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Salivary duct cyst of the upper lip

KEYWORDS
Salivary duct cyst;
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The salivary duct cyst (SDC) of the minor salivary glands occurs occasionally in the upper lip.[1,2] Here, we presented a case of the SDC of the minor salivary glands of the left upper labial mucosa in a 54-year-old male patient.

This 54-year-old male patient was referred to our oral mucosal disease clinic by a local dentist for evaluation and treatment of a soft, fluctuant mass approximately 0.6 cm in diameter in the left upper labial mucosa for about one month. The mass was sessile and covered by the smooth bluish labial mucosa. Although it was asymptomatic, sometimes it might disturb the patient when chewing. The clinical diagnosis by the local dentist was a mucocele, but the differential diagnoses of this lesion included mucocele, fibroma, lipoma, SDC, sialolith, and benign minor salivary gland tumor. The patient was referred to an oral surgeon for excisional biopsy. After discussing with the patient and obtaining the signed informed consent, the left upper labial mucosal mass was totally excised under local anesthesia by the oral surgeon and sent for histopathological examination. Microscopically, the excised soft tissue specimen showed a ruptured cyst and a dilated excretory duct below the several lobules of the minor labial glands and labial muscle bundles (Fig. 1A). The ruptured cyst was lined by one to two layers of eosinophilic columnar epithelium with oncocytic metaplasia (Fig. 1B–D). The adjacent dilated excretory duct was also lined by one to two layers of eosinophilic columnar oncocytes that displayed papillary folds into the ductal lumen. Moreover, there was a severe lymphoplasma cell infiltrate in the interstitial fibrous connective tissues around the dilated excretory duct (Fig. 1E and F). In addition, an adjacent lobule of the minor labial glands embedded in the labial muscle bundles also exhibited a mild lymphoplasma cell infiltrate in the periductal fibrous connective tissues (Fig. 1G and H). Therefore, the final histopathological diagnosis was an SDC of the minor salivary glands of the left upper labial mucosa.

The SDC and mucocele both may present as asymptomatic nodular lesions on the upper or lower lips, but they have some clinical and histopathological differences.[1–4] Chi et al. reviewed 1824 previously reported cases of mucocele in the literature.[3] Of the 1715 oral mucoceles with complete clinical data, 1405 (81.9 %) were located at the lower labial mucosa and none at the upper labial mucosa.[3] Although the mucocele was occasionally reported in the upper lip, the cumulated data showed that nearly all mucoceles are found in the lower lip.[3,4] The mean age of the 1715 patients with oral mucoceles is 24.9 years and the peak decade is the second decade. There is no gender predilection for the 1715 patients (870 males and 845 females) with a male to female ratio of 1.03: 1.[3] Stojanon et al.[1] reported the clinical and histopathological features of 177 cases of intraoral SDC in a single surgical pathology laboratory. They found that the 177 intraoral SDCs are relatively evenly distributed at the oral mucosal sites, including 41 at the floor of mouth, 29 at the buccal mucosa, 28 at the lower lip, 28 at the hard and soft palatal mucosa, 24 at the mandibular vestibular mucosa, 10 at the upper lip, 10 at the tongue, and 7 at the other oral mucosal sites.[1] This finding indicates that there are more intraoral SDCs at the lower lip than those at the upper lip.[1] The intraoral SDCs occur more commonly in female patients (103 cases, 58.2 %) than in male patients (74 cases, 41.8 %) with a female to male ratio of 1.39: 1.[1] The median age of 177 patients with the intraoral SDCs is 56 years and the intraoral

