Incidental Yellow Papules in the Upper Lip Vermillion

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The following Case Challenge is provided in conjunction with the UT Health San Antonio School of Dentistry faculty.

Case Summary
A 71-year-old male presents with multiple small yellow papules on the upper lip vermilion and right and left buccal mucosae.

After you have finished reviewing the available diagnostic information, make the diagnosis.
Diagnostic Information

History of Present Illness
Mr. Smith is a 71-year-old distraught white male who presents for a 1 week follow-up after having his maxillary teeth extracted. He is distraught because his dentist’s office was just shut down over infection control violations and he is worried he may have been exposed to an infectious disease such as HIV or hepatitis. He relates no discomfort or pain. He has had inconsistent dental care over the past 5 years, and is financially strapped due to his medical problems. A review of his medical history reveals:

Medical History
• Adverse drug effects: penicillin administration results in hives
• Medications: Stalevo 100 6x/day, Glucovance 5mg/500mg QD
• Pertinent medical history: Parkinson disease x 6 months, diabetes type 2 x 20 years
• Pertinent family history: paternal - fatal MI age 55; maternal - diabetes type 2, died of CHF age 78
• Social history: 30 pack year history of cigarettes, stopped age 60; 2-4 mixed drinks per month; denies recreational drug exposure

Clinical Findings
His extraction sites are healing normally. Several small yellow papules are noted on the upper lip vermilion (Figure 1). Multiple 2x2 mm yellow colored, cauliflower shaped, papules are also noted on the right and left buccal mucosa (Figure 2). An incisional biopsy is performed in the left buccal mucosa and the tissue submitted for histopathologic examination.

Histopathologic Findings
The biopsy shows a mucosal soft tissue fragment consisting of parakeratinized stratified squamous surface epithelium with underlying fibrovascular connective tissue. Multiple glandular acinar lobules are noted below the surface epithelium (Figure 3). The glandular cells are ovoid to polygonal in shape with round central basophilic nuclei and abundant clear foamy cytoplasm. Focal central ducts are present (Figure 4).

Figure 1. Multiple yellow papule upper lip vermilion.

Figure 2. Multiple clusters of yellow papules left buccal mucosa.

Figure 3. Low power image of specimen showing submucosal glandular lobules.

Figure 4. Medium power image of specimen demonstrating acinar lobules with glandular cells exhibiting abundant clear foamy cytoplasm. A central duct is present.
Select Diagnosis

Can you make the diagnosis
A 71-year-old male presents with incidental yellow papules in the upper lip vermilion.

Select the Correct Diagnosis
A. Xanthomas  
B. Papillomas  
C. Sebaceous glands  
D. Lymphoid aggregates
Xanthomas

Choice A. Sorry, this is not the correct diagnosis.

Xanthomas are relatively common lesions that may arise in numerous locations. In the head and neck area they are most commonly found around the eyelids in older individuals. In this location they present as asymptomatic, yellowish papules or nodules. Xanthomas represent a localized accumulation of foamy macrophages that may or may not be associated with hyperlipidemia. Histopathologic examination reveals diffuse aggregates of foam cells which are macrophages filled with lipid droplets. Scattered acute or chronic inflammatory cells may be seen interspersed between the foam cells. A similar lesion that contains foamy macrophages, verruciform xanthoma, does arise in the oral mucosa but this lesion most likely represents an inflammatory reaction to epithelial trauma. Xanthomas have not been reported in the oral mucosa and the histopathologic findings presented do not support this diagnosis.

Please re-evaluate the information about this case.
Papillomas

Choice B. Sorry, this is not the correct diagnosis.

Papillomas are benign proliferations of stratified squamous epithelium often associated with human papillomavirus (HPV), often HPV types 6 and 11. They may occur at any age and in either sex. The majority of cases arise as a single lesion and are often white in color due to excess keratin formation on the surface of the lesion. Any oral mucosal site may be affected. Histopathologic examination reveals numerous papillary projections composed of thickened stratified squamous epithelium surfaced by keratin. Each papillary projection contains a central core of vascularized fibrous connective tissue. Occasional squamous epithelial cells demonstrate perinuclear vacuolization (koilocytes), indicative of HPV infection. Papillomas should be conservatively excised and rarely recur. The presence of multiple yellow papules, without a papillary surface architecture, and the histopathologic findings presented do not support this diagnosis.

Please re-evaluate the information about this case.
Sebaceous glands

Choice C. Congratulations! You are correct.

Sebaceous glands are normal adnexal structures or epidermal appendages that are associated with hair follicles. In the skin they secrete sebum which acts as a lubricating agent for hair. Occasionally sebaceous glands may be found in an ectopic location such as the oral mucosa. In this location they are not associated with hair follicles. When sebaceous glands are found in the oral mucosa they are known as Fordyce granules. Fordyce granules present as multiple yellowish macules or papules that are commonly found on the vermilion of the upper or lower lips and on the buccal mucosa. Histopathologic examination reveals lobules of sebaceous glands that may or may not retain a communication with the overlying surface stratified squamous epithelium. The individual sebaceous cells vary in size and shape and contain a small central nucleus and a foamy cytoplasm. They are asymptomatic and do not need to be treated.2,8
Lymphoid aggregates

Choice D. Sorry, this is not the correct diagnosis.

Lymphoid aggregates are common in the oral cavity but are confined to areas that contain lymphoid tissue such as the posterior lateral tongue, oropharyngeal wall (Waldeyer's ring), soft palate, and floor of the mouth. They appear as small submucosal nodules that may be yellowish to normal mucosa colored. Histopathologic examination reveals localized collections of lymphocytes with interspersed lymphoid follicles and reactive germinal centers. The presence of multiple yellow papules on the vermilion of the upper lips and on the right and left buccal mucosa, and the histopathologic findings presented, do not support this diagnosis.

Please re-evaluate the information about this case.
References

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Since joining the faculty in 2002, Dr. Huber has been teaching both pre-doctoral and graduate dental students at the UTHSCSA School of Dentistry. In 2014, he was awarded the UTHSCSA Presidential Teaching Excellence Award. He is a Past President of the American Academy of Oral Medicine. Dr. Huber has spoken before many local, state, and national professional organizations. He has published over 70 journal articles, book chapters, and online postings.

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