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Case Report

Oncocytic Schneiderian Papilloma

Oncocytic Schneiderian papilloma, fungiform papilloma, and inverted papilloma are 3 morphologically separate tumors arising from the Schneiderian membrane. Oncocytic Schneiderian papillomas comprise about 3~5% of this entity. Old-aged group predominates. No sex predilection is noted. Multi-layered eosinophilic epithelium characterizes this kind of tumor. Exophytic and inverted growth pattern is found microscopically. It is often confused with sinonasal adenocarcinomas which contain only single-layered epithelium. Clinically, its behavior parallels inverted papillomas due to local recurrence and coexistence of malignancy. We reported a case of oncocytic Schneiderian papilloma arising from the anterior ethmoid sinus and extending to maxillary sinus antrum. Although destruction of the lamina papyracea was noted preoperatively, no malignancy was found microscopically. We adopted endoscopic approach and removed the tumor thoroughly. External approach was necessary if tumor extent was not feasible to endoscopic approach. The etiology of oncocytic Schneiderian papillomas remains unknown. However, it should be considered in the differential diagnosis of unilateral nasal polypoid lesions clinically.

Fungiform papilloma, inverted papilloma and oncocytic Schneiderian papilloma are 3 morphologically seperate lesions arising from the Schneiderian membrane. Oncocytic Schneiderian papilloma, comprising approximately 3-5% of Schneiderian papillomas, occurs mostly in patients over 50 years of age.[1]

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CASE REPORT

A 75-year-old male presented with a 4-month history of progressive left nasal obstruction. Occasional epistaxis was also told. Physical examination disclosed a fleshy, polypoid mass extending to the left nostril (Fig. 1A). The right nasal cavity was free of tumor growth. The remainder of head and neck appeared normal. Biopsy was performed. Computed tomography of sinus confirmed soft tissue mass in left nasal cavity and opacification of left maxillary and anterior ethmoid sinuses. However, bony destruction was noted in left lamina papyracea with intact orbital content (Fig. 1B). Since the tumor was limited to the ethmoid and maxillary sinuses, an endoscopic approach was adopted.

During endoscopic sinus surgery, the polypoid mass was found to originate from left anterior ethmoid sinus. It extended and enlarged the ostium of left maxillary sinus, growing into the sinus antrum. When the tumor was retracted out, the mucosa of left maxillary sinus appeared normal. The middle turbinate, the nasal septum, posterior ethmoid sinus and the orbital content were free of tumor. However, a large defect was found in left lamina papyracea. But the orbital content was not invaded by tumor. The soft tissue mass and adjacent ante-

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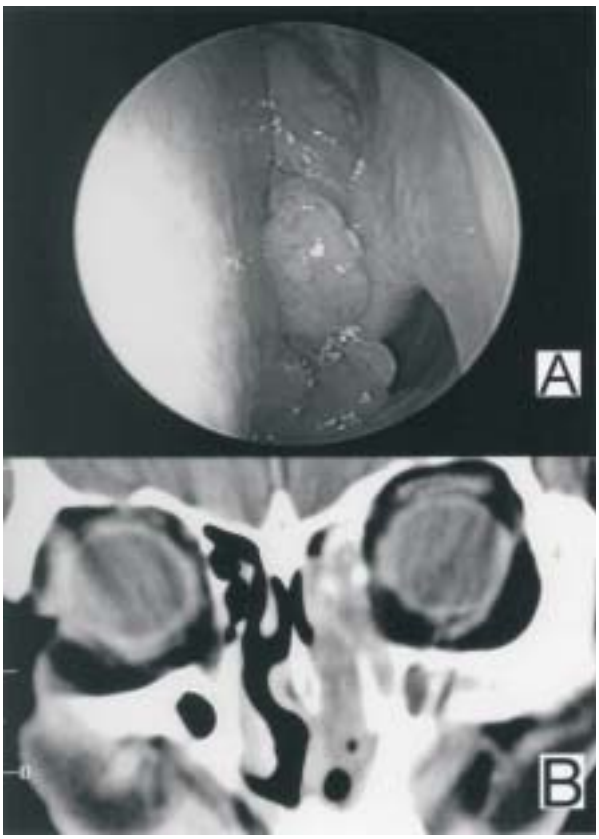

