Management of schneiderian papilloma with midfacial degloving

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Abstrak

Kata kunci: schneiderian papilloma; midfacial degloving

Abstract
Schneiderian Papilloma is a rare and benign sinonasal tumor. The symptoms include unilateral nasal obstruction, epistaxis, nasal drainage, bilateral nasal obstruction, nasal mass and sinusitis. The exact location, extension and the histological evaluation of the tumour is very important in order to decide the surgical modality. Here, we are reporting a case of Schneiderian Papilloma of the left nasal cavity and left maxillary sinus in a 62 years old man managed with midfacial degloving.

Keywords: schneiderian papilloma; midfacial degloving

INTRODUCTION
Schneiderian papilloma is a rare and benign sinonasal tumor. The incidence of schneiderian papilloma has been documented as approximately 0.6 cases per 100,000 people per year. It comprises 0.5 to 4% of all primary nasal tumors, usually affecting patients in the fifth and sixth decade of life. It is three times more common in males than in females. In 1854, Ward first documented the occurrence of schneiderian papilloma in the sinonasal cavity. However, in 1935, Reingertz histologically described the nature of the tumor and noted its classic inverted nature in underlying connective tissue stroma.

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Here, we are reporting a case of Schneiderian Papilloma of the left nasal cavity and left maxillary sinus managed with midfacial degloving.

CASE REPORT
A 62 year-old male patient was attended to ENT Department Adam Malik General Hospital on September 4th, 2010 complaining of left nasal obstruction for three months and mu copurulent rhinorrhea. Anterior rhinoscopy revealed a pinkish mass in the left nasal cavity.

Nasoendoscopy examination revealed mass protruding from the left middle meatal to the left nasal cavity (Figure 1). The paranasal sinus X-ray showed bilateral maxillary sinusitis and thickening of maxillary mucosa.

Figure 1. Nasoendoscopy examination revealed mass protruding from the left middle meatal to the left nasal cavity
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Coronal noncontrast CT scan of the paranasal sinuses showing lesion in the left maxillary sinus extending to the left nasal cavity and widening maxillary ostium on left side. There were no signs of bone destructions (Figure 2). Incisional biopsy was done, which was suggestive of Schneiderian papilloma, with no association of malignancy.

The patient suffered hypertension, so we consulted him to the Internal Medicine Department. After his blood pressure was stabilized, we scheduled the patient to midfacial degloving on February 8th, 2011 to remove the mass under general anesthesia (Figure 3). He was put on antibiotics and analgesics for 5 days. His post operative histopathological report was also schneiderian papilloma.

DISCUSSION

There are many different names which are used to describe various papillomas. These include Schneiderian papilloma, inverted papilloma, fungiform papilloma, cylindrical papilloma, inverted Schneiderian papilloma, epithelial papilloma, soft papilloma, transitional cell papilloma, polyp with inverting metaplasia and benign transitional cell growth.

The main theory on Schneiderian papilloma etiology proposes that Schneider membrane, which forms the nasosinus tract mucosa, originates from the ectodermal invasion of the olfactory placoid. This membrane would then suffer a number of structural changes, causing a greater predisposition for neoplastic differentiation.

Schneiderian papilloma most commonly arises from the lateral nasal wall near the turbinate. Cases are usually unilateral with no side predilection although bilateral lesions do occur in 4.9% of patients.

The lesion often has a polyp-like appearance when inspected by nasal endoscopy. Histologically, the epithelium rests on an intact basement membrane, with characteristic invaginations into the underlying connective tissue stroma. Diagnosis is established via biopsy.

The clinical manifestations of Schneiderian papilloma are as nonspecific as those of other sinonasal tumors. Common symptoms include unilateral nasal obstruction, epistaxis, nasal drainage, bilateral nasal obstruction, nasal mass and sinusitis.

Our patient only complained about left nasal obstruction and mucopurulent rhinorrhea, no history of epistaxis.

The exact cause of Schneiderian papilloma is uncertain. The role of allergy has been discounted secondary to the lack of allergic history in many patient with Schneiderian papilloma.

