

Adenoid Cystic Carcinoma of the Nasal Septum

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Abstract

Nasal cavity and paranasal sinus cancers are less commonly detected tumors of the head and neck region. Within this region, the nasal septum is a rare location for the occurrence of such malignant tumors. Adenoid cystic carcinoma of the nasal septum can be detected as a polypoid mass without any significant finding. We intend to present a case of adenoid cystic carcinoma of the nasal septum which was successfully treated with surgical excision and radiotherapy.

Keywords: Nasal septum, carcinoma, adenoid cystic, cylindroma, malign neoplasms

INTRODUCTION

Nasal cavity cancers are rarely detected in the head and neck region; malignant tumors constitute <3% of such cases (1). While malignant tumors are mostly seen in the nasal cavity and paranasal sinuses, it is extremely rare to see them in the nasal septum (1-3). Most of the cancers of the nasal septum are squamous cell carcinoma, followed by adenoid cystic carcinoma (1-4). According to the best of our knowledge, <10 cases have been reported in the literature. Here we present a case of adenoid cystic carcinoma of the nasal septum.

CASE REPORT

A 58-years old female visited our hospital with a complaint of right-sided facial and nasal swelling which persisted for 4 months. The patient denied the occurrence of symptoms such as nasal obstruction, nasal purulent drainage, pain, and bleeding during this time. On physical examination, a mass originating from the nasal septum near the middle turbinate was visualized on right endoscopic view. The mass was polypoid and hyper-vascularized in nature. The septum was found to be deviated to the right side, thereby decreasing operative view. Paranasal computerized tomography (CT) showed a right-sided polypoid, 29x18-sized mass located anterior to the middle meatus on axial and sagittal views (Figure 1, 2). Magnetic resonance imaging (MRI) showed a 27x17-mm contrast-enhanced mass in the right nasal cavity located anterior to the middle meatus (Figure 3). We performed biopsy of the mass but the pathology results were inconclusive. The pathology report suggested that the mass might be adenoid cystic carcinoma but pleomorphic adenoma and low-grade adenocarcinoma must be considered during differential diagnosis. Hence, they suggested us to excise the total tumor. After informed consent was obtained from the patient, we planned to excise the mass and investigate the specimen. Under general anesthesia, the mass was excised totally with clear margins, including the underlying septal cartilage (Figure 4). Pathologic investigation reported cribriform type adenoid cystic carcinoma of the nasal septum without perineural and perivascular invasion; in addition, surgical margins were clear from tumor (Figure 5. a, b). According to the pathology report, the patient consulted the oncology department. Oncology department investigated the patient after surgery for distant metastasis. They did not detect any distant metastasis, but they administered additional radiotherapy after surgery (55-66 Gray for 28 days). The patient has been in remission since 14 months.

DISCUSSION

Nasal and paranasal sinus cancers constitute only 3% of all head and neck cancers. Within this region, the nasal septum is an extremely rare location for malignant cancers. Most of the cases are of squamous cell carcinoma, followed

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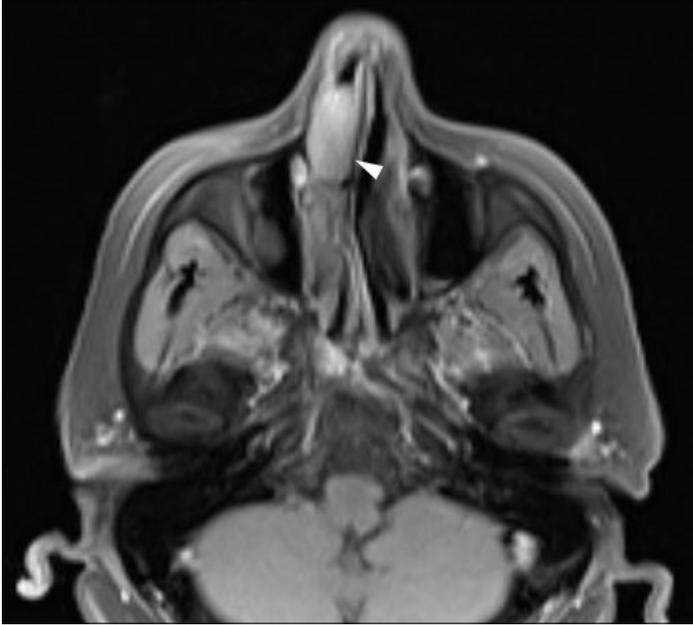


