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CORRESPONDENCE

Mucoepidermoid carcinoma of the upper lip

Hung-Pin Lin [a,b,c], Chieh Yuan Cheng [d], Andy Sun [c,e], Chun-Pin Chiang [c,e,f,*]

[a] Department of Dentistry, MacKay Memorial Hospital, Taipei, Taiwan
[b] Department of Medicine, MacKay Medical College, New Taipei City, Taiwan
[c] Department of Dentistry, School of Dentistry, National Taiwan University, Taipei, Taiwan
[d] Department of Oral and Maxillofacial Surgery, MacKay Memorial Hospital, Taipei, Taiwan
[e] Department of Dentistry, National Taiwan University Hospital, College of Medicine, National Taiwan University, Taipei, Taiwan
[f] Graduate Institute of Oral Biology, School of Dentistry, National Taiwan University, Taipei, Taiwan

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Mucoepidermoid carcinoma (MEC) is the most common salivary gland malignancy. It accounts for 4–10% of all major salivary gland tumors and 13–23% of all minor salivary gland tumors.[1] MEC occurs most frequently in the parotid gland (major salivary glands) and in the palate (minor salivary glands). However, it is rarely found in the upper lip.

A 35-year-old male patient visited our Oral and Maxillofacial Surgery Department for treatment of a nodule in the upper lip. Clinical examination revealed a nontender soft-tissue mass with intact mucosal surface in the left upper lip. Under the impression of a mucocele, the tumor was totally excised and sent for histopathological examination.

Grossly, the tumor had intact epithelial surface and measured 0.6 cm in the greatest dimension. Microscopically, the tumor was well-demarcated and consisted of a sheet of epidermoid and mucin-producing cells intermixed with some microcystic spaces (Figures 1A–1C). The mucous cells had foamy cytoplasm. Moreover, the mucous cells and contents of the microcystic spaces were stained positive with the mucicarmine stain (Figure 1D). Immunostains showed that the epidermoid, intermediate, and mucous cells were positive for cytokeratin 7 (Figure 1E), but were negative for cytokeratin 20 (Figure 1F). Therefore, the final histopathological diagnosis was an intermediate-grade MEC. Because the final diagnosis was a malignancy, the patient received further radical excision of the previously operated cancer site 1 week after the initial biopsy. However, the subsequently submitted specimen showed no residual cancer cells.

The clinical diagnosis of this case was a mucocele. MECs are sometimes fluctuant and have a blue color, and as a result they may be misdiagnosed as mucoceles. However, mucoceles are often found in the lower lip but rarely in the upper lip.[1] Previous studies have demonstrated that labial salivary gland tumors are significantly more common in the upper lip, accounting for 74–87% of all labial salivary gland tumors. Only 13–26% of all labial salivary gland tumors occur in the lower lip. In the upper lip, 9–25% of salivary gland tumors are malignant because of the high prevalence of the canalicular adenoma in the upper lip. By contrast, although lower lip salivary gland tumors are uncommon, 43–86% of the lower lip salivary gland tumors are malignant (mostly MEC).[1] Therefore, the MEC is rarely found in the upper lip.

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

* Corresponding author. Department of Dentistry, National Taiwan University Hospital, Number 1, Chang-Te Street, Taipei 10048, Taiwan.
E-mail address: cpchiang@ntu.edu.tw (C.-P. Chiang).

