

## Acinic Cell Carcinoma of the Palatine Tonsil – A Brief Case Report –

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Acinic cell carcinoma (ACC) is a rare, low-grade malignancy of the salivary glands. Most cases occur in the major salivary glands, especially the parotid gland, with only a few cases involving the minor salivary gland previously described. A 67-year-old male patient was admitted complaining of an obstructive feeling in the throat. On examination, a lobulated mass in the tonsillar surface was noticed. Tonsillectomy was performed under general anesthesia. Histopathological examination of the mass revealed sheets of large, polygonal acinar cells with granular, slightly basophilic cytoplasm, which led to the diagnosis of ACC. Here, we present a case of low-grade ACC of the palatine tonsil, which we believe to be the first reported case of ACC in this location.

**Key Words :** Carcinoma, acinar cell; Palatine tonsil; Salivary glands, minor; Tonsillectomy; Secretory vesicles

Acinic cell carcinoma (ACC) is a relatively rare, malignant epithelial neoplasm in which the tumor cells exhibit acinar serous differentiation. These tumors account for 2-3% of salivary gland tumors; they most often arise in the parotid gland but may occasionally involve the submandibular, minor salivary, or seromucinous glands.<sup>1</sup>

The majority of tonsillar carcinomas arises in the squamous mucosa and therefore presents with squamous cell morphology. The palatine tonsil also contains submucosal minor salivary glands, which may give rise to various carcinomas.<sup>2</sup> The majority of adenocarcinomas of the palatine tonsils are metastatic adenocarcinomas of the gastrointestinal tract and the lung. In this case report, we present a primary ACC arising in the palatine tonsil. We believe this to be the first case of ACC to be reported in this location.

### CASE REPORT

A 76-year-old man was admitted complaining of sensing a foreign body when swallowing for more than two years. Ear, nose and throat examination revealed a unilateral lobulated mass in

the left palatine tonsil, measuring 2.5 × 1.5 cm in size (Fig. 1 inset). On physical examination, the tonsil was firm, elastic and not tender on palpation. There was no palpable major salivary gland mass or any signs of metastatic lymphadenopathy. Under the clinical diagnosis of chronic tonsillitis, the patient underwent a bilateral tonsillectomy.

The surgical specimens were fixed in formalin and embedded in paraffin for routine histological examination. Macroscopic analysis of the 4 × 2 × 1.5 cm-sized left tonsil showed a 2.5 × 1.5 cm-sized, multinodular polypoid mass protruding out of the surface. The external surface was smooth with a light brown coloration. The cut surface showed a solid, fleshy mass with multiple round nodulations varying in size, and separated by thin fibrous septa. This feature was continuous to the main tonsillar parenchyma (Fig. 1).

Microscopically, the tumor was a multilobulated mass and infiltrated into the tonsillar parenchyma in variably sized, solid, round to oval nests, generally growing in a trabecular pattern (Fig. 2A). Most were composed of round to polyhedral cells with basophilic granular cytoplasm, and uniform, eccentric nuclei closely resembling normal serous type acinar cells (Fig. 2B). Periodic acid-Schiff reaction showed positive secretory granules with-

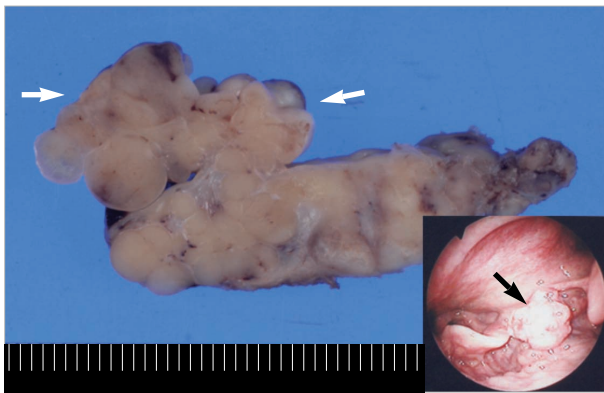


Fig. 1. Gross specimen, left tonsil. White arrows show an exophytic, multilobulated tonsillar mass. The cut surface is solid and multilobular separated by fine fibrous septa. Examination of the oral cavity (inset). Black arrow shows a superficial, multilobed mass on the left tonsil, measuring 2.5 × 1.5 cm.

in the cytoplasm of the tumor cells, which maintained positivity after diastase digestion (Fig. 2C). Immunohistochemical staining with antichymotrypsin, lysozyme antibodies suggested the presence of zymogen granules in the neoplastic cells (Fig. 2D).

Post-operative computerized tomographic study of the head and neck showed no recognizable tumor in the parotid or other major salivary glands, nor was there any evidence of metastasis. After 8 months of follow up, the patient is currently healthy without any evidence of a local recurrence.

