

## Case Report

# Papillary squamous cell carcinoma of the oral cavity with acantholytic and pseudovascular features

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**Abstract:** Herein reported is a case of papillary squamous cell carcinoma (PSCC) in the oral cavity with features of koilocytosis, acantholysis and pseudovascular structure. A 73-year-old woman consulted to our hospital because of a tumor in the right mandibular gum. Physical examination revealed an exophytic papillary tumor of the right mandibular gum, and a biopsy was performed. The biopsy revealed squamous cell carcinoma. No metastases were found by various imaging techniques. Therefore, resection of the tumor and mandibular bone was performed. Grossly, the tumor was exophytic and papillary, and measured 2 x 2 x 1 cm. The mandibular bone was free from tumor invasion. Microscopically, the tumor showed exophytic papillary proliferation with fibrovascular cores and consisted of atypical squamous epithelial cells. The tumor cells showed hyperchromasia, nuclear atypia, mitotic figures, apoptotic bodies, cancer pearls, and individual keratinization. Mild stromal invasion was seen. Therefore, PSCC was diagnosed. Koilocytosis, acantholytic features, and pseudovascular features were recognized in some areas. The lateral and vertical margins are negative for tumor cells. The mandibular bone was negative for tumor invasion. The pathological diagnosis was PSCC with koilocytotic, acantholytic and pseudovascular features. The patient was healthy and free from tumor three months after the operation.

**Keywords:** Papillary squamous cell carcinoma, oral cavity

### Introduction

Papillary squamous cell carcinoma (PSSC) is rare variant of squamous cell carcinoma (SCC). PSCC is characterized by papillary proliferation of SCC cells. PSCC is very rare in the oral cavity; only a few cases have been reported [1-5]. Acantholytic SCC and pseudovascular SCC are very rare in the oral cavity. Herein reported is a case of oral PSCC with focal koilocytotic, acantholytic and pseudovascular features.

### Case report

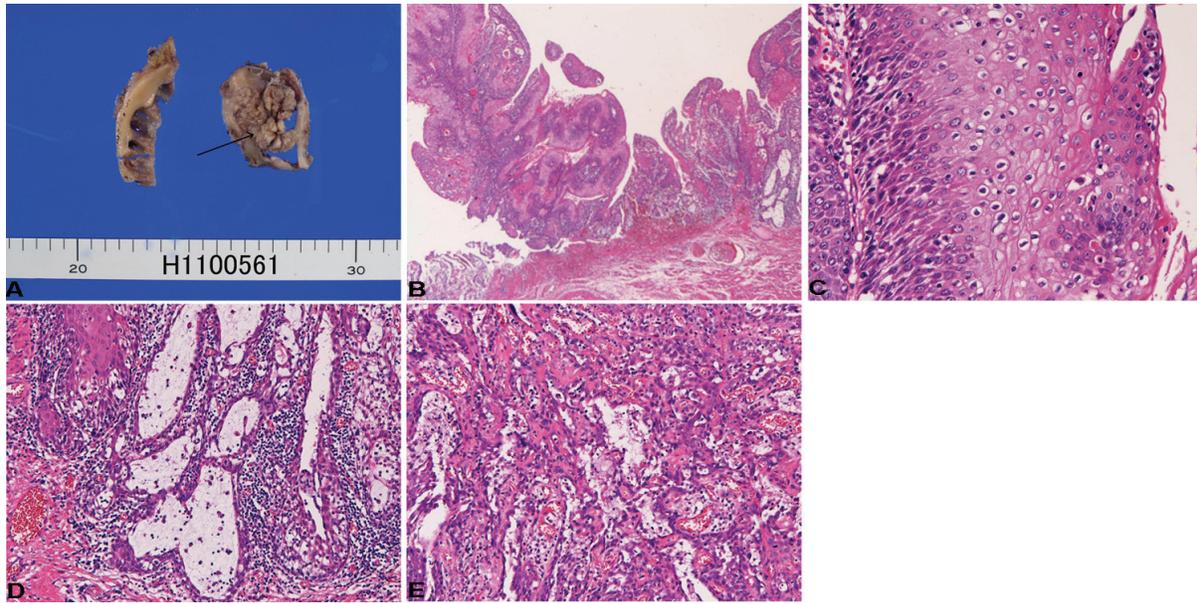
A 73-year-old woman consulted to our hospital because of a tumor in the right mandibular gum. Physical examination revealed an exophytic papillary tumor of the right mandibular gum, and a biopsy was performed. The biopsy revealed SCC. No metastases were found by various imaging techniques. Therefore, resection of the tumor and mandibular bone was performed. Grossly, the tumor was exophytic and papillary, and measured 2 x 2 x 1 cm (**Figure**

