperature 99°F, normotensive. Diffuse thyromegaly was present, no bruit. Fine tremors of hands could be demonstrated. Features of Plummer’s nails were noted in both the hands (Figs. 1 and 2, respectively showing close view of left and the right hands). The nails showed characteristic features viz. shiny, friable nails bearing longitudinal striations and flattened surface contour, and onycholysis. Systemic examination was essentially normal. Investigations revealed serum TSH of 0.1 mIU/ml. A diagnosis of hyperthyroidism with rheumatoid arthritis was made. The association between the two diagnosis in itself is rare. Patient was started on carbimazole 5 mg tid and his serum TSH improved to 2.2 mIU/ml after 6 weeks.

Cutaneous manifestations in hyperthyroidism are described in 2-40% patients. Thyroid hormones affect production of collagen and mucopolysaccharides by dermal fibroblasts. Acid-soluble collagen is increased, insoluble collagen decreases and accumulation of glycosaminoglycans is retarded by thyroid hormones. Hyperthyroidism results in increased sweating and increased blood flow. The cutaneous alterations occur with rising metabolic rate and heat production. Epidermal and dermal tissues which form skin and its appendages are target organs for action of thyroid hormones. In hyperthyroidism, rate of nail growth increases, longitudinal striations occur associated with flattening of surface contour and there is distal separation of nail plate from its underlying bed (onycholysis). The nails become shiny, soft and friable due to alterations in keratinizing nail matrix and supporting dermal structures. All these features are seen in the accompanying figures. The changes are not believed to revert to normal after normalization of thyroid hormone status.

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