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Case Report

Basal cell adenoma of nasal septum: report of a case and review of literature

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Abstract: Basal cell adenoma is an uncommon benign salivary gland neoplasm, presenting isomorphic basaloid cells with a prominent basal cell layer. Basal cell adenoma arising from the nasal septum is exceptionally rare. Reports on positron emission tomography with 2-deoxy-2-fluorine-18-fluoro-D-glucose (18FDG-PET) imaging for basal cell adenoma are limited. Here, we present the case of a 49-year-old man who had the symptoms of intermittent repeated bleeding from the left nose for half a year. 18FDG-PET scaning showed increased accumulation of ^{18}FDG with its characteristic benign pathology has a potential to malignancy. After removal of the mass, the patient became symptom free. Pathology showed basal cell adenoma. The evidence of active and growing cells was present in the specimen.

Keywords: Basal cell adenoma, nasal septum, PET/CT

Introduction

Basal cell adenoma, it is an uncommon benign salivary gland neoplasm and the majority of cases arise in the parotid gland of elderly patients. Basal cell adenoma is classified as a subtype of monomorphic adenomas, which were first described and adequately documented as a distinct clinical and pathologic entity by Kleinsasser and Klein in 1967 [1]. Currently, basal cell adenomas are classified by the World Health Organization (WHO) as one of nine subcategories of salivary gland epithelial tumors [2]. Basal cell adenoma, as defined by WHO, is a distinctive benign neoplasm composed chiefly of basaloid cells organized with a prominent basal cell layer and distinct basement membrane-like structure with no myxochondroid stromal component, as seen in pleomorphic adenomas. Here, we present a case of a basal cell adenoma of the nasal septum with 18FDG-PET findings, which showed increased accumulation of 18FDG with its characteristic benign pathology has a potential to malignancy and a brief review of the previous literature.

Case report

A 49-year-old man was admitted to our hospital with a history of intermittent repeated bleeding from the left nose for half a year. Physical examination on admission revealed a mass lesion in left nasal septum. Subsequently, the patient had a computed tomography (CT) of the nasal cavity. CT showed a mass lesion in left nasal septum. The mass showed enhancement on CT-weighted images. 18FDG PET/CT was performed for further evaluation. The maximum projection image of the PET revealed increased uptake in the left nasal septum (**Figure 1**). In the region of the left nasal septum, the intense FDG activity on PET corresponded well to a significantly thickened nasal septum on the CT and the fusion images (**Figure 2**). No lymph node, lung or liver metastasis was evident. After removal of the mass, the patient became symptom free.

The pathology showed basal cell adenoma. The tumor is composed of isomorphic basaloid cells with a prominent basal cell layer, a distinct basement membrane-like structure and no mucoid stromal component as in pleomorphic adenomas (**Figure 3**). The evidence of active and growing cells was present in the specimen. The postoperative course was uneventful, and the patient was followed up for 32 months. He presently is symptom free without any sign of recurrence.

Figure 1. 18FDG PET/CT scanning revealed increased uptake in the left nasal septum.

Discussion

Basal cell adenoma is a rare benign epithelial tumor of the salivary gland, accounting for 1-2% of all salivary gland epithelial tumors [3]. More than 80% of basal cell adenomas arise in the major salivary glands, mostly the parotid gland [4]. On the basis of morphologic features basal cell adenoma was divided into four subtypes: solid, trabecular, and membranous variants [5]. The most common type is the solid variant. According to previous studies of basal cell adenoma, it accounts for 1-3% of all salivary gland tumors, rare in eyelid [6], but none occurred in the nasal septum reviewing the English literature. Membranous basal cell adenoma is a rare benign neoplasm characterized by the presence of abundant, thick, eosinophilic, and PAS-positive hyaline basal lamina material around the smooth-contoured tumor islands, and absence of the myxochondroid stromal component. Histologically, basal cell adenomas are classified as monomorphic tumors composed chiefly of basaloid cells organized with a prominent basal cell layer and distinct basement membrane-like material. The basaloid cells are sometimes indistinguishable from adenoid cystic carcinoma, especially when diagnosed by cytology alone [7, 8]. It is important to differentiate between benign and malignant basal cell adenoma as their clinical behavior and prognosis are vastly different. Histological criteria alone are not adequate to distinguish between benign and malignant lesions and do not predict their clinical behavior.

The use of imaging techniques is necessary pre-operatively. Studies on MRI and computed tomography (CT) for the assessment of basal cell adenoma have been reported [9]. The solid section of the tumor exhibited a lower intensity signal than that of the surrounding parotid tissue on T1- and T2-weighted images. The efficacy of FDG-PET has been reported in the discrimination of benign from malignant tumors [10-13]. There may be a common mechanism of increased uptake in basal cell adenoma, granular cell tumor and schwannoma. Since basal cell adenoma has a potential to malignancy, assessment of metabolism may be a useful way to correctly diagnose this particular lesion. In the paper, 18FDG PET/CT was performed and the maximum projection image of the PET revealed increased uptake in the left nasal septum. Reviewing the literature, a case of malignant transformation of a basal cell adenoma has been reported [14]. Therefore, careful follow-up observation is important. In the study, the patient was followed up for 32 months who presently is symptom free without any sign of recurrence.