**1A**). The mandibular bone was free from tumor invasion. Microscopically, the tumor showed exophytic papillary proliferation and consisted of atypical squamous epithelial cells (**Figure 1B**). The papillary proliferation was accompanied with fibrovascular cores. The tumor cells showed hyperchromasia, nuclear atypia, mitotic figures, apoptotic bodies, cancer pearls, and individual keratinization. Mild stromal invasion was seen. Therefore, PSCC was diagnosed. Koilocytosis (**Figure 1C**), acantholytic features (**Figure 1D**), and pseudovascular features (**Figure 1E**) were recognized in some areas. The lateral and vertical margins are negative for tumor cells. The mandibular bone was negative for tumor invasion. The pathological diagnosis was PSCC with koilocytotic, acantholytic and pseudovascular features. The patient was healthy and free from tumor three months after the operation.

### Discussion

Grossly and microscopically, the present tumor

## Oral papillary squamous cell carcinoma



**Figure 1.** A: Gross features. The tumor (arrow) shows exophytic papillary structures. The left is mandibula bone. B: Very low power view of the tumor. Exophytic papillary proliferation is seen. The atypia is severe and regarded as papillary squamous cell carcinoma. HE, x10. C,D, and E. Focal areas shows koilocytosis (C), acantholytic features (D) and pseudovascular features (E). HE, x100.

showed exophytic papillary structures. Microscopically, the present tumor is obvious SCC with keratinization and fibrovascular core. The present tumor is not different from verrucous carcinoma. Verrucous carcinoma shows verruca-like proliferation and lacks papillary proliferation with fibrovascular cores. In addition, verrucous carcinoma show little cellular atypia and no invasion. Thus, the present tumor fulfills the criteria of PSCC. The present tumor is not verrucous carcinoma (VC). VC usually consists of mild atypical cells and does not show invasive features [6]. The current tumor showed severe atypia and showed mild invasion; thus the present tumor is not VC but PSCC. PSCC is thought to be probably caused by human papilloma virus (HPV). HPV is known to cause koilocytosis. In the current case, koilocytic tumor cells were seen, suggesting that the cause of the present tumor is HPV. Rarely, SCC shows acantholytic and pseudovascular changes. Such SCCs are called acantholytic SCC and pseudovascular SCC. Very interestingly, the current case showed acantholytic and pseudovascular features. Such a case has not been reported. It may be possible that in the present case acantholysis occurred in the tumor cells, creating such acan-

tholytic and pseudovascular features.

In conclusion, the author reported a very rare case of PSCC of the oral cavity with koilocytotic, acantholytic, and pseudovascular structures.

### Conflict of interest

The author has no conflict of interest.

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### References

- [1] Ishiyama A, Eversole LR, Ross DA, Raz Y, Kerner MM, Fu YS, Blackwell KE, Feneberg R, Bell TS, Calcaterra TC. Papillary squamous neoplasms of the head and neck. *Laryngoscope* 1994; 104: 1446-1452.
- [2] Takeda Y, Satoh M, Nakamura S, Yamamoto H. Papillary squamous cell carcinoma of the oral mucosa: immunohistochemical comparison with other carcinomas of the oral mucosal origin. *J Oral Sci* 2001; 43: 165-169.
- [3] Khan SM, Grossweiler MK, Zunt SL, Edwards

## Oral papillary squamous cell carcinoma

- MD, Blanchard SB. Papillary squamous carcinoma presenting on the gingival. *J Periodontol* 2005; 76: 2316-2321.
- [4] Marques YM, Chicaro CF, Tosta M, Kowalski LP, dos Santos Pinto D Jr. Papillary squamous cell carcinoma of the tongue. *Otolaryngol Head Neck Surg* 2009; 141: 298-299.
- [5] Russel JO, Hoschar AP, Scharpf J. Papillary squamous cell carcinoma of the head and neck: a clinicopathologic series. *Am J Otolaryngol* 2011; 32:557-63.
- [6] Terada T. Verrucous carcinoma of the skin: a report of five Japanese cases. *Ann Diagn Pathol* (in press).