Other possible etiologies are: inflammatory origin and/or chronic infectious rhinosinusitis, exposure to toxic substances, allergic processes, Epstein-barr virus and human papilloma.
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virus (HPV) of subtypes 6 and 11. HPV is associated with the disease pathogenesis, happening in 14% of all Schneiderian Papilloma.1,2

Chronic rhinosinusitis has also been proposed as a possible etiologic factor due to a temporal relationship and the increased incidence of sinusitis on the opposite side from the lesion; however, it has also been proposed that chronic sinusitis develops in these patients secondary to the obstructive nature of the neoplasm itself.2 Chronic rhinosinusitis can be the etiologic factor of the Schneiderian papilloma for our patient.

Radiographic studies are commonly used to evaluate Schneiderian papilloma with CT and MRI being the most common. Tumors involving the maxillary sinus may lead to widening of the infundibulum on CT, making the uncinate process difficult to discern. Although the term "bony erosion" is often used to describe CT changes seen with Schneiderian papilloma, "bony remodelling" may be a better term to describe the changes that occur secondary to the constant pressure and mass effect on surrounding bony structures from Schneiderian Papilloma.9

Treatment for Schneiderian papilloma consists of total excision of the tumor. The traditional approach has been a lateral rhinotomy or midfacial degloving approach, to a medial maxillectomy for total tumor removal. Open approaches procedures allowed for increased tumor visualization and more complete resections.1,2,5,8

To ensure a more complete resection, a microscope can be used to improve visualization of the mucosa. Recent experience with endoscopic sinus surgery has initiated a new concept. In carefully selected cases, inverting papilloma may be removed endoscopically.1,2,5,8

Recurrence rates for inverting papillomas treated endoscopically vary between 0 to 27%. Lee et al. examined recurrence rates in 43 patients undergoing endoscopic medial maxillectomy for inverting papilloma with a follow-up average of 2 years. The recurrence rate in this study was 9.3%, and all recurrences were treated successfully with an additional endoscopic approach.9

In the review written by Weissler and colleagues, a recurrence rate of 71% was noted for closed intranasal procedures compared to 29% for open procedures (lateral rhinotomy and midfacial degloving).2

Patients also have a 5-15% risk of developing squamous cell carcinoma within the Schneiderian papilloma. An important feature in the management of patients with these neoplasms is that all of the excised specimens should be closely examined with multiple sections to rule out invasive squamous cell carcinoma.5

The goal of surgery is complete removal (en bloc or piecemeal) with negative margins. We believed that en bloc resection of benign sinonasal lesions is not required as long as negative margins are obtained.9 Once the tumor has been removed, many advocate that the adjacent mucosa and underlying bone be drilled away with a diamond burr or the bone itself resected when needed.2

The special growth characteristics of this tumor require adequate exposure to allow for complete removal, so for this patient we perform midfacial degloving in order to remove the mass from the maxillary sinus and nasal cavity. This is a versatile approach that can provide access to a wide variety of areas, including the nasal cavity, nasopharynx, maxillary antrum, orbital floor, and zygoma.

The primary advantages of the procedure are its lack of extensive facial incisions and good access provided for inferiorly based tumors. Additionally, there is a fairly low complication rate associated with the procedure. Disadvantages include difficulty with access to superiorly based tumors.7,10

Krouse has proposed a staging system for Schneiderian papilloma primarily based on disease extent, location, and presence of malignancy (Table 1).

T1 tumors may be resected endoscopically without much bone removal, while T2 lesions may require more bony excision. T3 tumors may be resected endoscopically, if adequate visualization can be achieved; an open medial maxillectomy may be required. T4 tumors usually necessitate an open approach for maximal visualization and complete resection.2

Table 1. Krouse staging system for Schneiderian papilloma

| T1: Tumor isolated to one area of the nasal cavity without extension into the paranasal sinuses. |
| T2: Tumor involves the medial wall of the maxillary sinus, ethmoid sinus, and/or the ostiomeatal complex. |
| T3: Tumor involves the superior, inferior, posterior, anterior, or lateral walls of the maxillary sinus, frontal sinus, or sphenoid sinus. |
| T4: Tumor with extrasinosonal extension or malignant tumor. |

CONCLUSION

We have reported a case of Schneiderian papilloma of the left nasal cavity and left maxillary sinus in 62 year old male managed with midfacial degloving.

REFERENCES

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