

Adenoid Cystic Carcinoma of Minor Salivary Gland - A Case Report

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Abstract: Adenoid cystic carcinoma is a rare malignant tumor of salivary gland. The characteristic clinicopathological features of this tumor are indolent growth, perineural spread and local recurrence. We report an unusual case of adenoid cystic carcinoma of minor salivary gland in 70 years old male.

Keywords: adenoid cystic carcinoma, minor salivary gland.

INTRODUCTION

Adenoid cystic carcinoma (ACC) is a malignant salivary gland tumor that was first described by three Frenchmen Robin, Lorain and Laboulbene in two articles published in 1853 and 1854. Billroth, in 1859, first described ACC under the name "Cylindroma", for its cribriform appearance formed by tumor cells with cylindrical pseudolumina and pseudospaces and described that Adenoid cystic carcinoma had a "great tendency to recur" [1].

Adenoid cystic carcinoma makes up 5% of salivary gland tumors. Approximately 50% of cases found in the minor salivary glands. Among the major salivary glands, the parotid and submandibular glands are the most common locations. Similar neoplasms have been reported in the nose, sinuses, upper airways, breast and elsewhere. Although slow growing, adenoid cystic carcinomas are unpredictable tumors with a tendency to invade perineural spaces and they are stubbornly recurrent [2].

ACC is graded according to Szanto *et al.* [3] cribriform or tubular but without solid components (grade I), cribriform tumors with less than 30% solid areas (grade II), or greater than 30% solid areas (grade III). Clinically it represents as an indolent, persistent lesion which shows propensity for late distant metastasis. Its innocuous clinical presentation remains a diagnostic challenge [4].

We report a rare case of adenoid cystic carcinoma of minor salivary gland in a 70 year old male.

CASE REPORT

A 70 year old male patient presented with swelling in the floor of mouth since seven months.

Intra oral examination revealed a small well defined non tender swelling in the floor of mouth which was hard in consistency. Throat examination was normal. No evidence of lymphadenopathy. Excisional biopsy was performed. Histological diagnosis was done on paraffin embedded formalin fixed section stained with hematoxylin and eosin.

PATHOLOGICAL FINDINGS

Gross

The specimen comprised of multiple small tissue fragments, grayish white, aggregating to 0.5cc. The entire tissue was processed.

Microscopy

The tumor composed of cells arranged in cribriform, tubular pattern and at places cells are arranged concentrically around gland like spaces filled with homogenous eosinophilic material. The cells are basaloid with scant cytoplasm and have round to oval dark compact nuclei. The tumor was diagnosed as adenoid cystic carcinoma.

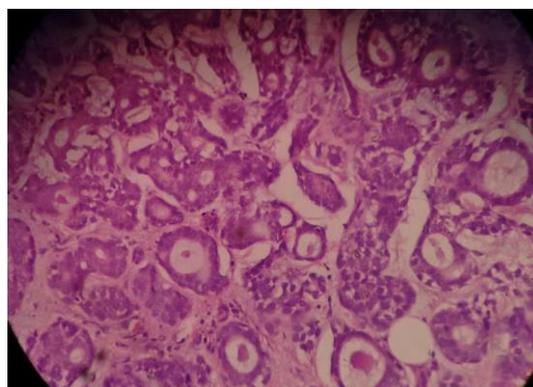


Fig-1: Photomicrograph showing tumor cells in cribriform pattern with eosinophilic material (H&E,x400)

DISCUSSION

Adenoid cystic carcinoma is a generally slow-growing but highly malignant neoplasm with a remarkable capacity for recurrence. In minor salivary glands it is the most common malignant tumor [5].

In our case a 70 year old male presented with a small swelling in the floor of mouth over a period of seven months. Histopathology revealed ACC of minor salivary gland.

Spiro RH *et al* [6] studied 242 cases of adenoid cystic carcinoma of salivary origin and reported minor salivary gland involvement in 171 (71%) cases.

Chromette *et al* [7] observed ACC occurred in older patients (mean age 54 years) than the other salivary neoplasms. The sex ratio was 1/1. The tumor was located more often in palate and lesser degree in the buccal floor, tongue or gums.

Chundru NSV *et al* [8] reported ACC of palate in a 60 year old male with chief complaint pain and discharge in the upper left back region of jaw. Yaga U *et al* [9] reported ACC of palate in a 35 year old lady with chief complaint of swelling in upper jaw. Choudhry K *et al* [10] in his case report recorded ACC in a 56 year old male patient with painless swelling of left maxillary posterior region. The tumor size was 4x3cm. Garg V. *et al* [11] reported adenoid cystic carcinoma of buccal mucosa in a 40-year old female.

The typical adenoid cystic carcinoma has a pattern described as cribriform: nests and columns of cells of rather bland appearance are arranged concentrically around gland like spaces ('pseudocysts') filled with homogeneous eosinophilic periodic acid-Schiff (PAS)-positive material or granular basophilic material. Most of these are not true glandular spaces; they represent instead extracellular cavities containing reduplicated basal lamina material and mucin produced by the tumor cells. Some have a predominantly tubular pattern of growth, whereas others are mainly solid. The cell type presents combine features of intercalated ducts, myoepithelial cells, secretory cells, and pluripotential reserve cells. This tumor has a remarkable tendency for invasion of perineural spaces [2].

The differential diagnosis of ACC includes polymorphous low-grade adenocarcinoma (PLGA), basal cell adenoma and mixed tumor. The cribriform pattern typical of ACC may also rarely be seen in Basal cell adenoma. A polymorphous architecture, foci of papillary growth and areas of single cell infiltration, uniform cell population with cytologically bland, round oval vesicular nuclei and pale eosinophilic cytoplasm characterizes PLGA. ACC has a more limited range of histologic patterns [12].

Adenoid cystic carcinomas frequently metastasize to the lungs [5]. ACC of salivary gland is generally an indolent tumor that pursues a protracted clinical course with recurrences and late metastasis. Cheuk W *et al* [13] reported three cases of ACC with dedifferentiation to high grade malignant neoplasm.

In the treatment of ACC, surgery and radiotherapy remains the main course of treatment [4]. The primary treatment objective in ACC patients is local control, normal functionality and distant metastasis prevention. For this purpose, early detection of the lesion is a requirement, in order to enable a more favorable prognosis and better quality of life [9].

CONCLUSION

Adenoid cystic carcinoma is unique for its typical histopathological features, tendency for perineural invasion and local recurrence. Oral examination may provide an opportunity for early detection. Long term follow up is needed.

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