Case report

A case report on Adenoid cystic carcinoma of nasal cavity: Successfully treated by endoscopic surgical excision

Abstract:

The sinonasal tract, which is made up of the nose, paranasal sinuses, and nasopharynx, seldom develops malignancies. Only a few studies have been published, despite the fact that adenoid cystic carcinoma (ACC) is the second most prevalent cancer to develop in the sinonasal tract. It primarily consists of a minor salivary gland cancer that is located in the sinonasal cavity. We are providing a case report of a male patient, age 55, who underwent successful endoscopic endonasal treatment for a left sided nasal tumour.

Keywords: Sinonasal malignancy, adenoid cystic carcinoma,minor salivary gland, endoscopy, surgical excision

Introduction

Adenoid cystic carcinoma (ACC) is a rare malignant epithelial tumor, described at first in 1859 as “cylindroma” by Bill Roth [10]. It’s common in minor salivary glands around the mouth, uncommon in parotids and rare in paranasal Sinuses and nose [11,12]. Tumors of the sinonasal tract commonly present with symptoms that are identical to those caused by inflammatory sinus disease, such as nasal obstruction, nasal discharge, epistaxis, headache, facial pain and cheek swelling [13]. We present a case report on Adenoid cystic carcinoma of nasal cavity of a 56-year-old male patient.

Case report:

A 56-year-old male patient arrived at our Apollo E.N.T. hospital complaining of a left sided nasal blockage for the past 12 months. Over time, he became aware of a pinkish tumour in the left side of the nasal cavity. He had a history of a headache on the left side and an eye discharge. He also lamented the nasal quality of his voice. He denied any addiction. No trauma, nasal haemorrhage, anosmia, or hyposmia were in his past. No prior history of cheek fullness existed. His sight was unimpaired. On anterior rhinoscopy, the inferior turbinate was enlarged and discharged mucopurulent material. The intraoral and neck examinations were normal. On diagnostic nasal endoscopy (figure 1), the septum was being pushed toward the right side by a reddish mass that filled the whole left side of the nasal cavity. A contrast-enhanced computed tomography scan had been recommended for the patient (Figures 2 and 3), which suggested a left-sided nasal mass occupying the left nasal cavity. The osteomeatal complex was being obstructed, and the septum was migrating to the right side. The ethmoid and maxillary sinus planes were preserved. A biopsy revealed that the patient had adenoid cystic cancer. The patient was scheduled for endoscopic removal of the nasal tumour. The patient had been informed about the nature of the illness

and its potential for recurrence. Following agreement, the patient underwent an endoscopic endonasal approach for the removal of a tumour in the nose. During surgery, an endoscopic medial maxillectomy was performed. The nasolacrimal duct was severed. Complete removal of the nasal mass and submission to histology. Patient after surgery moved to recovery and continued receiving intravenous antibiotics for two days. It was identified as an adenoid cystic carcinoma in the histology report. Since the tumour was precisely localised in the nasal cavity and margins were free of tumour, we didn't recommend radiotherapy in this case. Patient had no recurrence throughout his one-year follow-up and was doing well.

Discussion:

The sinonasal tract is home to a number of malignancies with salivary gland origins, such as adenocarcinoma, adenoid cystic carcinoma and mucoepidermoid carcinoma. [1] Adenoid cystic carcinoma (ACC) is the most common minor salivary gland tumour in the sinonasal tract, accounting for 10% to 25% of all ACC in the head and neck. [2-4] Nasal blockage, facial pain, epistaxis, nasal discharge, and loss of smell are among the common presenting symptoms of sinonasal ACC; same symptoms are often seen in patients with sinusitis and inflammatory nasal diseases. Delays in diagnosis and treatment may result from this. The nasal cavity and maxillary sinus are where these tumours most frequently occur. [8] Patients with nasal cavity tumours had the highest overall and disease-specific survival rates, whereas those with sphenoid tumours had the lowest rates. [5] Overall, 5-year survival rates for patients with sinonasal ACC from 50% to 86% have been reported. [8] Additionally, it has been noted that ACC of the paranasal sinuses has a lower metastatic rate than ACC of the primary salivary glands. Surgery is the mainstay of ACC treatment; adjuvant radiation therapy is only used if the tumour has positive margins or is advanced in stage. [5-7] For early incidence, thorough removal of the main tumour with enough tumor-free margin is advised. In contrast to squamous cell carcinomas of the head and neck, ACC rarely develops cervical lymph node metastases. However, it is believed that the occurrence of lymph node metastases is a poor predictor of distant metastasis and survival. [9] The limited lymphatic distribution in the sinonasal tract and surrounding structures may be the cause of the sinonasal ACC's lower nodal metastasis rate than other ACCs of the head and neck. Patient in the current case study had no prior history of cervical lymphadenopathy.