Fig. 1. (**A**) A fleshy, polypoid tumor filled the left nasal cavity. (**B**) Computed tomography showed soft tissue mass in left nasal cavity. Large part of defect in left lamina papyracea without orbital content invasion by tumor was revealed.

Fig. 2. Pseudostratified eosinophilic epithelium with some mucin inclusions was demonstrated. (H & E stain, 100x).

rior ethmoid sinus mucosa were all removed completely and submitted for processing. Tumor with multilayered, eosinophilic epithelium with some mucin inclusions after H & E stain was found microscopically (Fig. 2). The diagnosis was oncocytic Schneiderian papilloma.

DISCUSSION

Fungiform papilloma, inverted papilloma and oncocytic Schneiderian papilloma are 3 morphologically seperate lesions arising from the Schneiderian membrane. Oncocytic Schneiderian papilloma, comprising approximately 3-5% of Schneiderian papillomas, occurs mostly in patients over 50 years of age.[1] There is no sex predilection, in contrast to the male predominance of inverted and fungiform papillomas. Hyam [2] classic histologic description of the oncocytic Schneiderian papilloma emphasized the presence of both exophytic and inverted growth patterns, composed of multilayers of columnar cells with eosinophilic cytoplasm and small uniform dark nuclei. Barnes and Bedetti[3] demonstrated that the epithelial cells of oncocytic Schneiderian papilloma are true oncocytes which arise from the sinonasal respiratory epithelium- hence the term oncocytic Schneiderian papilloma was used. Pathologically, this multilayered epithelium separates the oncocytic Schneiderian papilloma from the single-layered, well-differentiated adenocarcinoma of the sinonasal tract- the entity with which the oncocytic Schneiderian papilloma has previously been confused.

Clinically, symptoms vary in duration from months to years; typically, they include unilateral nasal obstruction or epistaxis. The clinical behavior of the oncocytic Schneiderian papilloma parallels that of the inverted papilloma due to its propensity for recurrence and association with malignant disease. The synchronous discovery of carcinoma with oncocytic Shneiderian papilloma is reported in 15% of patients at the time of diagnosis. Whether such carcinomas represented a malignant transformation of the papilloma or simply a coexistence of carcinoma with papilloma at the same anatomic site is uncertain. These dysplastic cells in oncocytic Shneiderian papilloma which might represent possible site of origin for invasive carcinoma were also documented.[4] In addition, bony destruction in radiograph or found intra-opera-

tively usually indicates associated malignancy. In this case, the oncocytic Shneiderian papilloma derived from anterior ethmoid sinus mucosa with typical polypoid, fleshy appearance was observed perioperatively. But a large part of left lamina papyracea defect was found without any malignant or dysplastic cells, as observed pathologically subsequently. This is quite different from what we know about oncocytic Shneiderian papilloma associated with malignancy in the literature review. Because of the high rate of recurrence and the possibility of missing an associated carcinoma, meticulous removal of all adjacent mucosa of sinonasal passage with en-bloc resection of tumor is advocated for the management. External approach was usually used. However, with the advance of sinonasal endoscopic technology and surgical techniques, the endoscopic management of these lesions in quite lots of situations is now feasible.[5] As in this case, the tumor was limited to the anterior ethmoid sinus; complete resection could be achieved via an endoscopic surgery.

The cause of the oncocytic and the other Schneiderian papillomas remains unknown. There is no convincing association with allergy, chronic infection, smoking or other environmental noxious agents. The oncocytic Schneiderian papilloma should be considered in the work-up of all unilateral nasal polypoid lesions.

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