Figure 1. Axial view on computerized tomography showed a right-sided polypoid, 29×18-mm mass located anterior to the middle meatus

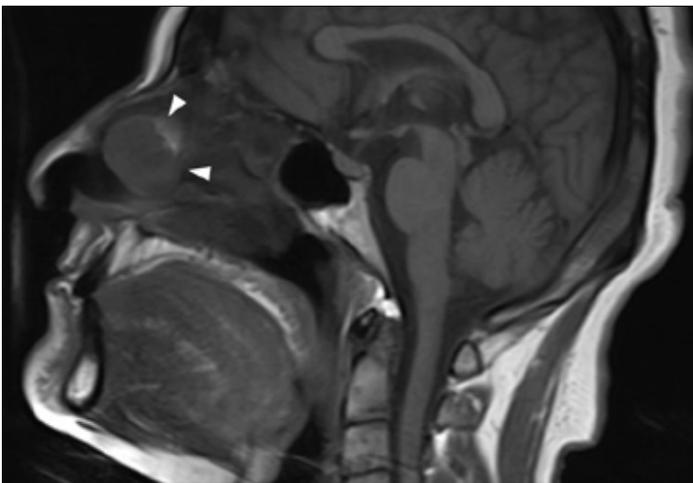


Figure 2. Sagittal view on computerized tomography showed a right-sided polypoid, 29×18-mm mass located anterior to the middle meatus

by those of adenoid cystic carcinoma. Nasal cavity cancers are associated with nasal obstruction, epistaxis, nasal purulent discharge, facial swelling, facial pain, and numbness on facial bones. These nonspecific symptoms can be observed at any age but most of the cases are diagnosed between the fourth and sixth decade of life with a female predominance (1-3). Distant and neck metastasis ratio remains unclear. In our case, the patient was a 58-year-old female with nonspecific complaints such as nasal and facial swelling without any pain.

Both imaging modalities CT and MRI showed polypoid mass. MRI can be helpful in identifying contrast-enhanced polypoid mass as observed in our case; however, this does not help in diagnosis. This imaging modality can be helpful at an advanced stage when intracranial invasion has occurred. CT can be helpful in identifying bone involvement of the mass (4-8).



Figure 3. Magnetic resonance imaging showed a 27×17-mm contrast-enhanced mass in the right nasal cavity located anterior to the middle meatus



Figure 4. Macroscopic view of the adenoid cystic carcinoma of the nasal septum. The mass is polypoid with rubber-like inconsistency

