Papule in the Right Floor of the Mouth

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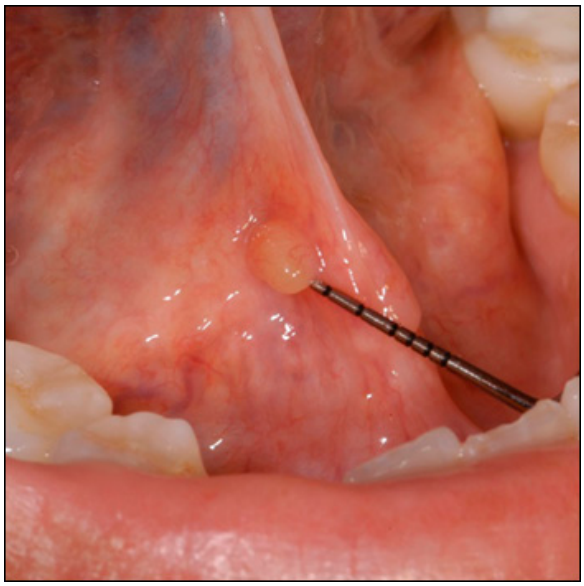
Online Case: *www.dentalcare.com/en-us/professional-education/case-challenges/case-challenge-070*



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

A 28-year-old male presents with an asymptomatic papule in the right floor of the mouth.

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

Diagnostic Information

History of Present Illness

Bob is a 28 year-old-male who presents for a routine 6 month dental recall visit. On examination, a small yellow-tan papule is noted in the right floor of mouth. The patient is asymptomatic and completely unaware of the lesion. No mention of this lesion was made in the clinical notes from the patient's last examination. Bimanual palpation of the floor of mouth reveals no other discrete masses. Clear saliva is easily expressed from the submandibular ducts. The patient does have mild exfoliative cheilitis secondary to a lip licking habit. The remainder of the oral examination is normal. An excisional biopsy is performed under local anesthesia.

Medical History

- Adverse drug effects: None
- Medications: No prescription medications, takes over-the-counter vitamins and nutritional supplements
- Pertinent medical history: Patient is in excellent health
- Pertinent family history: paternal - hypertension, hypercholesterolemia; maternal - osteoporosis
- Social history: smoked cigarettes briefly as adolescent; social alcohol (beer); denies recreational drug exposure

Clinical Findings

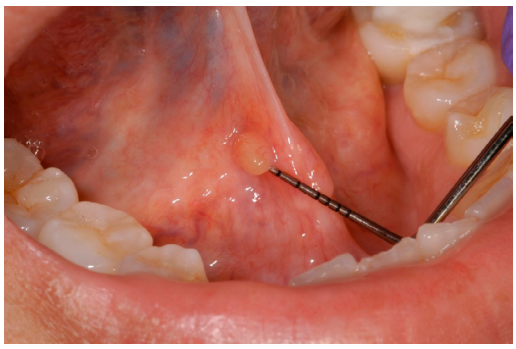


Figure 1. Clinical image showing small yellow-tan papule in right floor of mouth.

Histopathologic Findings

The biopsy revealed a small submucosal cyst lined by thin stratified squamous epithelium with parakeratinizing luminal surface and abundant intraluminal keratin material. The wall of the cyst displayed a lymphocytic infiltrate with reactive germinal center formation. Serial sectioning showed that the cyst communicated with the surface mucosa (Figures 2 and 3).

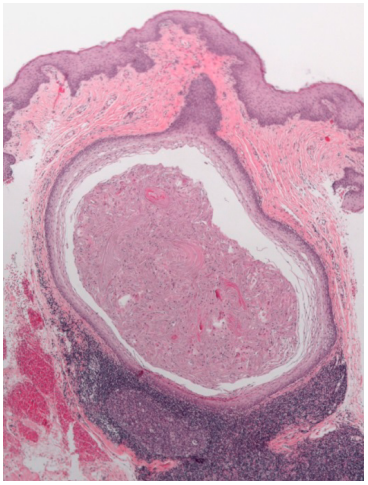


Figure 2. Low power histologic image showing a submucosal cyst with adjacent reactive lymphoid tissue exhibiting germinal center formation.

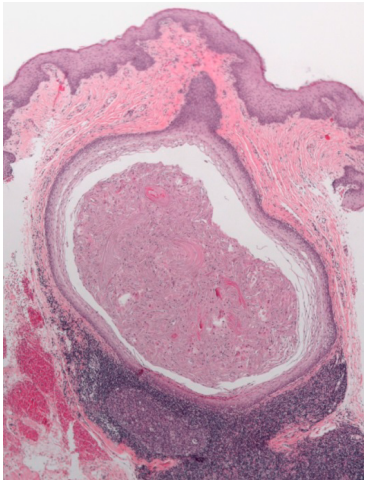
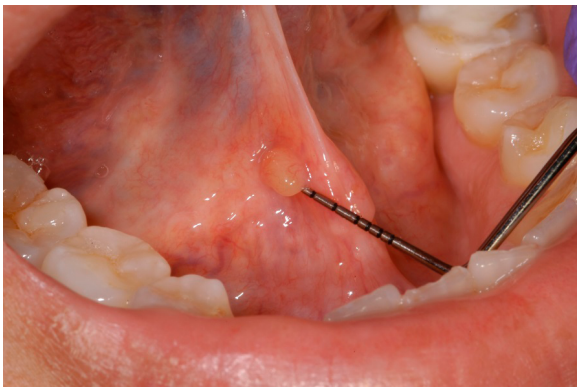


Figure 3. High power histologic image of cyst wall lined by thin stratified squamous epithelium with a parakeratinizing luminal surface and associated mural lymphoid infiltrate. The cyst lumen is filled with keratin.

