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Hypopharyngeal inverted papilloma

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Abstract
A case of inverted papilloma of the hypopharynx is described. Review of the literature failed to reveal any previous case reports of inverted papilloma of the hypopharynx.

Introduction

Inverted papilloma is a well known but uncommon lesion of the nose and paranasal sinuses, with a reported incidence of 20 per cent of all nasal and paranasal sinus tumours (Friedmann and Osborn, 1982). The combination of the lateral wall of the nose, maxillary and ethmoid sinuses account for the vast majority of inverted papillomas (Hyams, 1971). Unusual sites such as the nasolacrimal duct (Hyams, 1971) nasal septum (Kelly *et al.*, 1980), nasopharynx (Radcliffe, 1953; O'Reilly and Zuk, 1989) and oropharynx (Nosanchuk, 1974) have all been reported as sites of inverted papilloma. We report a case of inverted papilloma of the hypopharynx hitherto not reported in the literature.

Case report

A 51-year-old Caucasian lady was referred by her general practitioner with a six week history of dysphagia for solids, the sensation of a lump in the throat, and referred pain to the right ear. She attributed her symptoms to an upper respiratory tract infection, which initially had left her hoarse for a period of two weeks. She denied any stridor or weight loss. Examination revealed a 3 × 2 cm polypoidal lesion arising from the hypopharynx (Fig. 1). The lateral soft tissue X-ray (Fig. 2) of the neck clearly outlines the soft tissue projection of the lesion. The patient underwent urgent pharyngoscopy as the lesion appeared highly suspicious of malignancy. Pharyngoscopy confirmed the site of origin and the tumour was debulked. Histopathological examination of the tumour revealed it to be typical of inverted papilloma. The patient subsequently underwent complete excision and vaporization using the carbon dioxide laser. The patient has been disease free for the past six months.

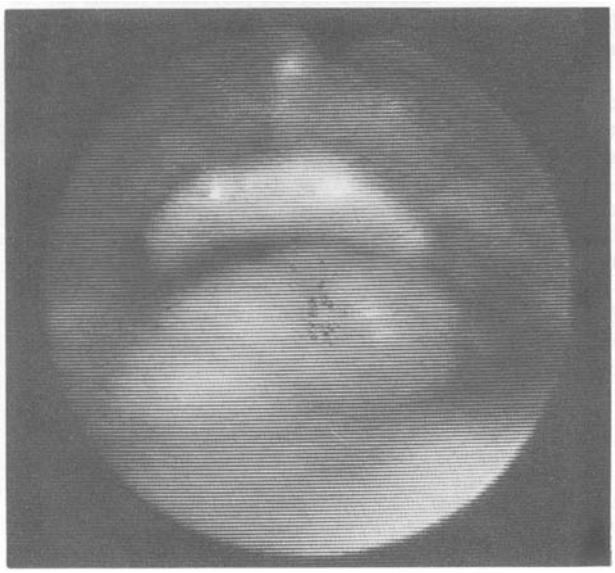


Fig. 1
View of hypopharynx through flexible endoscope:- taken from video monitor.



Fig. 2
Radiograph: Lateral projection of the neck shows clearly the soft tissue outline of the inverted papilloma in the hypophaynx.

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Pathology

Macroscopically the tumour measured 2.5 × 2.0 × 2.0 cm and appeared firm and deep red in colour. The tumour was fixed in 10 per cent formalin and embedded in paraffin.

Microscopy of the tumour showed characteristic invagination by the squamous epithelium into the underlying stroma (Figs. 3, 4). The squamous epithelium was found to be dysplastic in few localized areas, but no malignant cells were present.

Discussion

The vast majority of inverted papillomas arise from the Schneiderian membrane (Hyams, 1971; Kristensen *et al.*, 1985; Christensen and Smith, 1986). The area corresponding to the Schneiderian membrane has been described by Geschickter (1935) as the mucosa of the nasal cavity and paranasal sinuses that originates from the ectoderm surrounding the olfactory placode. The membrane extends as far back as the posterior choana. The earliest description of the inverting papilloma has been credited to Billroth in 1885, but it was Ringertz in 1938 that was the first to report the invagination of the squamous epithelium in to the tumour stroma. The vast majority of these benign tumours arise from the lateral nasal wall and adjacent maxillary and ethmoid sinuses (Hyams 1971; Vrabec, 1975; Kristensen *et al.*, 1985) and only scattered case reports of involvement of other sites have been reported. This case report is the first to implicate the hypopharynx. The precise reason why these tumours arise in sites beyond the confines of the Schneiderian membrane is unknown, but it has been postulated that it may be due to migration of the membrane to the nasopharynx (Hyams, 1971). Similarly the hypopharynx could be the site of such ectopic migration of Schneiderian membrane.

