Thyroid Dermopathy and Acropachy

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A 58-year-old man with a 9-year history of gradually worsening and disabling hand and feet swelling, with associated burning pain, is followed in Dermatology. He developed Graves disease 20 years ago, treated with radioactive iodine, and Graves ophthalmopathy treated with surgical decompression and tarsorrhaphy 8 years ago. He is a former smoker. Examination revealed disfiguring hypertrophic, firm, skin-colored overgrowth, and nonpitting edema of hands (Figure 1; Supplemental Figure, available online at http://www.mayoclinicproceedings.org) and feet (Figure 2).

He had normal thyroid hormone levels. Previous biopsy from the calf was consistent with pretibial myxedema. He was diagnosed with severe thyroid dermopathy and acropachy. He has been treated with a combination of compression, topical and intralesional corticosteroid, intralesional hyaluronidase, intravenous rituximab, localized radiotherapy, and oral gabapentin, with limited or short-term efficacy.

Thyroid dermopathy occurs with autoimmune thyroid disease, particularly Graves disease, and is thought to be caused by several factors including autoimmunity, limb dependency, mechanical injury, and tobacco use.[1] Approximately 20% of patients with dermopathy also have acropachy with clubbing, digital swelling or periosteal reaction, and dermopathy is almost always associated with ophthalmopathy.[2] Although dermopathy typically affects pretibial region with firm, nonpitting edema, it may also affect acral sites and progress to lymphedema and elephantiasis in severe forms.[2,3] Many treatments have been reported with variable efficacy. These include topical, intralesional, and systemic corticosteroids; compression therapy; radiotherapy; hyaluronidase; tumor necrosis factor inhibitors;

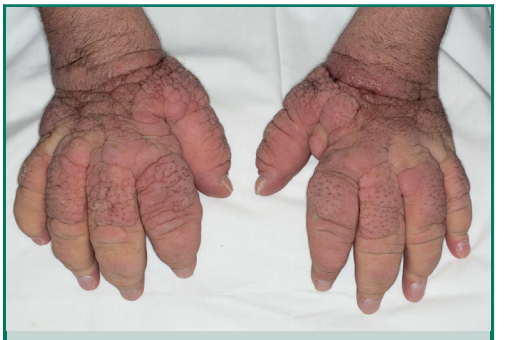

FIGURE 1. Hypertrophic skin-colored plaques and nodules of bilateral hands, dorsal view with nail clubbing, consistent with elephantiasis, thyroid dermopathy, and acropachy.

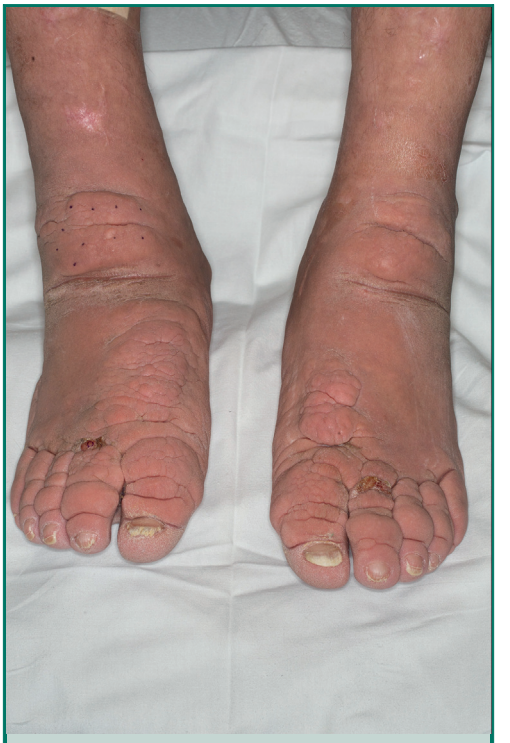

FIGURE 2. Hypertrophic skin-colored plaques and nodules of bilateral feet, with nail clubbing and serous crusting of proximal second toes bilaterally.

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tocilizumab; rituximab; and teprotumumab (insulin-like growth factor-1 receptor blocking antibody).[4-6] Thyroid dermopathy and acropachy are important to recognize as severe signs of autoimmune thyroid disease and thyroid ophthalmopathy.

POTENTIAL COMPETING INTERESTS

The authors have no competing interests.

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SUPPLEMENTAL ONLINE MATERIAL

Supplemental material can be found online at www.mayoclinicproceedings.org. Supplemental material attached to journal articles has not been edited, and the authors take responsibility for the accuracy of all data.

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