

ADENOID CYSTIC CARCINOMA MISINTERPRETED AS ANTROCHOANAL POLYP: A RARE PRESENTATION

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ABSTRACT

Adenoid cystic Carcroma (ACC) is an uncommon malignant tumour accounting for <1% of all oral and maxillofacial tumors. However, in the sinonasal tract, ACC is the most common salivary gland tumor. The sinonasal ACC is asymptomatic initially or causes non-specific symptoms that are similar to those caused by inflammatory sinus disease and local neurological symptoms such as trigeminal neuralgia in advance stage due to perineural invasion by the tumour. We present a case of 35-year-old female who presented with complaints of nasal obstruction and headache. CT scans revealed an antrochoanal polyp without any bony involvement. The histopathological examination revealed unremarkable respiratory epithelium with underlying sheets and acini of small hyperchromatic cells with hyaline-like material in the lumina, confirming adenoid cystic carcinoma. The highlight of this case is that sinonasal polyps are not always inflammatory in origin, these can be neoplastic also.

Keywords: Sinonasal polyp; Nose; Maxillary sinus; PAS

INTRODUCTION

Adenoid cystic carcinoma (ACC) is a rare, epithelial, slowly developing, malignant tumor with ductal, myoepithelial and basal cells differentiation.^{1,2} It constitutes about 10% to 15% of all salivary gland neoplasms and about 1% of all head and neck malignant tumors.¹ The sinonasal malignancy comprises about 1–2% of all malignancies and ACC is the 3rd commonest sinonasal malignancy.³ Maxillary sinus is the most common site for sinonasal ACC (SNACC) followed by nasal cavity.³ Lateral nasal wall is the most common site in nose.² The SNACC is asymptomatic initially or causes non-specific symptoms that are similar to those caused by inflammatory sinus disease and local neurological symptoms such as trigeminal neuralgia in advance stage due to perineural invasion by the tumour.^{3,4} We present a case of SNACC presented as antrochoanal polyp causing nasal obstruction and headache.

CASE: We present a case of a 35-year-old female who presented to the Department of Oto-rhinolaryngology with complaints of right sided nasal obstruction and headache for 1 month. There was worsening of nasal blockage for the last 15 days. On nasal anterior rhinoscopy, a glistening white soft tissue mass in the middle meatus and nasal cavity with a stalk rising from right maxillary ostium was noticed. Computed tomography (CT) scans showed a soft tissue lesion arising from the maxillary antrum and extension

through the maxillary ostium into the nasal cavity between the middle turbinate and the lateral nasal wall without bone erosion. No cervical lymphadenopathy was seen. Radiological diagnosis of right benign antrochoanal polyp was given. The Functional endoscopic sinus surgery (FESS) for polypectomy was done. The tissue excised was received for histopathological examination. Multiple grey brown pieces of tissue were received for histopathological examination. The microscopic examination revealed unremarkable respiratory epithelium. Beneath the epithelium, there were sheets and acini of small hyperchromatic cells with hyaline-like material in the lumina and forming gland-like spaces. The cells had minimal amount of cytoplasm. Periodic acid Schiff (PAS) staining revealed magenta coloured hyaline material in the lumina, in the tumor area beneath respiratory epithelium (Figure 1). The final histopathological diagnosis of SNACC was given. The patient was transferred to higher centre for further management. Postoperative CT scan at the other centre revealed no regional lymphadenopathy or distant metastasis. She did not report back to our centre after uneventful post-operative radiotherapy of 1 month duration and was lost to follow up.

DISCUSSION

ACC is an uncommon malignant tumour accounting for <1% of all oral and maxillofacial tumors. However in the sinonasal tract, ACC is the most common salivary