Conclusion:

Compared to other head and neck sites, particularly the minor salivary glands, paranasal sinus tumours are uncommon. Paranasal sinus adenoid cystic carcinoma is a rare condition. When the tumour is adequately localised, surgery is the preferred form of treatment. Depending on the margin situation, adjuvant radiation may or may not be necessary.

Compliance with Ethical Standards:

The procedure performed in this case report was in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Ethical Approval:

The study was published with the written consent of the patient.

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Figure 1.A Anterior rhinoscopy examination of left nasal cavity showing mass.

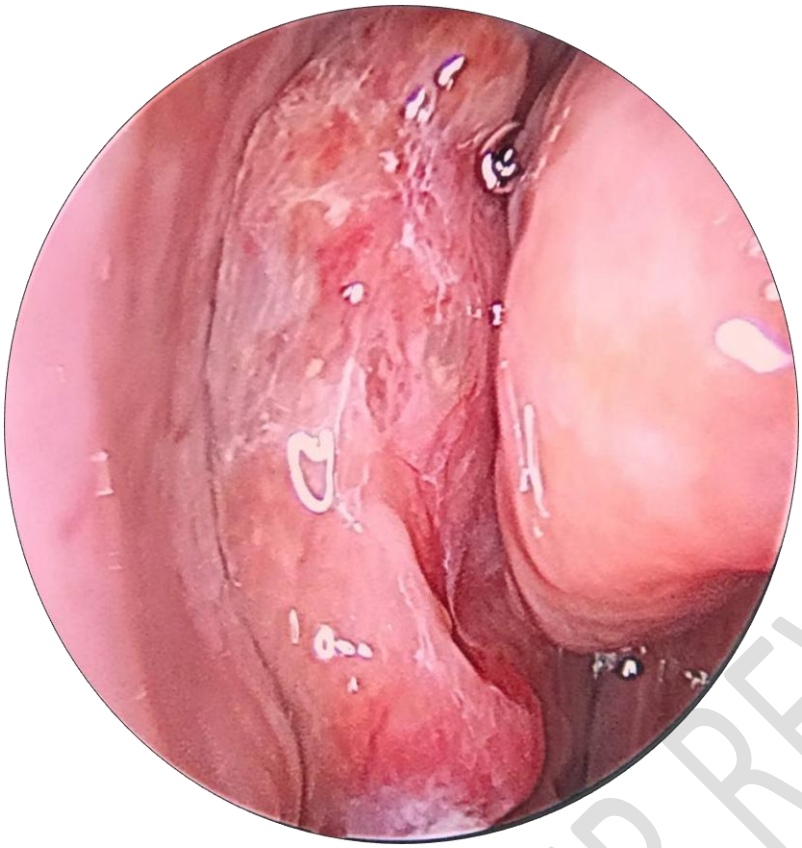

Figure 1B: Diagnostic nasal endoscopy shows nasal mass occupying the left nasal cavity.

