**Endoscopic endonasal approach for the maxillary sinus inverted papilloma**

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**ABSTRACT**

**INTRODUCTION**

Total removal is required in the surgical treatment of sinonasal inverted papilloma (IP). The association with squamous cell carcinoma is reported although IP is a benign tumor. The lateral wall of the nasal fossa and the maxillary sinus are the most frequent sites of origin for IP. However, in case of IP originating from the posterior-anterior wall of the maxillary sinus, endoscopic endonasal sinus surgery (ESS) approach is considered difficult to totally remove IP in spite of the recent developments.

Transnasal endoscopic medial maxillectomy (TEMM)¹ has been employed in these intractable cases, but TEMM still seems invasive because the nasolacrimal duct and the inferior turbinate are sacrificed. This study demonstrated our surgical managements of IP originating from the maxillary sinus. Trans-lacrimal bone approach (TLA) as the alternative to TEMM was advocated, and the surgical procedure and the outcome are demonstrated.

**PATIENTS AND METHODS**

Between 1998 and 2010, 21 patients with maxillary sinus IP were operated on at our institutes. The patients consisted of 16 men and 5 women, and the age ranged from 25 to 81 years old. Krouse’s stage classification of the 21 patients was distributed as follows, II: 16; III: 16; IV: 1. ESS procedure including TLA was completed in all 21 patients. Trans-lacrimal bone approach was added to the conventional middle meatal antrostomy in 4 patients classified as stage III. In these patients, IP had originated from the anterior-lateral wall of the maxillary sinus. The new approach accompanied by submucous inferior turbinate bone resection could totally remove IP, preserving the nasolacrimal duct and the turbinate mucosa.

**DISCUSSION**

In the surgical treatment of IP, extranasal methods such as the lateral rhinotomy or Caldwell-Luc procedure have been being replaced with ESS for the last 2 decades. However, total removal of IP originating from the posterior-anterior wall of the maxillary sinus is considered difficult because of the limitation of the visualization and surgical manipulations. IP has to be totally removed because of its ability to recur after removal. Its association with squamous cell carcinoma is reported. Therefore, transnasal endoscopic medial maxillectomy (TEMM) has recently been employed in these intractable cases.

Our new procedure is less invasive than TEMM because the nasolacrimal duct and the inferior turbinate can be preserved. The procedure consists of conventional submucous removal of the inferior turbinate bone and is not complicated.

**CONCLUSIONS**

ESS is a successful technique even in patients in which IP originates from the deep maxillary sinus. Our new approach is less invasive and can be alternative to TEMM although the number of patients and the follow-up period were limited in this study.

**REFERENCES**