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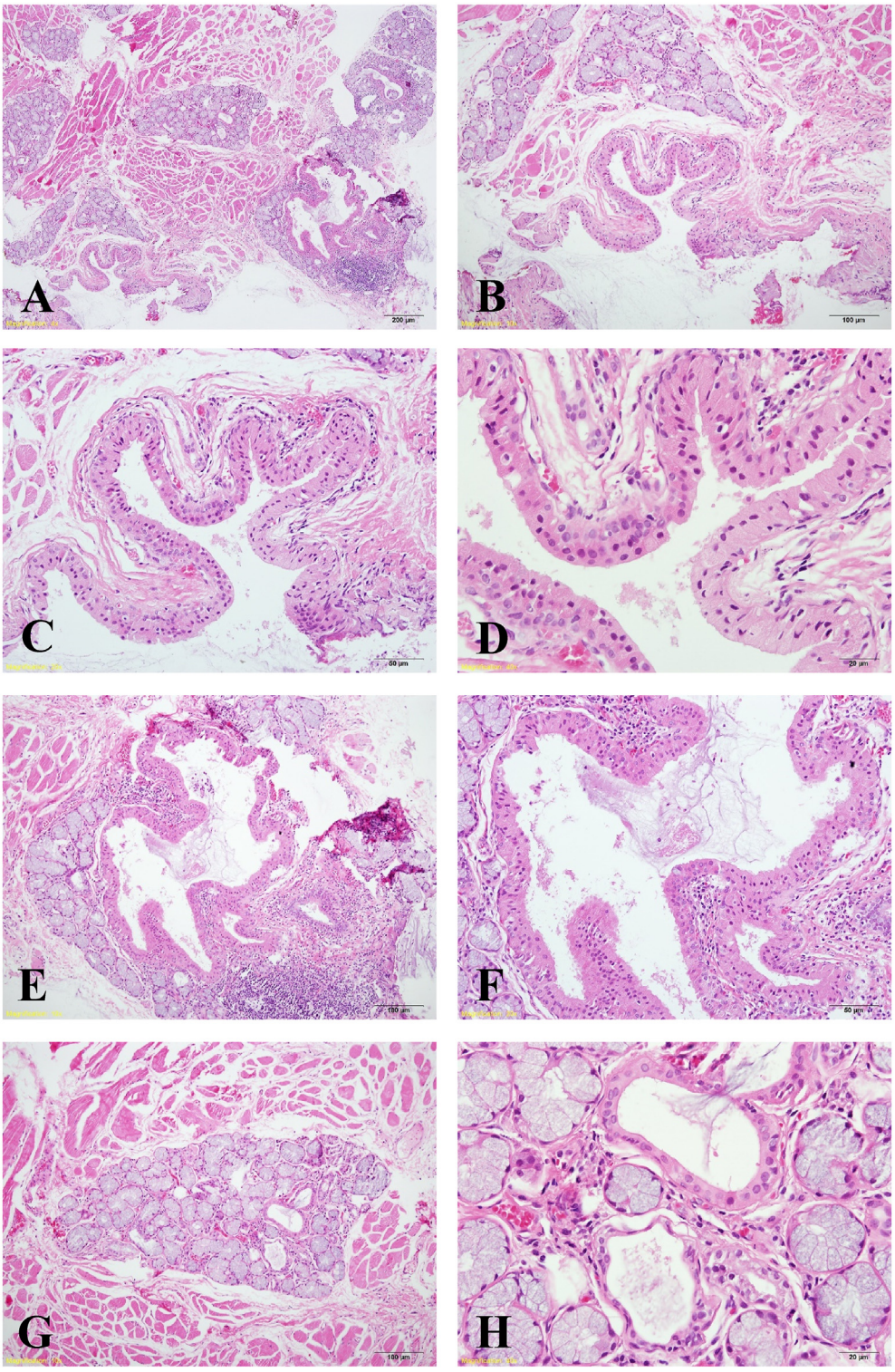

Figure 1 Histopathological photomicrographs of our case of the salivary duct cyst of the left upper lip. (A) Low-power photomicrograph showing a ruptured cyst and a dilated excretory duct below the several lobules of the minor labial glands and labial muscle bundles. (B, C and D) Medium- and high-power photomicrographs exhibiting a ruptured cyst lined by one to two layers of eosinophilic columnar epithelium with oncocytic metaplasia. (E and F) Medium- and high-power photomicrographs demonstrating a dilated excretory duct lined by one to two layers of eosinophilic columnar oncocytes that displayed papillary folds into the ductal lumen. Moreover, there was a severe lymphoplasma cell infiltrate in the interstitial fibrous connective tissues around the dilated excretory duct. (G and H) Medium- and high-power photomicrographs showing an adjacent lobule of the minor labial glands embedded in the labial muscle bundles, which exhibited a mild lymphoplasma cell infiltrate in the periductal fibrous connective tissues (Hematoxylin and eosin stain; original magnification; A 40 × ; B, E and G, 100 × ; C and F, 200 × , D and H, 400 ×).

SDCs occur more frequently in the sixth decade.[1] The above findings suggest that the mucoceles are commonly found in children and young adults, but the intraoral SDCs occur frequently in relatively older adults.[1,3] The mucocele usually results from local trauma-induced rupture of a salivary gland duct and spillage of mucin into the surrounding soft tissue. It is a pseudocyst lined by a thin layer of granulation tissue with an infiltrate of foamy histiocytes and lymphoplasma cells.[3] However, the SDC is frequently caused by intraluminal mucous stasis or ductal obstruction by the mucus plug, and it is a true cyst usually lined by one to two layers of columnar or cuboidal epithelial cells with oncocytic, mucous cell, squamous, ciliated cell, or apocrine-like metaplasia.[1] We also reported a SDC at the left upper labial mucosa with oncocytic metaplasia of the lining epithelial cells.[2]

Declaration of competing interest

The authors have no conflicts of interest relevant to this article.

Acknowledgments

None.

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Fang-Yu Kang[†]
Department of Dentistry, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Hualien, Taiwan

Yi-Pang Lee[†]
Department of Dentistry, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Hualien, Taiwan
Institute of Oral Medicine and Materials, College of Medicine, Tzu Chi University, Hualien, Taiwan

Andy Sun[**]
Department of Dentistry, National Taiwan University Hospital, College of Medicine, National Taiwan University, Taipei, Taiwan

Chun-Pin Chiang[*]
Department of Dentistry, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Hualien, Taiwan
Institute of Oral Medicine and Materials, College of Medicine, Tzu Chi University, Hualien, Taiwan
Department of Dentistry, National Taiwan University Hospital, College of Medicine, National Taiwan University, Taipei, Taiwan
Graduate Institute of Oral Biology, School of Dentistry, National Taiwan University, Taipei, Taiwan

**Corresponding author. Department of Dentistry, National Taiwan University Hospital, No. 1, Chang-Te Street, Taipei 10048, Taiwan.
E-mail address: andysun7702@yahoo.com.tw (A. Sun)

*Corresponding author. Department of Dentistry, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, and Institute of Oral Medicine and Materials, College of Medicine, Tzu Chi University, No. 707, Section 3, Chung-Yang Road, Hualien 970, Taiwan.
E-mail address: cpchiang@ntu.edu.tw (C.-P. Chiang)

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[†] These two authors contributed equally to this study.