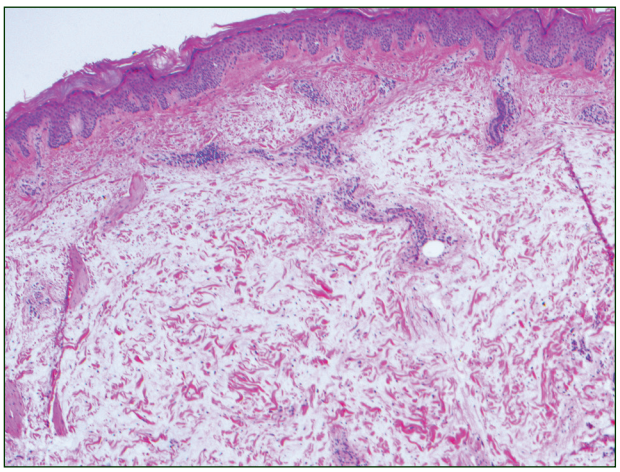
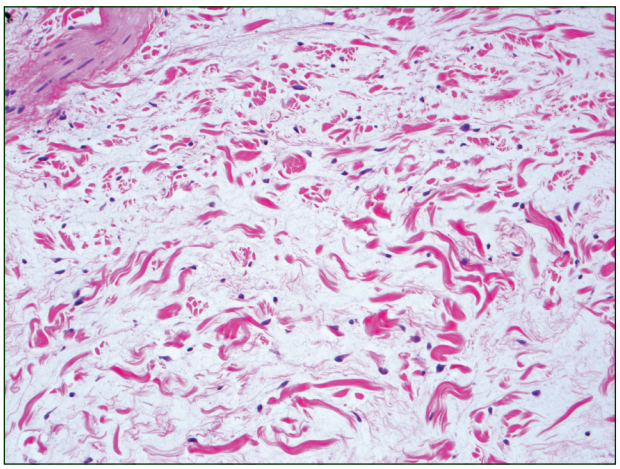


H&E, original magnification ×40.



H&E, original magnification ×200.

The best diagnosis is:

a. nephrogenic systemic fibrosis
b. pretibial myxedema
c. scleredema
d. scleromyxedema
e. tumid lupus erythematosus

PLEASE TURN TO PAGE 73 FOR DERMATOPATHOLOGY DIAGNOSIS DISCUSSION

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The authors report no conflict of interest.
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Pretibial Myxedema

Pretibial myxedema (PM) is a cutaneous mucinosis associated with thyroid dysfunction. It most commonly presents in the setting of Graves disease and is seen less often in patients with hypothyroidism and euthyroidism.[1] The anterior tibia is most frequently affected, but lesions also may present on the feet, thighs, and upper extremities. Physical examination generally demonstrates skin thickening, hyperkeratosis, hyperpigmentation, yellow-red discoloration, and hyperhidrosis. Classically, the term *peau d'orange* has been used to characterize these clinical features.[1] Histologic examination of PM typically reveals marked deposition of mucin throughout the reticular dermis with sparing of the papillary dermis (Figure 1) and may be accompanied by overlying hyperkeratosis. Collagen fibers are splayed and appear decreased in density (Figure 2). Alcian blue, periodic acid–Schiff, colloidal iron, and toluidine blue staining can be used to highlight dermal mucin.

Similar to PM, histologic examination of scleredema and scleromyxedema usually demonstrate prominent mucin deposition. In scleredema,

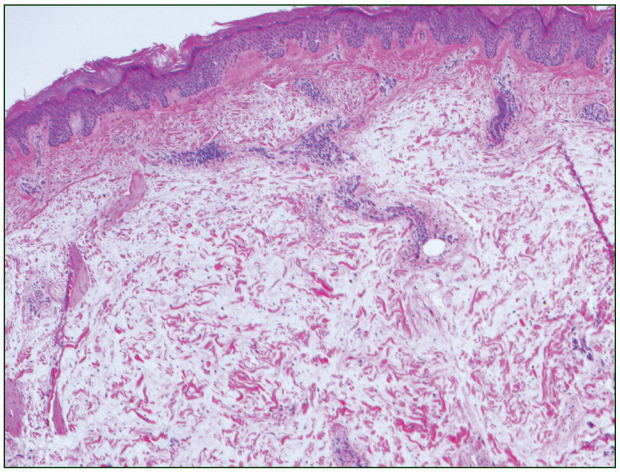

Figure 1. Prominent mucin deposition throughout the reticular dermis in pretibial myxedema (H&E, original magnification ×40).

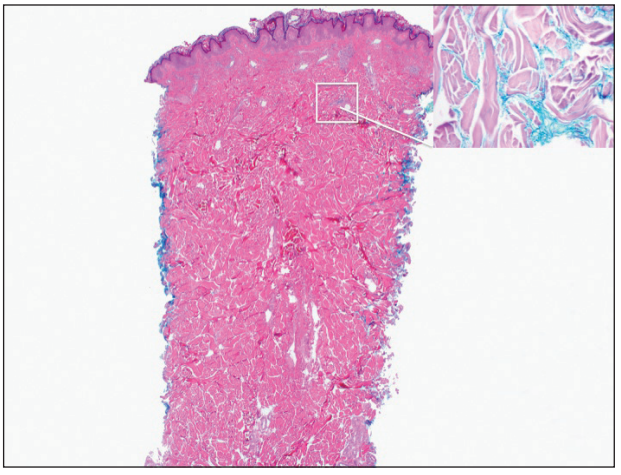

Figure 3. Scleredema with increased dermal thickness (H&E, original magnification ×20) and interstitial mucin on colloidal iron–stained sections (inset in upper right corner, original magnification ×400).

