Dermatological Quiz

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This 50-year-old man developed these non-itchy lesions at his shins, calves and dorsa of his feet for more than five years. He had history of goiter and received treatment from physician for more than ten years.

Questions:

1. What is your diagnosis?
2. What other relevant physical signs will you elicit in order to support your clinical diagnosis?
3. How will you manage this man?

Answer to Dermatological Quiz

Answer:

1. The clinical diagnosis is pretibial myxedema. There are extensive erythematous, firm, non-pitting edematous brawny peau-d’orange-like waxy infiltrative patches and plaques symmetrically affecting this patient’s shins, calves, ankles and dorsa of his feet. Most of the skin in the affected area is thickened by the infiltrative process. Small verrucous infiltrative nodules are formed which give rise to a “pseudo-elephantiasis like” appearance. Together with a history of goiter, the clinical diagnosis of pretibial myxedema as a cutaneous manifestation of Grave’s disease can be made.

2. Graves’ disease consists of a triad of hyperthyroidism, eye changes and skin lesions. Relevant signs of hyperthyroidism include goiter, hand tremors, sweaty palms, palmar erythema and diffuse alopecia with fine soft scalp hair. Eye changes include a "stare and frightened" appearance due to lid lag, lid retraction, proptosis and periorbital swelling. Skin lesions of pretibial myxedema and thyroid acropathy are characteristic. Pretibial myxedema is found in 1-5% of patients with Graves’ disease, but in up to 25% of patients with exophthalmus. A serum factor (unrelated to long-acting thyroid stimulating hormone) could incite fibroblasts to produce mucin. Fibroblasts from the dermis of the lower extremities have been found to be more sensitive to this factor than fibroblast elsewhere in the body. An insulin-like growth factor, trauma, and lymphatic obstruction due to mucin may also play roles in the pathogenesis.

3. Corticosteroid applied under occlusive dressings or delivered by intralesional injection may help. Gradient pneumatic compression has been of some benefit. The thyroid status of the patient should be worked up and treated accordingly by endocrinologist. But in general, therapy for the associated hyperthyroidism does not improve the cutaneous lesion, and often, localized myxedema develops after treatment has been instituted.

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