Case Report

Endoscopic management of huge pleomorphic adenoma of the nasal septum; a case report

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ARTICLE INFO

Keywords:
Endoscopic endonasal approach
Nasal septal pleomorphic adenoma
Rare disease

ABSTRACT

Introduction: and Importance: Pleomorphic adenoma (PA) is one of the most common benign tumors of the salivary glands. They can develop in all the salivary glands, but it most commonly occurs in the parotid gland, followed minor salivary gland. It may occurs at the hard and soft palate, lips, cheeks, gingiva, and nasal septum. PA of the nasal septum is a rare tumor.

Case presentation: 72-year-old female was diagnosed with pleomorphic adenoma of the nasal septum which was successfully treated by endoscopic endonasal surgical excision.

Clinical discussion: Pleomorphic adenoma of the nasal septum was rare tumor may mimic with hemangioma of nose. Diagnostic nasal endoscopy, Computerized tomography and Magnetic resonance imaging are diagnostic to see extent and vascularity of tumor. Endoscopic endonasal approach with microdebrider can help removal of tumor.

Conclusion: Pleomorphic adenoma of nasal septum is a rare diagnosis may mimic hemangioma. Endoscopic endonasal approach with microdebrider can be performed in highly vascular masses of the nose in selected cases.

1. Introduction

Pleomorphic adenoma commonly occurs in the major salivary gland. It constitutes 75% of all salivary gland tumors [1]. It also presents at minor salivary glands of the hard palate, soft palate. The nasal septum is the midline structure of the nose. Leiomyoma, haemangioma, osteochondroma, papilloma, melanoma, adenoid cystic carcinoma, and squamous cell carcinoma are some of the benign and malignant lesions that can develop on the nasal septum [2]. The pleomorphic adenoma of nasal septum is a rare tumor [3]. This paper presents a 72-year lady with a pleomorphic adenoma of the nasal septum which has obstructed the bilateral nasal cavity for two years which is look like hemangioma and successfully removed with endoscopic endonasal approach with microdebrider. This case report has been reported in compliant with the SCARE criteria [4].

2. Case reports

2.1. History and clinical examination

A 72-year-old female presented to the Department of Otorhinolaryngology and Head and Neck Surgery with bilateral progressively increasing nasal obstruction for two years. She complained of difficulty in sleeping for the last three months. She even complained of occasional nasal bleeding. She is known case of hypertension, ischaemic heart disease, and hypothyroidism. There was no history of weight loss or difficulty with vision. She didn’t give a history of trauma and allergy. On anterior rhinoscopy, a huge polypoid mass was seen in the right nasal cavity. The nasal septum was deviated to the left, obstructing further left-side visibility. Cervical lymph node groups were not palpable.

2.2. Investigation

Flexible endoscopy was performed, which showed a huge reddish polypoid vascular mass obstructing both the nasal cavity (Fig. 1 A). On Computerised Tomography, ill-defined heterogeneous soft tissue density...
mass in the right posterior nasal cavity extending to the nasopharynx which measures 4.8 cm × 2.6 cm × 2.6 cm. Medial and inferior turbinate were pushed laterally and the medial wall of the maxillary sinus was thinned out and the posterior part of the Nasal septum was eroded (Fig. 2A). On contrast enhancement, heterogeneous enhancement with non-enhancing areas suggestive of necrosis was seen. On MRI, isointense T1 weighted image and hyperintense T2 weighted image were seen (Fig. 2B and C).

2.3. Treatment

Endoscopic endonasal surgical excision was performed under local anesthesia and sedation. The sphenopalatine block was performed bilaterally via oral cavity with 3 ml of a solution containing an equal amount of 2% xylocaine with 1:200000 adrenaline and bupivacaine. The nasal cavity was packed with the same solution-soaked ribbon gauze for 10 min. The anterior ethmoidal nerve block was done at the axilla of the middle turbinate. The patient was kept on a paracetamol infusion. Heart rate, BP, and oxygen saturation were monitored throughout the procedure. Oxygen was given through an oral cannula at a rate of 6 L per minute. A tumor from the right nasal cavity was debrided. The site of origin was found in the posterior part of the nasal septum. Bleeding was controlled with bipolar cautery. A 5 mm area of origin of the tumor was removed (Fig. 1B). After opening the right nasal cavity, packing was performed at the posterior part to prevent blood from entering the airway. Finally, endoscopic septoplasty was done to negotiate the left nasal cavity, and the tumor from the left nasal cavity was debrided. The bilateral nasal cavity was packed with a nasal splint (merocele) and shifted to the post-op ward. After two days, she was discharged from the hospital. The histopathology report showed the varying size of tubules and cribriform pattern with some myxoid areas consistent with diagnosis of pleomorphic adenoma (Fig. 3). The mucosa of the nasal septum had healed normally. She was followed up at 1 week, 2 weeks, and monthly till 6 months after surgery. The patient improved symptomatically. Diagnostic Nasal endoscopy was performed at 2 month and 6 month which didn’t show regrowth of the tumor.