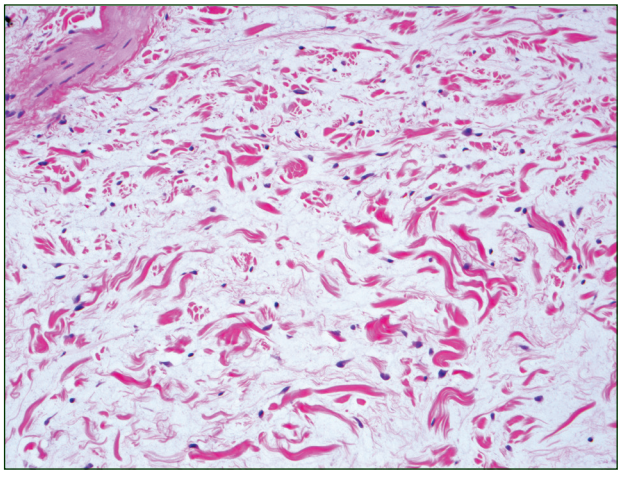

Figure 2. Increased mucin deposition and collagen fiber splaying in pretibial myxedema (H&E, original magnification ×200).

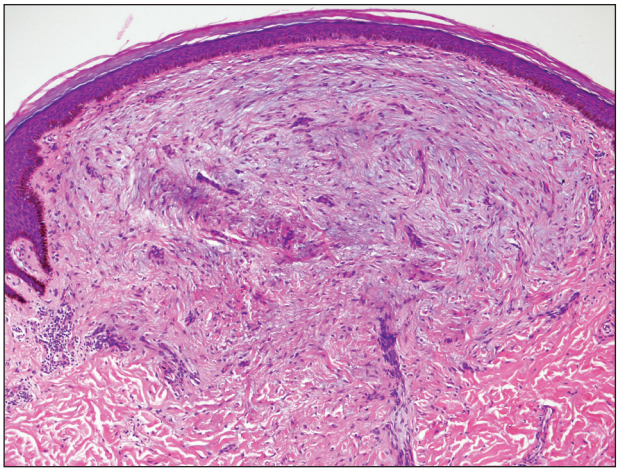

Figure 4. Scleromyxedema with mucin deposition primarily in the superficial dermis as well as increased cellularity and fibrosis (H&E, original magnification ×200).

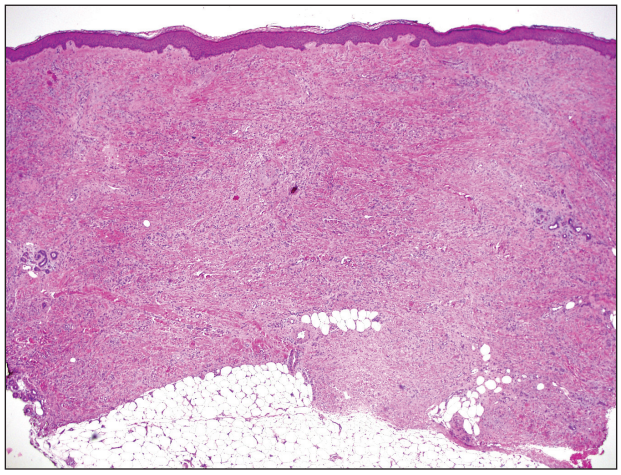

Figure 5. Nephrogenic systemic fibrosis with prominent mucinous fibrosis (H&E, original magnification ×40).

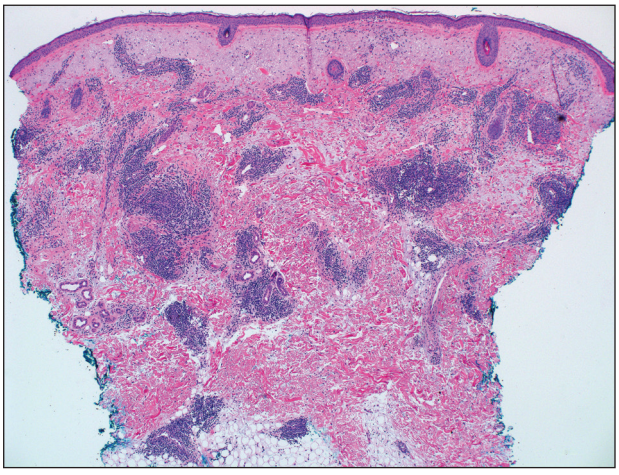

Figure 6. Tumid lupus erythematosus with a superficial and perivascular lymphoid infiltrate as well as increased dermal mucin (H&E, original magnification ×40).

mucin primarily is visualized in the deep dermis between thick collagen bundles and typically is localized to the back (Figure 3). Scleromyxedema is distinguished by mucin deposition in the superficial dermis with associated fibroblast proliferation and fibrosis (Figure 4).

Nephrogenic systemic fibrosis is characterized by proliferation of $CD34^+$ dermal spindle cells, fibroblasts, interstitial mucin, altered elastic fibers, and thickened collagen bundles that involve the dermis and subcutaneous septa (Figure 5).[2] Tumid lupus erythematosus classically demonstrates perivascular and periadnexal superficial and deep lymphocytic inflammation (Figure 6). Similar to scleredema and PM, mucin deposition in tumid lupus erythematosus is interspersed between collagen bundles in the reticular dermis.[3]

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