Select Diagnosis

Can you make the diagnosis

A 28-year-old male presents with an asymptomatic papule in the right floor of the mouth.



Select the Correct Diagnosis

A. Sialolith
B. Fordyce granule
C. Superficial mucocele
D. Oral lymphoepithelial cyst

Sialolith

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

Sialoliths are calcifications that develop within salivary ducts.[1,2,3] They result from the deposition of calcium salts on an intraluminal nidus of thick mucin, ductal epithelium, bacteria and/or foreign material. Most siaoliths develop within the ductal system of the submandibular gland. Other major glands and oral minor salivary glands may also be involved. Ductal obstruction and sialadenitis may be contributing factors. Most patients are young to middle aged adults. Obstructive symptoms of pain and swelling may be present. Sialoliths are yellow-tan ovid to cylindrical concretions that are hard to palpation and may be seen as a radiopaque mass on radiographic examination. Histologically sialoliths are laminated calcifications within the lumen of an inflamed metaplastic salivary duct. The associated salivary glands may show chronic inflammation and atrophy. While a small sialolith at the terminal portion of an oral minor salivary gland could present as a yellow-tan mucosal lesion, the histologic findings of a keratin filled submucosal cyst with associated lymphoid stroma do not support the diagnosis of sialolith.

Please re-evaluate the information about this case.

Fordyce granule

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

Fordyce granules are sebaceous glands that are present on the oral mucosa.[1,4] They are considered to be a normal anatomic variation as they are seen in a majority of the adult population. Fordyce granules present as multiple asymptomatic yellow-tan macules or papules involving the buccal mucosa, labial vermilion border, retromolar region and tonsillar pillar. Histologically they are composed of normal appearing lobules of sebaceous glands. Unlike in the skin, they are not associated with hair follicles. Fordyce granules require no treatment. While the clinical appearance is similar to a small oral lymphoepithelial cyst, Fordyce granules are usually multiple and are uncommon in the floor of mouth. The histologic findings of a keratin filled submucosal cyst with associated lymphoid infiltrate do not support the diagnosis of Fordyce granules.

Please re-evaluate the information about this case.

Superficial mucocele

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

A mucocele is a very common lesion of the oral mucosa that develops when mucin is extravasated into the surrounding connective tissue from a ruptured salivary duct.[1,3] A history of local trauma may be elicited. The most common site for a mucocele is the lower lip, followed by the floor of mouth, anterior ventral tongue, and buccal mucosa. The peak incidence is in children and young adults. The clinical appearance is usually a blue translucent fluctuant submucosal swelling. There is often a history of the lesion collapsing then redeveloping. Most lesions are non-painful unless secondarily traumatized. A mucocele can range in size from a small superficial to large deep seated lesion. Histologic examination shows an area of cavitated submucosal mucin spillage with a denuded wall of inflamed granulation tissue. The associated salivary glands often show chronic inflammation and ductal ectasia. Chronic persistent lesions are treated by surgical excision with removal of adjacent minor salivary glands. The prognosis is excellent, although recurrences may develop. While a superficial mucocele in the floor of mouth could present as a small amber vesicle, the histologic findings of a keratin filled submucosal cyst with an adjacent lymphoid stroma does not support this diagnosis.

Please re-evaluate the information about this case.

Oral lymphoepithelial cyst

Choice D. Congratulations! You are correct.

Oral lymphoepithelial cysts may develop from occlusion of tonsillar crypt epithelium associated with submucosal lymphoid aggregates.[1,5] These cysts are relatively uncommon and present as a small (<1cm), asymptomatic, non-ulcerated yellow-tan to white submucosal nodule. These cysts develop most often in young adults. The floor of mouth, ventral tongue, posterior lateral tongue, palatine tonsil, and soft palate are the sites most frequently involved. This pattern reflects the distribution of lymphoid tissue in the oral cavity (Waldeyer ring). Oral lymphoepithelial cysts are lined by stratified squamous epithelium with accumulated intraluminal parakeratin. There is a surrounding mural lymphoid infiltrate which frequently contains reactive germinal centers. Conservative surgical excision is curative. The prognosis is excellent and recurrence is not expected.

References

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Anne Cale Jones graduated from the University of Alabama in 1981 with the Bachelor of Science degree (Magna Cum Laude) in Natural Sciences. She received a Doctor of Dental Surgery degree (Magna Cum Laude) from the Medical College of Virginia, Virginia Commonwealth University in 1986. Following a three-year residency program in Oral and Maxillofacial Pathology at Booth Memorial Medical Center in Queens, New York, Dr. Jones joined the faculty at the University of Florida, College of Dentistry. In 1998, she became a faculty member at The University of Texas Health Science Center at San Antonio. She is currently a Distinguished Teaching Professor in the Department of Pathology and is board certified by the American Board of Oral and Maxillofacial Pathology.

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Since joining the faculty in 2002, Dr. Huber has been teaching both pre-doctoral and graduate dental students at the UTHSCA 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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