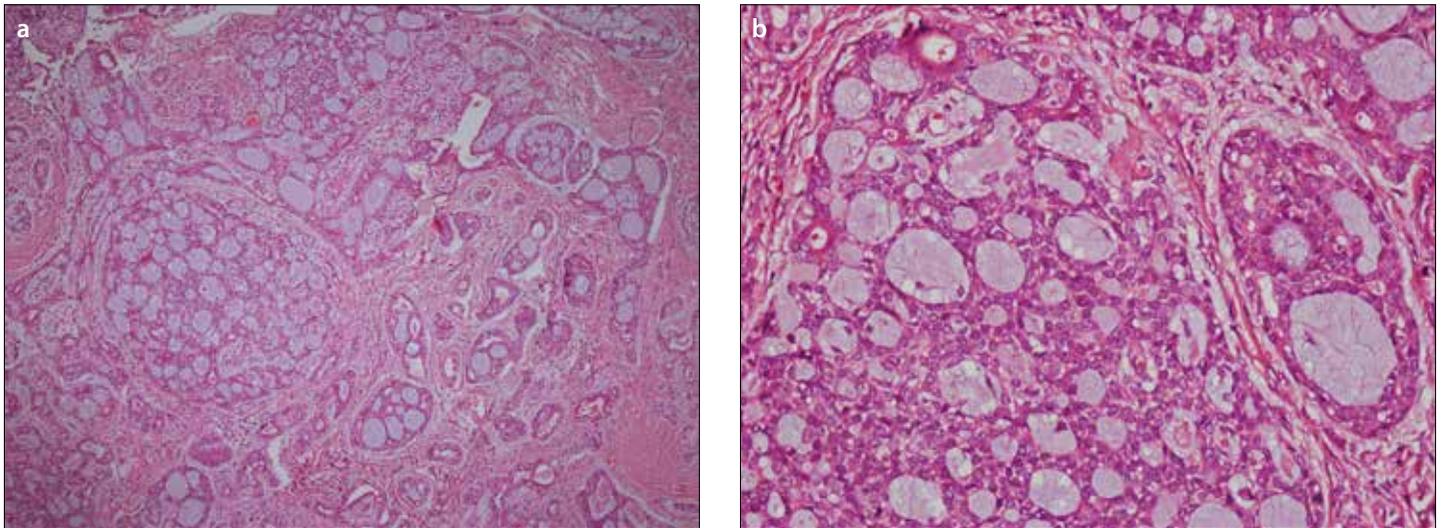


Figure 5. a, b. Prominent cribriform pattern and hyalinization of the stroma (H&E, $\times 100$) (a) Cuboidal tumor cells have round- or angular-shaped uniform nuclei, abundant eosinophilic cytoplasm, and form a cribriform pattern (H&E, $\times 400$) (b)

Diagnosis can be performed by pathologic investigation. On differential diagnosis, we excluded squamous cell carcinoma, malignant melanoma, adenocarcinoma, osteosarcoma, lymphoma, mucoepidermoid carcinoma, schwannoma, chondroma, and chondrosarcoma. In our case, the pathologist was unable to provide a definite diagnosis after punch biopsy. Hence, we performed excisional biopsy; further, the pathologist investigated the specimen again and diagnosed the patient to have cribriform type adenoid cystic carcinoma (4-6).

Adenoid cystic carcinoma is divided into three subgroups pathologically: tubular, solid, and cribriform. The cribriform type is the most common form and its 5-year recurrence rate is 89%. Adenoid cystic carcinoma is known to have the ability of neural and hematogenous invasion. The recurrence rate and survival is depended to this ability of the tumor (5-7). In our case, we did not detect any perineural and perivascular invasion; in addition, there was no distant metastasis.

Treatment modalities for adenoid cystic carcinoma are surgical resection and radiotherapy. Because of less lymphatic metastasis, neck dissection is not necessary. Surgical excision with tumor-free surgical margin is necessary for local control of the disease. Adjuvant radiotherapy is necessary for further treatment. Although the recommended dose has not been determined, 40-70 Gy was common in previous reports of head and neck ACC cases. Horiuchi stated that at least 50 Gy should be given to eradicate the disease if residual lesion was thought to be apparent. Another treatment option for small accessible tumors of the nasal septum is interstitial brachytherapy at a dose of 60-65 Gy or with definitive external beam treatment at a dose of 50 Gy, followed by an interstitial brachytherapy boost of 15-20 Gy (6-9). In our case, we first excised the tumor with clear surgical margins and then the oncology department performed the radiation therapy with a dose of 56-66 Gy. On follow-up, the patient is asymptomatic and healthy after 14 months.

CONCLUSION

Adenoid cystic carcinoma of the nasal septum is a rare tumor in the head-neck region. We should consider adenoid cystic carcinoma in the differential diagnosis of patients with a nasal septal polypoid mass.

Informed Consent: Written informed consent was obtained from the patients who participated in this study.

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