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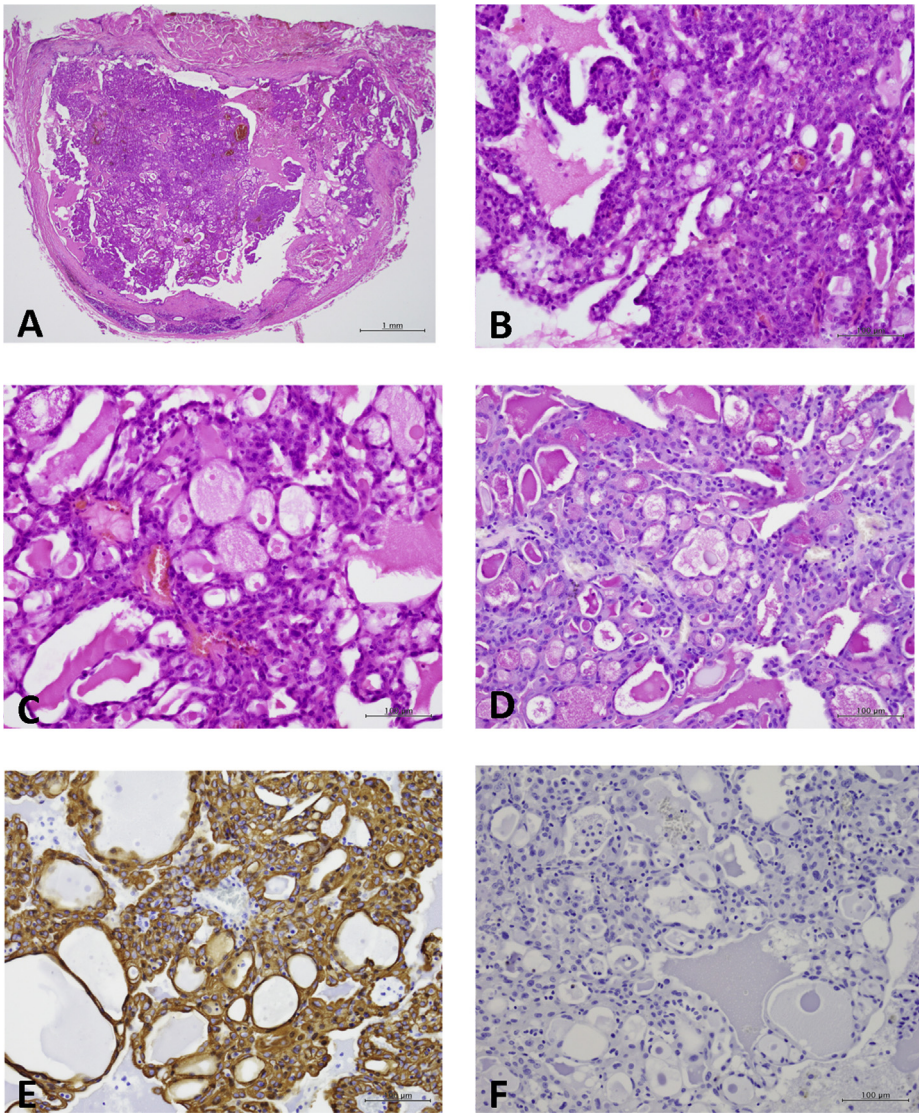

Figure 1 Histopathological and immunostained microphotographs of the tumor excised. (A) Hematoxylin and eosin (H&E)-stained microphotograph showing a well-demarcated submucosal tumor composed of blue-stained cells and some microcystic spaces. (B and C) H&E-stained microphotographs demonstrating a sheet of tumor epidermoid, intermediate, and mucin-producing cells intermixed with some microcystic spaces. (D) Mucicarmine-stained microphotograph showing that mucous cells and contents of the microcystic spaces were mucicarmine positive (red). (E) Immunostained microphotograph illustrating that the epidermoid, intermediate, and mucous cells were positive for cytokeratin 7. (F) Immunostained microphotograph illustrating that all tumor cells were negative for cytokeratin 20 (original magnification: A, 40×; B—F, 200×).

Regarding their histopathological diagnoses, MECs can be classified into low-, intermediate-, and high-grade subtypes according to the amount of cyst formation; degree of cytologic atypia; and relative numbers of mucous, epidermoid, and intermediate cells.[1] Our case of MEC contained relatively more epidermoid and intermediate cells, fewer mucin-producing cells, and some microcystic spaces. Thus, it was diagnosed as an intermediate-grade MEC. Immunohistochemical staining is a very useful method for identification of different cell types in a variety of tumors.[2—5] In our case, the epidermoid, intermediate, and mucous cells were positive for cytokeratin 7. In addition, the presence of mucin-producing cells and their secretory mucin materials can be confirmed by mucicarmine stain. Therefore, the final diagnosis was an MEC.

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