In general, the present study encountered a rare case of synchronous basal cell adenoma of the left left nasal septum. The 18FDG-PET findings of a basal cell adenoma have a poten-

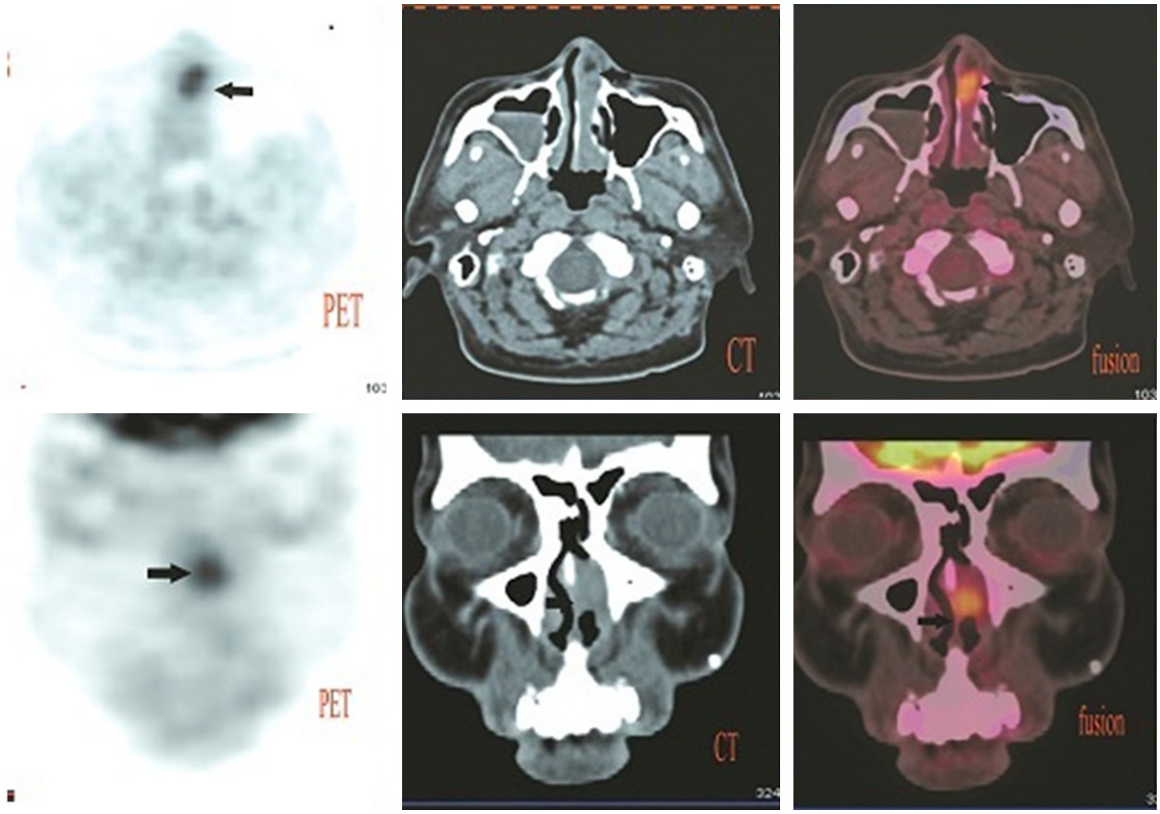

Figure 2. 18FDG PET/CT scanning illustrates that the intense FDG activity on PET corresponded well to a significantly thickened nasal septum on the CT and the fusion images.

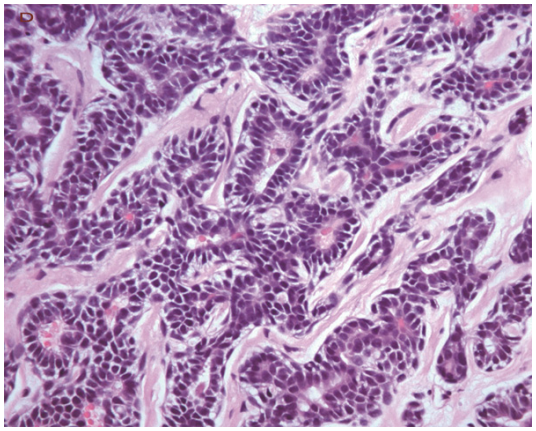

Figure 3. Photomicrograph showing the tumor is composed of isomorphic basaloid cells with a prominent basal cell layer, a distinct basement membrane-like structure and no mucoid stromal component as in pleomorphic adenomas (H & E, ×100).

tial to malignancy that had obviously increased 18FDG uptake.

Disclosure of conflict of interest

None.

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