CASE REPORT

Inverted papilloma of the palate with malignant transformation

Monireh Halimi, Amirala Aghbali[1], Parya Emamverdizadeh[1], Koroush Taheri Talesh[2]

Department of Pathology, Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz, [1]Department of Oral and Maxillofacial Pathology, Faculty of Dentistry, Tabriz University of Medical Sciences, Tabriz, [2]Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Tabriz University of Medical Sciences, Tabriz, Iran

Address for correspondence:
Assistant Professor Amirala Aghbali, Department of Oral and Maxillofacial Pathology, Faculty of Dentistry, Tabriz University of Medical Sciences, Tabriz, Iran. E-mail: pathologist1357@yahoo.com

ABSTRACT

The inverted papilloma is a unilateral sinonasal benign tumor which is characterized by aggressive local invasion, high recurrence rate, and transformation into malignancy. The etiology of inverted papilloma is still unknown. Possible causes include allergy, chronic sinusitis, occupational exposure to dusts and aerosols, tobacco, and viral infections. Treatment is complete surgical excision and close postoperative follow-up is necessary. Here we report a case of inverted papilloma arising from the hard palate with malignant transformation in a 41-year-old female. Clinical and histological features and treatment are discussed with the review of literature.

***Key words*:** Inverted papilloma, malignant transformation, palate

INTRODUCTION

Inverted papilloma is a true epithelial neoplasm characterized by hyperplastic epithelium inverting into the underlying connective tissue.[1] The first description of this entity was made by Ward in1854.[2] This lesion originates from the lateral nasal cavity wall or a paranasal sinus, usually the antrum and appears as a soft, pink or brown, polypoid or nodular growth.[3] The etiology of inverted papilloma is still unknown. Possible causes include allergy, chronic sinusitis, occupational exposure to dusts and aerosols, tobacco, and viral infections.[2,4] A strong male predilection is noted with greater prevalence in Caucasians.[3,5] The characteristic features of inverted papilloma are the presence of associated nasal polyps, its tendency to recur, destructive potential, and malignant transformation.[6] Recurrences after conservative surgical excision have occurred in 75% of cases and transformation to malignancy, usually SCC, in 3–24% of cases.[3] As a result, close postoperative follow-up is necessary for early detection of recurrences and malignant transformations.

CASE REPORT

A 41-year-old woman presented to the Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Tabriz University of Medical Sciences, Tabriz, Iran, with a chief complaint of a nodule on the hard palate. The patient had a history of diabetes mellitus and clinical intraoral examination revealed a nodule measuring 0.5 × 0.7 cm with soft consistency. On radiographic studies no changes were seen. Excisional biopsy was performed and histological findings showed multiple islands of epithelium extending into the underlying connective tissue, suggestive of inverted papilloma with mild dysplasia. Recurrence occurred 3 months later. The patient returned 5 months later with a rapidly growing lobulated mass on the hard palate and maxillary alveolar ridge [Figure 1].

Surface ulceration was evident in some parts. Computed tomography (CT) scan of this massive lesion did not show sinus involvement and bone lysis [Figure 2]. Incisional biopsy was performed and severe hemorrhage was encountered during surgical manipulation. Palatal biopsy showed epithelial proliferation with multiple inverting islands of epithelium extending into the underlying connective tissue. Invading lesion cells showed abundant eosinophilic cytoplasm with large hyperchromatic nuclei. Varying degrees of cellular and nuclear pleomorphism and individual cell keratinization were seen [Figure 3]. A diagnosis of inverted papilloma with malignant transformation to squamous cell carcinoma was established. The patient was sent for chemotherapy before surgery and the treatment has not come to an end yet.