## DISCUSSION

Over 99% ACCs occur in the parotid gland. ACC arising in the minor salivary gland has rarely been reported, and ACCs have also been described in the mandible, accessory parotid gland,

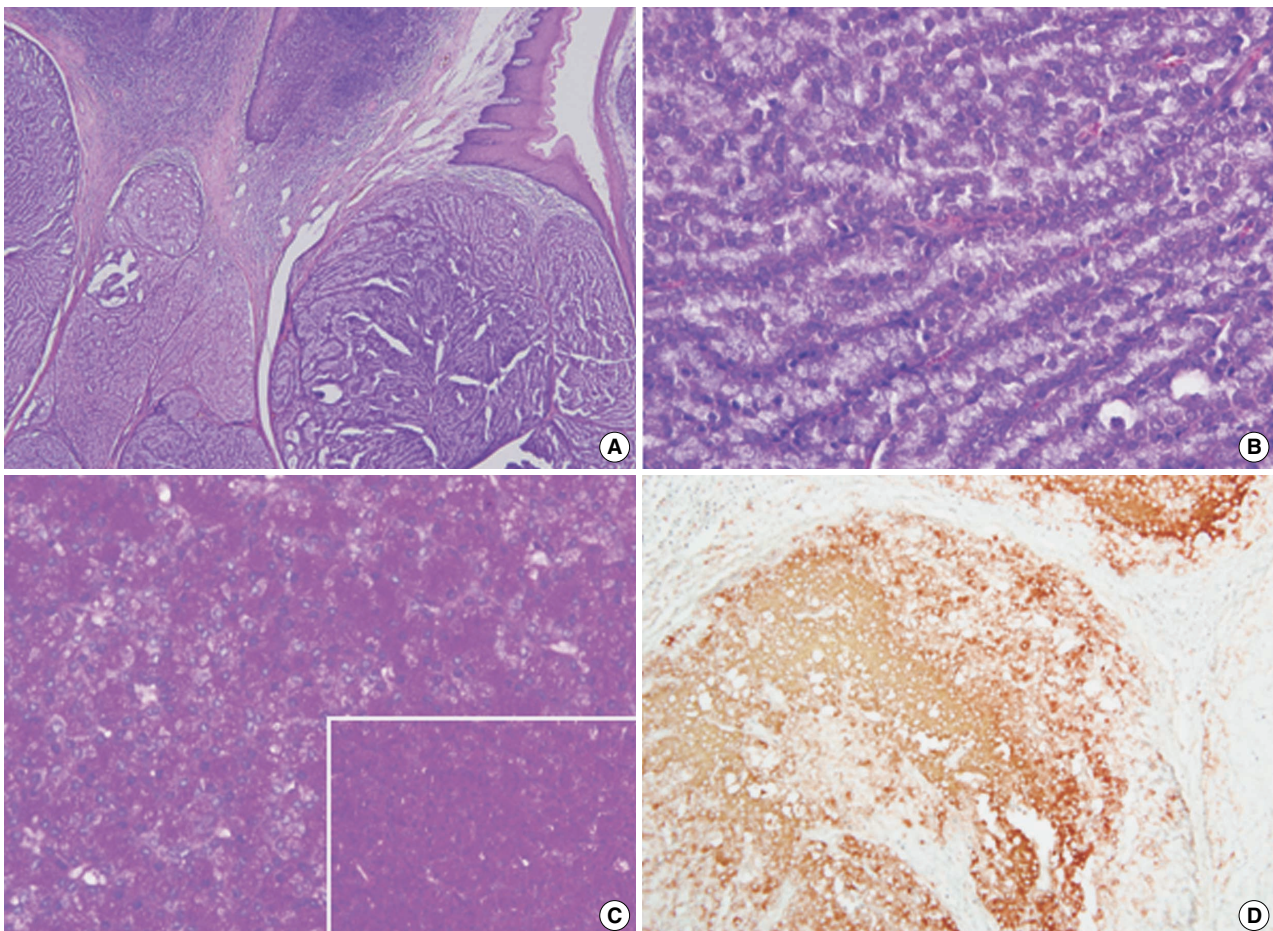


Fig. 2. (A) Round to oval nests of tumor cells originate from the superficial mass invading the tonsillar parenchyma. (B) The tumor consists of round to polyhedral cells with basophilic granular cytoplasm and uniform, round, eccentric nuclei similar to normal serous type acinar cells. (C) Periodic acid-Schiff (PAS) shows positive secretory granules. The PAS positive granules maintain positivity after diastase digestion (inset). (D) The tumor cells are positive for lysozyme expression suggesting the existence of zymogen granules.

maxillary sinus, palate, lip, buccal mucosa, tongue and the nasal cavity.<sup>2-4</sup> Wise *et al.*<sup>5</sup> reported a case of ectopic salivary tissue on the tonsil of a child as a painless, growing, unilateral pale exophytic mass, grossly similar to our present case. We think it is possible that the ectopic salivary tissue might have been the primary focus of malignant transformation in our case, considering the location of the tumor.

Tonsillar malignancies can be clinically suspected, but not acknowledged until after pathologic investigations have been performed. The tonsillar mucosa is often ulcerated in squamous cell carcinoma, while nonepithelial malignancies such as lymphoma usually have an intact mucosa with asymmetry.<sup>6</sup> Recently, Beaty *et al.*<sup>7</sup> suggested that asymmetry is a strong indicator of malignancy, but their study consisted of the asymmetric tonsils with mucosal ulceration and lymphadenopathy. Ours is a case of an epithelial malignancy showing an asymmetric tonsil without mucosal ulceration. In conclusion, ACC can arise in the minor salivary gland or ectopic salivary gland of the palatine tonsil, and we believe that this is the first case of ACC to be reported in this location.

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