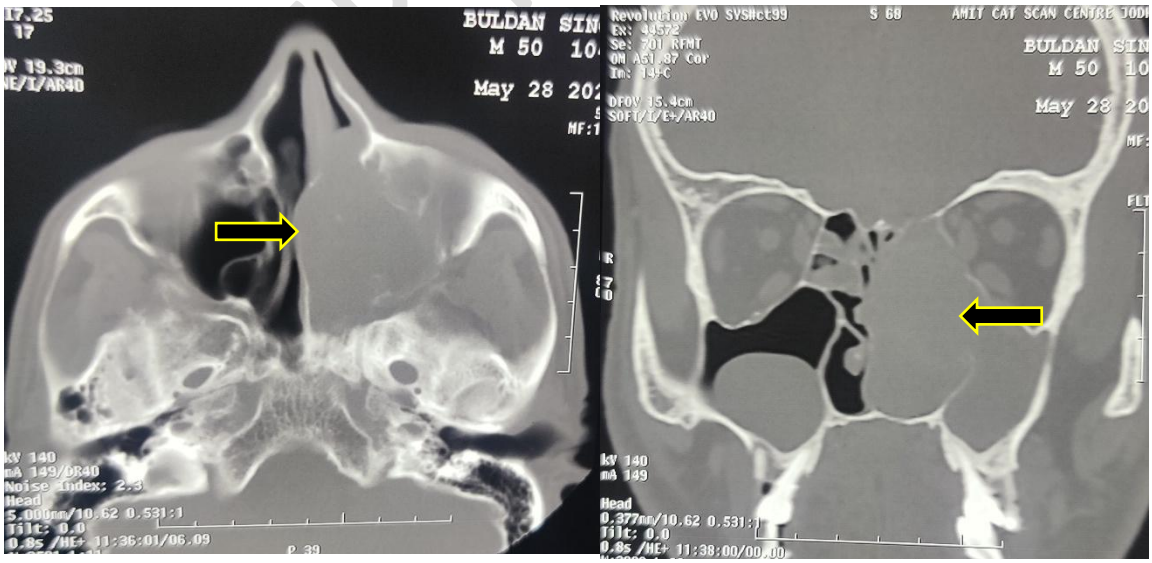

Figure 2: Axial computed tomography scan (Bone window) showing mass occupying the left nasal cavity obliterating the osteomeatal complex without any bone erosion

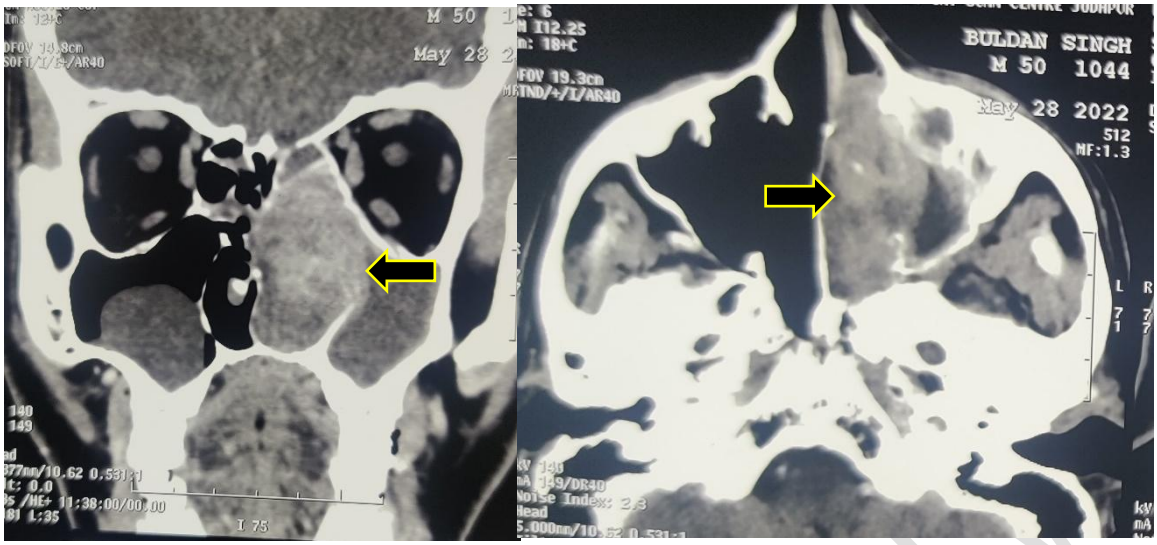

Figure 3: Axial + coronal computed tomography scan (soft tissue window) shows heterogeneously enhanced soft tissue mass occupying left side nasal cavity with retained section in left maxillary sinus.