DISCUSSION

Inverted papilloma (Schneiderian papilloma) is considered the most common benign sinonasal tumor and it is characterized

Access this article online

Quick Response Code:

Website: www.jomfp.in

DOI: 10.4103/0973-029X.99093

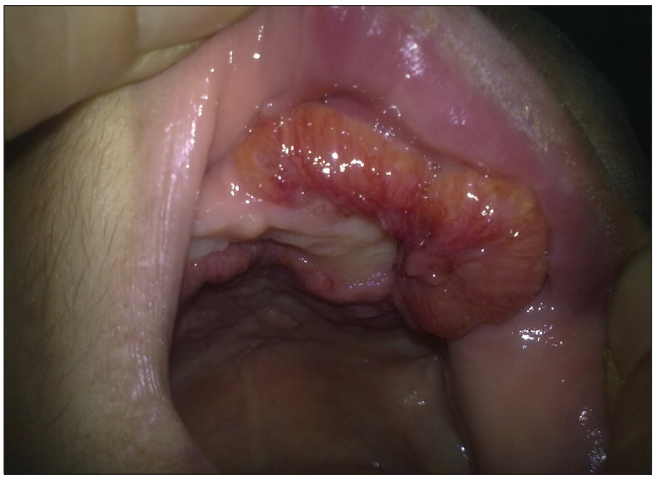

Figure 1: A lobulated mass on the hard palate and maxillary alveolar ridge

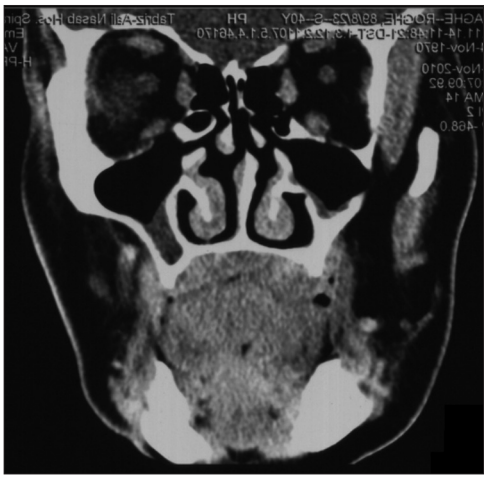

Figure 2: CT scan did not show sinus involvement and bone lysis

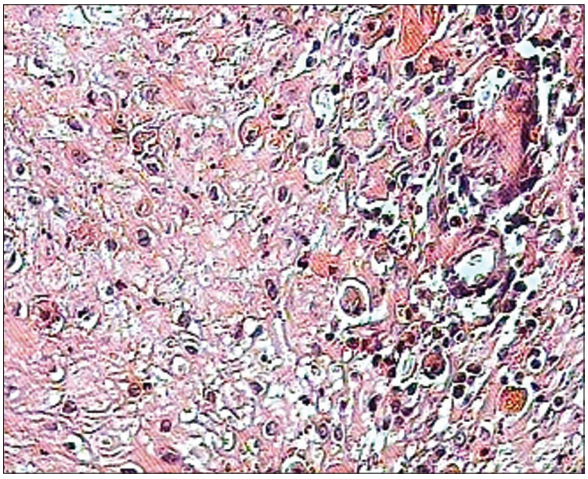

Figure 3: Varying degrees of cellular and nuclear pleomorphism and individual cell keratinization were demonstrated

by aggressive local invasion, high recurrence rate, and transformation into malignancy.[7] The name "inverted" is justified by the endophilic growth pattern of the superficial epithelium. Inverted papilloma originates from the nasal cavity lateral wall, and it secondarily affects the maxillary, ethmoidal, frontal, and sphenoidal sinuses.[8] The incidence ranges from 0.5 to 4% of all primary nasal tumors and it is prevalent in the fifth and sixth decades of life.[7] It is three times more common in males than in females.[3] The symptoms include nasal obstruction, hyposmia, frontal headache, epistaxis, and rhinorrhea (Buchwald *et al.*, 1989; 1995b).[8,9] Diagnosis is accomplished by history taking, otorhinolaryngological examination, and radiography.[10] CT scan is considered the investigation of choice (Lund and Lloyd, 1984) but the size of an Inverted Papilloma may be exaggerated by CT (Lund, 2000). With MRI the tendency to overestimate the size of IP is less than that with CT (Oikawa *et al.*, 2003).[11]