3. Discussion

Pleomorphic adenoma is the common tumor of the major salivary gland. It can also occur in the minor salivary gland at the hard and soft palate; however, it is rarely seen in the nasal cavity, larynx, pharynx, and Trachea [5]. It commonly occurs in the age group of 30–60 with predominance in females. The most common presentation is unilateral nasal obstruction followed by epistaxis. Some other accompanying symptoms include nasal swelling, epiphora, and nasal discharge [6]. In our case, the age of the patient was slightly higher although she had similar complaints.

Differential diagnoses of nasal pleomorphic adenoma include different nasal tumors. It is important to differentiate mass by radiological investigations like CT and MRI. We did a CT scan and MRI which give almost diagnostic dilemmas like lymphoma, hemangioma, fungal or papilloma. The biopsy is a definite diagnosis but we didn’t perform it as it looks like a highly vascular tumor seen by diagnostic nasal endoscopy. The tumor was not encroaching skull base and lamina papyracea, endoscopic removal of mass was planned and performed successfully. Our technique was unique as we do such cases under local anesthesia. Histopathology gives the definitive diagnosis of the nasal mass which came to be pleomorphic adenoma. On histology, the Pleomorphic adenoma consists of three major structures the tubulo-ductal, the solid area, and the myxoid area [6]. In our case, it showed tubules of varying size with cribriform patterns and some myxoid areas.

The major difference between the nasal and salivary pleomorphic adenoma is that the nasal pleomorphic adenoma consists mainly of the epithelial component rather than the stromal component. These epithelial cells are small, oval-shaped, and arranged in small acinar structures.

Nasal Pleomorphic adenoma is highly cellular because of which the tumor is highly aggressive. The chance of malignant transformation of pleomorphic adenoma is about 2–6% and the chance is most common in females [6]. Our patient had benign pleomorphic adenoma with no evidence of malignant transformation.

One of the major complications of pleomorphic adenoma is its recurrence. However, the chance of recurrence of nasal pleomorphic adenoma is less compared to salivary gland pleomorphic adenoma [7].

The classical treatment for nasal pleomorphic adenoma is wide local excision along with periosteum and involved bone. However, the approach depends on the site, size, and extension and encroachment. In our case, we removed around 5mm margin of septal mucosa around the tumor.

Transnasal endoscopic approach is still a challenging operation to remove highly vascular tumor. Instrument like microdebrider and bipolar cautery is needed to clear the tumor and blood from the surgical field and cauterized the bleeding vessel. Computer aided Simulation endoscopic training should be added at residency programme so that resident are familiar with endoscopic control of bleeding and perform transnasal endoscopic surgery which avoid external facial ugly scar and reduce hospital stay of the patients.

4. Conclusion

Pleomorphic adenoma commonly occurs in the major salivary gland. However, it can also occur in the nasal cavity. Pleomorphic adenoma of the nasal septum is a rare disease. It is difficult to differentiate between
hemangioma and fungiform papilloma on MRI study. In any situation of highly vascular nasal disease, obtaining a biopsy prior to the definite treatment plan is problematic. Endoscopic endonasal excision of the tumor is a better option if feasible compared to open approach which leads to avoid a scar on the face and prolong recovery time. we recommend that nasal pleomorphic adenoma be considered if a patient complains of nasal obstruction due to a nasal mass and has a history of occasional epistaxis. Furthermore, regular follow-up along with endoscopic examination is recommended to identify its early recurrence.

Ethical approval

Not applicable.

Source of funding

This study did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Author contributions

BS: operated the case and conceptualized the study. BS, SR, AP, SKC: involved in design, literature review, and writing, seen and approved the final manuscript.

Trail registry number

Not applicable.

Guarantor

Prof. Dr. Brihaspati Sigdel, the corresponding author, accept my role as the Guarantor of this case.

Provenance and peer review

Not commissioned, externally peer reviewed.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Declaration of competing interest

The Authors have no conflict of interest to declare.

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Fig. 2. A. Computed Tomography scan of Paranasal sinus coronal view showing Isodense mass filling posterior part of right nasal cavity. B. T1 weighted sagittal image showing isointense mass at posterior part of the nasal cavity. C. T2 weighted sagittal image showing hyperintense area at the right nasal cavity.

Fig. 3. Microscopic picture showing the varying size of tubules and cribriform pattern of the tumor.