

Surgical Removal of Inverted Papilloma: Case Report of Endoscopic Versus Open Excision

N Prepageran, FRCS, (Late K N Subramaniam, FRCS), K Gopala, FRCS

Department of ENT, University of Malaya, 50603, Kuala Lumpur

Summary

We describe two cases of nasal inverted papilloma who had different management modalities. Although both were essentially of the same pathology, one underwent endoscopic excision while the other was treated with the more popular lateral rhinotomy and medial maxillectomy. We wish to highlight the different modalities of treatment available for inverted papilloma and a review of published results.

Key Words: Inverted papilloma, Endoscopic, Open excision

Introduction

The classical lateral rhinotomy and medial maxillectomy has largely been replaced by endoscopic assisted excision which although is technically more difficult and demanding, is associated with lower morbidity and complications. Precise excision is possible with conservation of normal anatomy with endoscopic surgery and the avoidance of a scar is definitely a major point in favour of endoscopic surgery.

Case 1

Mr. K.V, a 55-years-old male executive who presented with a 6-month history of right nasal obstruction and was found to have right polyps with a marked septal deviation to the left. He underwent septoplasty and polypectomy elsewhere. Postoperatively, a histopathological

diagnosis of inverted papilloma with no evidence of malignant change was made. A CT scan was then ordered and on noticing extensive residual disease, he was referred to our department. On endoscopic examination, masses of polyploid tissue were noted in the middle meatus. CT Scan of nose and paranasal sinuses showed residual disease in the middle meatus, anterior and posterior ethmoids (Figure 1). An endoscopic excision of the residual tumour was performed under general anaesthesia. Intraoperatively, tumour was found in the anterior and posterior ethmoids and involving the medial surface of the middle turbinate, extending into maxillary sinus. Endoscopically, the residual tumour was removed piece meal from the anterior and posterior ethmoids. Post operative care was uneventful. He was discharged and reviewed regularly with no evidence of recurrence. Post operative clinical nasal endoscopy at 3 months revealed a large,

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Corresponding Author: N Prepageran, Department of ENT, University of Malaya, 50603, Kuala Lumpur

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well epithelised maxillary antral cavity and ethmoid sinus with no evidence of recurrence.

Case 2

Mr LST was referred to our centre on in June 1997 by a private practitioner for recurrent intranasal inverted papiloma. He had undergone two previous intranasal polypectomies. On examination, papilomatous growth was noted in the right lateral wall of the nose, arising from the middle meatus and extending into the inferior meatus. Biopsy was performed in the outpatient clinic and was reported as inverted papiloma. CT scan showed involvement of the lateral wall of right nasal cavity with extension into the right maxillary antrum and ethmoid sinuses. A lateral rhinotomy and medial maxilectomy was performed in May 1998 under general anaesthesia. Intraoperatively, multiple polypoidal mass was noted involving the middle meatus and extending into superior and inferior meatus with mucopurulent discharge. The maxillary antrum was filled with oedematous polyps, extending into the anterior and posterior ethmoids. The post operative care was uneventful. Nasal endoscopy performed at 3 months follow up revealed no evidence of recurrence.

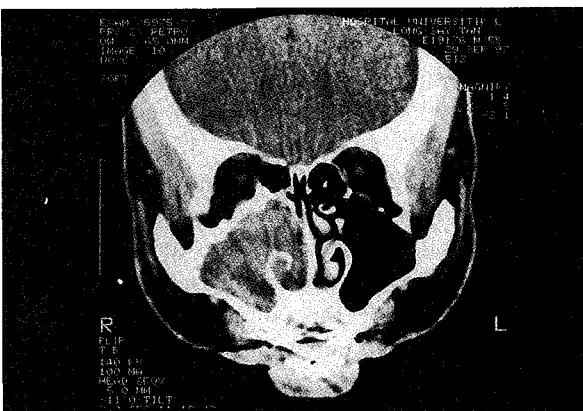


Fig. 1: A coronal CT scan showing unilateral opacified antrum with involvement of the nasal fossa.

Discussion

Inverted papiloma forms about 5% of all nasal tumors. Ringertz (1983) originally described transitional cell papilloma and its potential for malignancy was discussed by Osborn (1970) and Hyams (1971). The etiology still remains unknown. Plinkert PK(1997) suggested that inverted papiloma is derived from a cytokeratin 5-immunoreactive cell of the basal layer of the mucosa based on findings of immunohistochemical examinations¹. They are usually found unilaterally with a male predominance of 5: 1. They may be present at any age, but most commonly found in the fifth decade. It rises almost exclusively from the lateral wall of the nose and occasionally from the nasal septum¹. It also tends to extend into the ethmoid and maxillary sinus. The patient usually presents with nasal obstruction, occasional epistaxis and rhinitis.

There can also be obstruction to the sinus ostia ; precipitating sinus infection. The tumor is soft and friable and may become detached or bleed especially with nose blowing. Histologically, the tumor surface consist of alternating layers of squamous and columnar epithelium, hence the name, transitional papiloma¹. The tumor consists of finger like projection, infiltrating into the stroma, with deep invaginations of epithelium and microcyst formation. However, the basal epithelium remains intact. Macroscopically there is usually a papilliferous exophytic mass. Diagnosis is confirmed by biopsy. Probably, less than 8% undergo malignant change, although there may be a synchronous sinonasal carcinoma of up to 10%, thus underlying the need for careful post operative endoscopic follow up. The treatment of inverted papiloma is adequate local excision.

Local intranasal removal tends to be followed by recurrence, probably due to the difficulty in seeing the extent of the involved mucosa due to

the complex anatomy and relationship of the lateral wall of the nose. Traditionally, inverted papilloma was excised through lateral rhinotomy. In-patients where repeated or rapid recurrence occurs, removal by a medial maxillectomy is indicated and this can be achieved by mid facial degloving approach with excellent cosmetic results.

Following surgery, adequate follow up is vital, as the tumor tends to recur. Thus, any recurrence is removed immediately and examined histologically for any evidence of malignancies. Through an intranasal approach and limited excision, the recurrence rate is almost 60% as compared to a lateral rhinotomy approach and wide excision, where the recurrence rate is much lower around 17%.

Raveh E (1996) reported a review of 56 patients with inverted papilloma over a period of 32 years and compared the different modalities of surgical approach: limited intranasal excision in 5 patients with an 80% recurrence rate, a Caldwell Luc approach in 21 patients with a 48% recurrence rate and lateral rhinotomy with medial maxillectomy in 18 patients with only 22% failure rate; a selected group of 9 patients underwent an endoscopic approach with a 22% recurrence rate ².

Recently, advances in endoscopic sinus surgery have made it possible for endoscopic excision of tumors with very good results. Sham CL (1998) reviewed the results of 22 patients with inverted papilloma resected by endoscopic approach with a post operative follow up of 33 to 96 months in Hong Kong. Following endoscopic resection, 6 patients had residual disease and required further open surgery. No complication was noted following surgery.

He noted that the advantages of endoscopic surgery include precise determination of tumour extent, preservation of normal mucosa and bony structures and avoidance of external scars ³. Xu G (1996) reported similar results from China, where 14 patients with inverted papilloma were operated by endoscopic approach and only one case of recurrence was noted. However, a high level of technical skill and competence is required before a successful excision can be carried out. Endoscopic excision has its limitations: involvement of frontal sinus and anterolateral aspect of maxillary sinus is not easily approached endoscopically and would need open excision.

In conclusion, endoscopic excision should be considered in treatment of inverted papilloma in our setting.

References

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