Pathologic Quiz Case

A 30-Year-Old Man With a White Plaque in the Oral Mucosa

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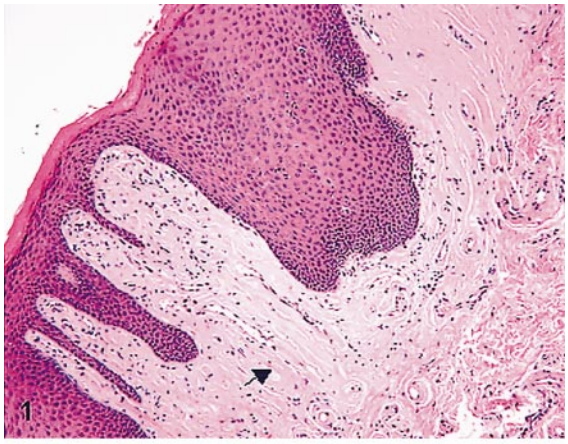
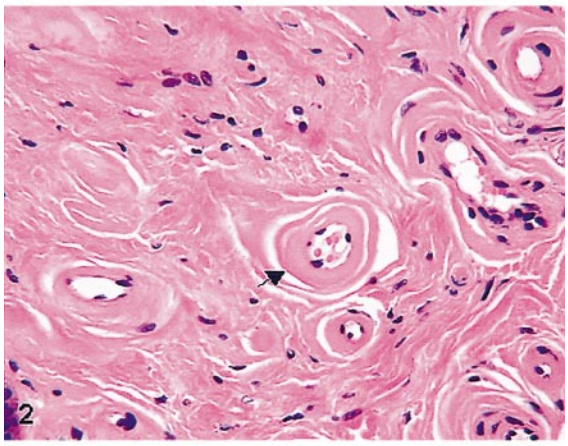
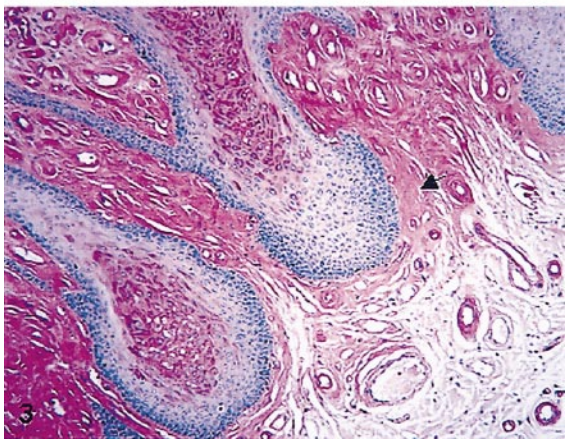
A 30-year-old man who drinks alcohol and chews tobacco presented with soreness in the right side of the oral mucosa of 6 weeks' duration. The patient did not have a significant medical history. On examination, a white plaque without ulceration was found on the right buccal mucosa, and a white discolored area was found on the left buccal mucosa.

An elliptic excision of the right-sided lesion was performed, measuring 1.5 × 1 × 0.5 cm. Histologic sections showed multiple pieces of mucosal tissue with hyperorthokeratosis, parakeratosis, and acanthosis (Figure 1, arrow). Within the upper spinous layers, focal aggregates of vacuolated epithelial cells were noted. In addition to the presence of a sparse lymphocytic infiltrate and chronic sialadenitis, an amorphous eosinophilic deposition was seen diffusely within the lamina propria (Figures 2 and 3, arrow) concentrated around the epithelial-stromal interface and around nerves, vascular channels, and minor salivary glands in the deeper portion of the specimen. This material stained positive with periodic acid–Schiff, whether the specimen was digested with diastase or not, and was Congo red negative (Figure 3, arrow). It stained blue on the trichrome stain.

What is your diagnosis?







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Pathologic Diagnosis: Smokeless Tobacco Keratosis

Smokeless tobacco keratosis usually occurs in a person who uses snuff or chews tobacco, and severity is proportional to the length of exposure and brand of tobacco. Clinically, there is a filmy gray-white opalescence at the area of contact; it is reversible on stopping the habit. Histopathologic features include parakeratosis or hyperorthokeratosis with spires of parakeratin (''chevrons''); acanthosis; and mild chronic inflammation. Very few references exist in the oral pathology literature regarding the presence of amyloid-like material and/or periodic acid–Schiff-positive perivascular cuffs in smokeless tobacco keratosis.[1,2] This feature does not seem to have received much attention in the dermatopathology literature, and it is not described in several standard dermatopathology textbooks, although Barnhill[3] provides a brief discussion of it.

The common differential diagnosis given in the dermatopathology literature is that the amyloid-like material is amyloid material, colloid material, or hyalin material as seen in hyalinosis cutis et mucosae. The intraoral location of the material in this case ruled out colloid material. Therefore, the differential diagnosis was between hyalin and amyloid material. A Congo red stain was negative, indicating the material was hyalin. The material stained positive on a periodic acid–Schiff stain and only weakly blue with a trichrome stain, consistent with hyalin.[1]

The presence of the marked hyalin deposition was suggestive of hyalinosis cutis et mucosae. In this entity, the amorphous material also consists of hyalin, and the deposition begins initially around blood vessels, eccrine glands, and the epithelial-stromal interface. Hyalin gradually fills the entire dermis. In contrast to smokeless tobacco keratosis, the changes seen in hyalinosis cutis et mucosae are less localized and may involve the entire oral mucosa, tongue, pharynx, larynx, and vocal cord.

References

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