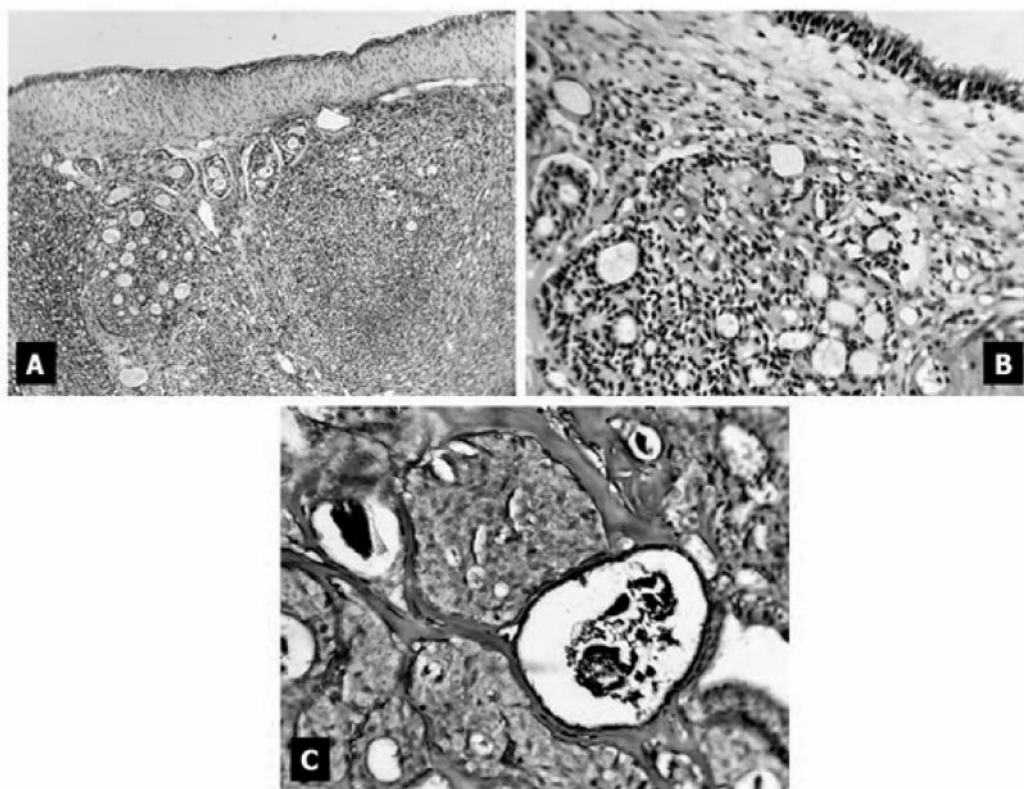


Figure 1

A. Unremarkable respiratory epithelium, beneath which are seen sheets and acini of tumor cells. (H&E, x100)

B. High power view of ciliated respiratory epithelium with sheets and acini of tumor cells beneath. (H&E, x400)

C. PAS stain showing magenta coloured hyaline-like material in the acini.

gland tumor.⁴ SNACC accounts for 10% to 25% of all head and neck ACCs.⁴ The peak incidence of SNACC is at age of 5th to 6th decade of life with female predominance.³ SNACC is asymptomatic or causes nonspecific symptoms that are similar to those caused by inflammatory sinus disease, such as nasal discharge, nasal obstruction, epistaxis, headache and cheek swelling.^{3,4} In advance stage, facial pain, facial hypesthesia and trigeminal neuralgia are the other associated symptoms due to perineural invasion by the tumour.^{3,4} ACC is continuous and progressive, slow growing malignant neoplasm with uncommon regional lymph nodes involvement but has frequent distant metastases to lungs and bones.³⁻⁵ In the present case, patient was in 4th decade of her life with non-specific symptoms of nasal obstruction and headache. The CT scans revealed antrochoanal polyp without bone erosion. No regional cervical lymphadenopathy was seen; this was similar to the observation by Ghani *et al.*² Histologically, on the basis of growth patterns ACC can be categorized into cribriform, tubular, solid and mixed subtypes.^{3,5} These patterns may decide the prognosis of ACC.³ The tumour is graded according to these patterns.⁵ The grade I is cribriform or tubular pattern, Grade II when solid pattern is less than 30% and grade III when solid pattern is greater than 30%.⁵

The advanced stage, distant metastasis and worse prognosis is related to solid growth pattern.⁵ A notable character of ACC is the tendency for perineural invasion, even with early-stage tumors.⁵ In the present case, the histology pattern was predominant cribriform pattern without perineural invasion, regional lymphadenopathy or distant metastasis. Surgery is the gold standard treatment for patients with ACC, along with adjuvant radiotherapy.^{1,4,5} ACC is considered as a radiosensitive tumor but not radiocurative tumor and radiotherapy is mainly used to eliminate the left over microscopic tumour after surgery.^{1,4} These tumours show multiple local recurrences and incidence of recurrence is not decreased by post-operative radiotherapy.^{1,4,5}

CONCLUSION: SNACC may present with non-specific symptoms and therefore sinonasal polyps should be excised and sent for histopathological examination to avoid missed diagnosis of aggressive tumors like adenoid cystic carcinoma.

REFERENCES

1. Lukšić I, Baranović S, Suton P, Gerbl D. Adenoid cystic carcinoma of the head and neck: a single-institution's analysis of 45 consecutive cases

- over a 29-year period. *Oral Surg Oral Med Oral Pathol Oral Radiol.* 2016; 122: 152-157
2. **Gill KS**, Frattali MA. An Unusual Presentation of Adenoid Cystic Carcinoma. *Case Rep Otolaryngol.* 2015; 2015: 826436
 3. **Ghani NMSNA**, Shukri NM, Mohamad A. 2 Case reports of sinonasal adenoid cystic carcinoma: Review of the literature on surgical approaches. *Egyptian Journal of Ear, Nose, Throat and Allied Sciences* 2016; 17: 173–176
 4. **Unsal AA**, Chung SY, Zhou AH, *et al.* Sinonasal adenoid cystic carcinoma: a population-based analysis of 694 cases. *Int Forum Allergy Rhinol.* 2017; 7: 312-320
 5. **Bradley PJ**. Adenoid cystic carcinoma of the head and neck: a review. *Curr Opin Otolaryngol Head Neck Surg.* 2004; 12: 127-132