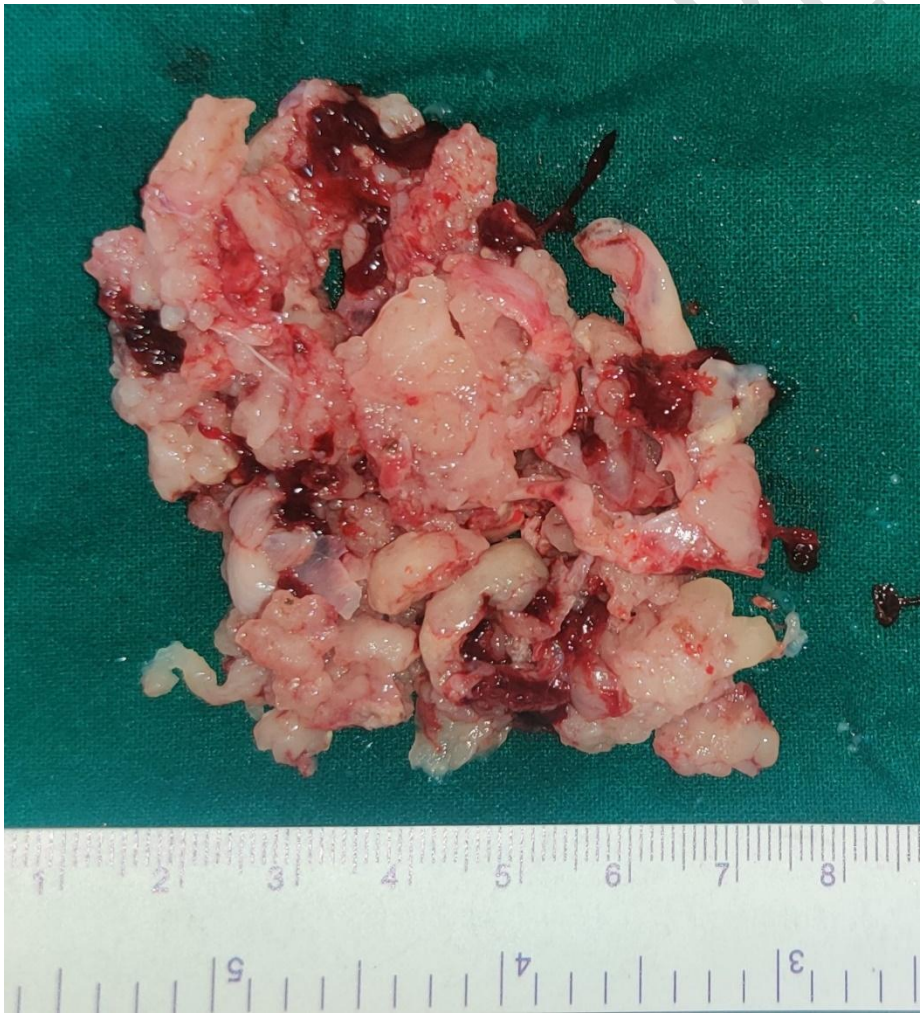

Figure 4: Main Specimen

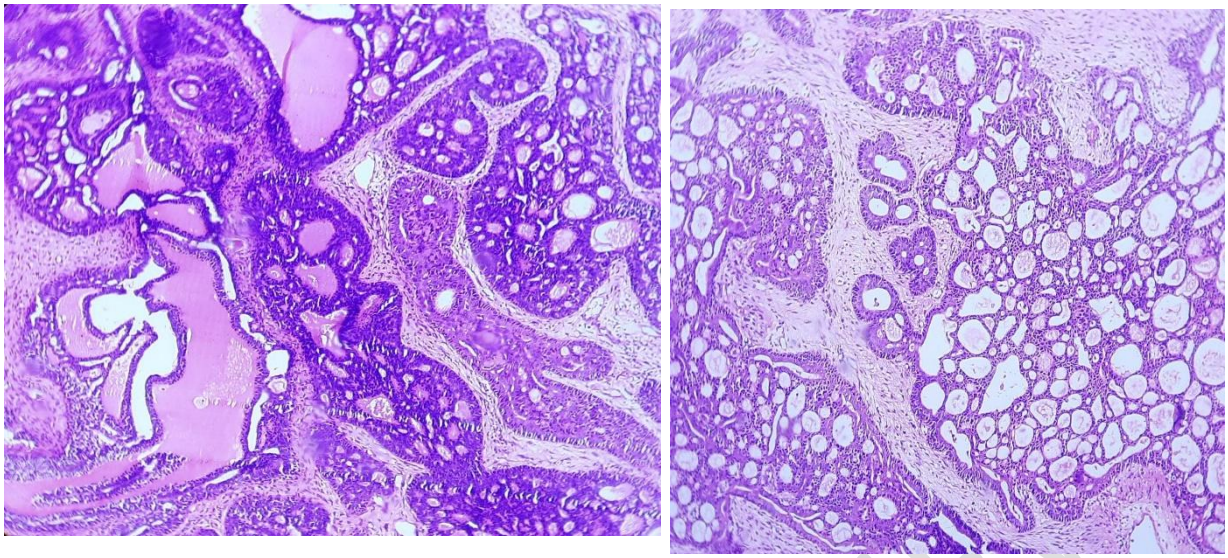

Figure 5: Histopathology slide