



## Correspondence

# Metastasis of thyroid carcinoma to the buccal mucosa



## KEYWORDS

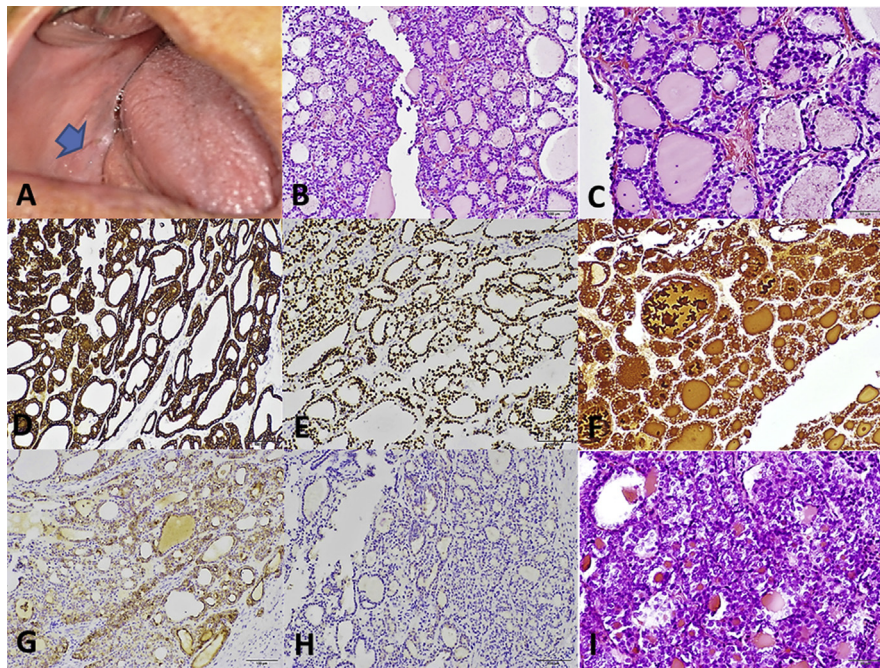
Oral metastasis;  
Thyroid carcinoma;  
Buccal mucosa

Metastatic tumors to the oral cavity are uncommon, contributing approximately 1% of all oral malignant neoplasms,<sup>1</sup> which occur either in the jaws (mostly located in the mandibular molar area), or even more infrequently in the oral soft tissues (<0.1% of all oral malignancies).<sup>1</sup> Nearly any malignant neoplasm can metastasize to the oral cavity. The most frequent locations of primary cancers with metastases to the oral cavity in males are the lung, kidney, liver, and prostate, whereas those in females are the breast, genital organs, kidney, and colo-rectum.<sup>1</sup> To our knowledge, oral metastasis from thyroid is very uncommon. Hereby, we reported a rare case of follicular thyroid carcinoma with metastasis to the buccal mucosa.

A 78-year-old woman visiting the oral and maxillofacial department of our institution complained of a painful ulceration over the right buccal mucosa for about one month. Intraoral examination revealed a tender, painful ulcerative lesion measuring about 1.0 cm in diameter over the right buccal mucosa (Fig. 1A). The patient had a history of diabetic mellitus and hypertension. Moreover, she was suffered from follicular thyroid carcinoma with multiple distant metastases to the left humerus and lung one year ago. So, a clinical impression of oral metastatic cancer was suspected. An incisional biopsy was performed subsequently. Microscopically, the tissue sections showed a neoplasm with the tumor cells arranged in a follicular pattern with colloid substances in the follicular lumens (Fig. 1B and C). The tumor cells also revealed nuclear hyperchromatism and

pleomorphism (Fig. 1C). Immunohistochemically, the neoplastic cells were positive for CK7 (Fig. 1D), thyroid transcription factor-1 (TTF-1) (Fig. 1E), thyroglobulin (Fig. 1F), and hector battifora mesothelial antigen-1 (HBME-1) (Fig. 1G), and focal weakly positive to galectin-3 (Fig. 1H). Additionally, the histopathological features of the oral soft tissue metastatic lesion were compatible to those of a primary follicular thyroid carcinoma (Fig. 1I). So, metastatic thyroid follicular carcinoma to the right buccal mucosa was rendered. Due to the old age, the poor systemic conditions, and multiple distant metastases of the patient, the patient herself and the family determined not to undergo further radical treatment.

Cancer metastases to the oral soft tissues are mainly from lung, kidney, skin, and breast in females.<sup>2</sup> Reviewing the English literature, metastasis to the oral mucosa from thyroid is very rare with only three cases having detailed descriptions of the lesions in the literatures.<sup>3–5</sup> Whittaker et al. reported a case of follicular thyroid carcinoma with metastases simultaneously to the dorsal tongue and lower lip in a 87-year-old man.<sup>3</sup> Piattelli et al. presented a gingival metastasis from a medullary thyroid carcinoma in a 54-year-old female,<sup>4</sup> whilst Siddique et al. documented another case of gingival metastasis from papillary thyroid carcinoma in a 71-year-old man.<sup>5</sup> Therefore, the current case, to the best of our knowledge, may be the fourth case of metastatic oral soft tissue lesion from thyroid and also the first reported case in the buccal mucosa.



**Figure 1** Clinical and microscopic photographs of the current case of follicular thyroid carcinoma with metastasis to the buccal mucosa (A) Ulcerative lesion (arrow) over the right buccal mucosa. (B and C) The hyperchromatic and pleomorphic tumor cells arranged in a follicular pattern with colloid substances in the follicular lumens (hematoxylin and eosin stain; magnification, B, 100 $\times$ ; C, 200 $\times$ ). The tumor cells were positive for CK7 (D, magnification, 100 $\times$ ), thyroid transcription factor-1 (TTF-1) (E, magnification, 100 $\times$ ), thyroglobulin (F, magnification, 100 $\times$ ), hector battifora mesothelial antigen-1 (HBME-1) (G, magnification, 100 $\times$ ), and focal weakly positive for galectin-3 (H, magnification, 100 $\times$ ). (I) Microscopic features of the buccal metastatic lesion were consistent with a primary follicular thyroid carcinoma (hematoxylin and eosin stain; magnification, 100 $\times$ ).

## Conflicts of interest

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

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jds.2019.08.005>.

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