Treatment is complete surgical excision, but in cases associated with SCC the lesion is treated as a malignancy by performing more radical surgery with or without radiotherapy and chemotherapy.[2,3] Recurrences are usually noted within 2 years of surgery and smoking is associated with increased risk of recurrence.[3] Its potential for malignant transformation is quite high.[1] Patients with carcinoma in IP are older than those IP patients without carcinoma and they are predominantly males.[12] Kumar *et al.* (2003) reported two cases of nasal inverted papillomas in 60- and 73-year-old males with malignant transformation.[1] Laton *et al.* (1986) reported one case of nasal inverted papilloma with focal malignant transformation.[13] In the case we presented inverted papilloma had originated from the hard palate without sinonasal involvment, which is quite different from what we know about the origin of inverted papilloma in the literature. In this case, the tumor was limited to the palate; therefore, complete resection was achieved by an intraoral surgery.

REFERENCES

1. Jha AK, Goyal A, Sharma S, Upadhyay S, Mishra SC, Sah SP. Inverted papilloma of nose with orbital involvement and malignant transformation. Indian J Otolaryngol Head Neck Surg 2003;55:124-6.
2. Eggers G, Muhling J, Hassfeld S. Inverted papilloma of paranasal sinuses. J Craniomaxillofac Surg 2007;35:21-9.
3. Neville BW, Damm DD, Allen CM, Bouqout JE. Oral and maxillofacial pathology. 3rd ed. Philadelphia: Saunders; 2009. p. 409-20.
4. Mathai J. Isolated sphenoid sinus inverted papilloma. Knowledge Management Journal 2009;5:222-4.
5. Liu CY, Tsai TL, Hsu CY, Lin CZ. Oncocytic schneiderian papilloma. J Chin Med Assoc 2004;67:255-7.
6. Wang AL, Liu HG, Zhang Y. Increased expression of fascin associated with malignant transformation of sinonasal inverted papilloma. Chin Med J (Engl) 2007;120:375-9.
7. Lawson W, Kaufman MR, Biller HF. Treatment outcomes in the management of inverted papilloma: an analysis of 160 cases. Laryngoscope 2003;113:1548-56.
8. Buchwald C, Nielsen H, Nielsen PL, Ahlgren P, Tos M: Inverted Papilloma: A follow-up study including primarilyunacknowledged cases. Am J Otolaryngol 1989;10: 273–81,
9. Buchwald C, Franzmann MB, Tos M: Sinonasal papillomas: a

report of 82 cases in copenhagen county, including a longitudinal epidemiological study. Laryngoscope 1995b;105:72–9,
10. Salomone R, Matsuyama C, Giannotti FO, De Alvarenga ML, Martinez Neto EE, Chaves AG. Bilateral inverted papilloma: Case report and literature review. Braz J Otorhinolaryngol 2008;74:293-6.
11. Oikawa K, Furuta Y, Itoh T, Oridate N, Fukuda S. Clinical and pathological analysis of recurrent inverted papilloma. Ann Otol Rhinol Laryngol 2007; 116: 297-303.
12. Lesperance MM, Esclamado RM. Squamous cell carcinoma arising in inverted papilloma. Laryngoscope 1995;105:178-83.
13. Lawton AW, Karesh JW, Gray WC. Proptosis from maxillary sinus, inverted papilloma with malignant transformation. Arch Ophthalmol 1986;104:874-7.

How to cite this article: Halimi M, Aghbali A, Emamverdizadeh P, Talesh KT. Inverted papilloma of the palate with malignant transformation. J Oral Maxillofac Pathol 2012;16:291-3.

Source of Support: Nil. **Conflict of Interest:** None declared.