Various factors have been implicated in the aetiology of inverted papilloma, the more popular being: human papilloma viruses (Kusiak and Hudson, 1970), squamous cell metaplasia within inflammatory polyps (Judge, 1952), neoplastic metaplasia of ductal and acinous components of submucosal seromucinous glands (Oberman, 1964). Respler *et al.* (1987) have reported detection of DNA from human papilloma virus 11 (HPV) in two specimens of inverted papilloma. Hyams (1971) in a very large series failed to detect any intranuclear or cytoplasmic inclusion bodies. Alford and Winship (1963) have dismissed the inflammatory polyp theory and Nosanchuk (1974) has suggested that the ducts of the minor salivary glands are the site of the origin rather than the Bowman glands as the tumour is intimately associated with minor salivary glands.

A recurrence rate of 46 per cent has been reported after simple local excision. The recurrence is invariably at the original anatomical site (Hyams, 1971). The recurrence interval is variable and in Hyams' series (1971) the mean interval was one year. It is thus recommended that a substantial margin of healthy tissue be excised. In our case, a cuff of healthy tissue around the tumour was vaporized with the CO_2 laser. This is the first reported case of the use of the laser to treat inverted papilloma.

Conclusion

Presented in this paper is a unique case of inverted papilloma arising from the hypopharynx which was completely eradicated by employing the CO_2 laser. There are many theories to account for the tumour in sites other than the Schneiderian membrane but none appears to be wholly conclusive. Fairly

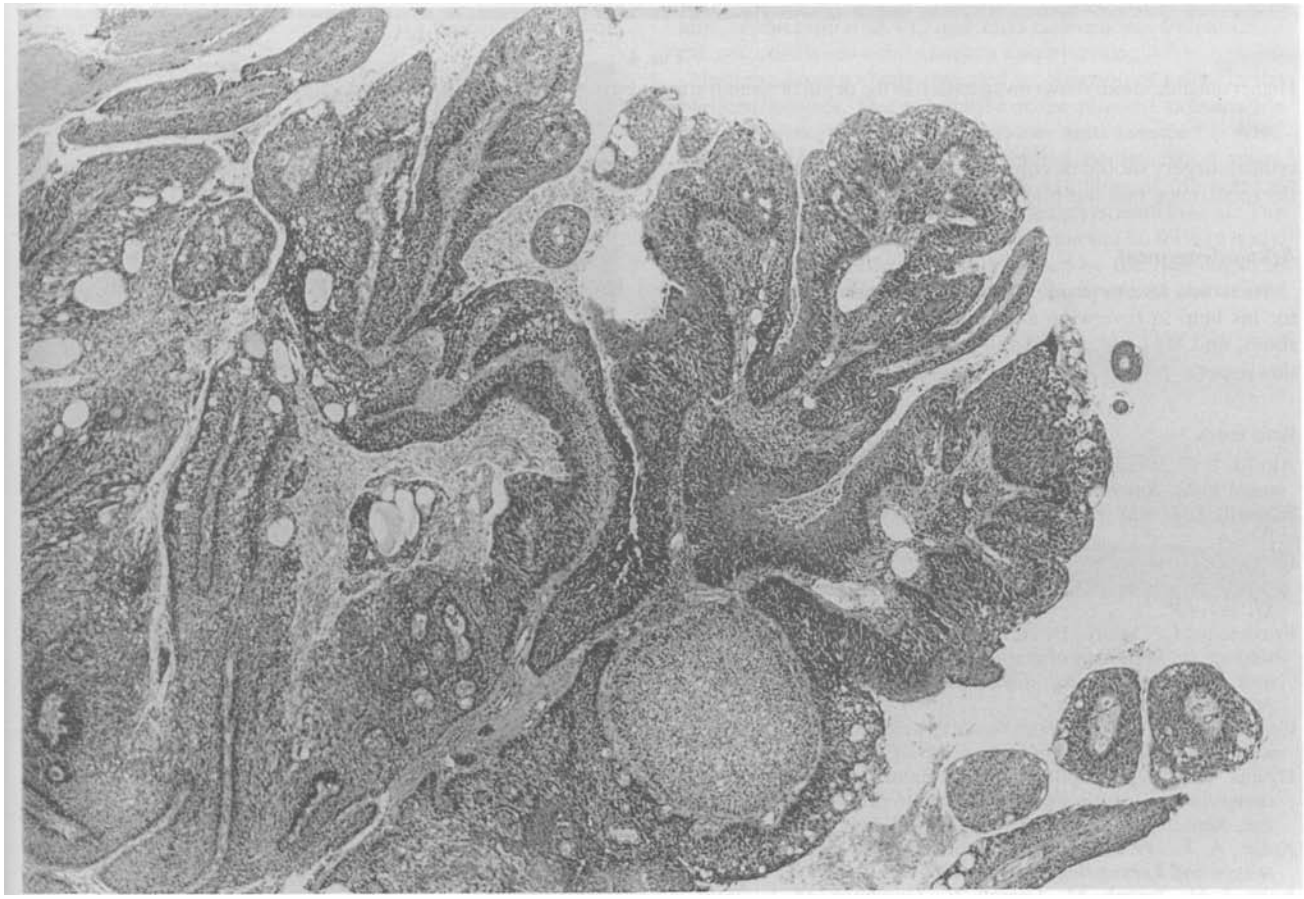


FIG. 3

Showing the papilliferous outline and with downward invagination of the stroma by squamous epithelium (H & E original magnification ×40).

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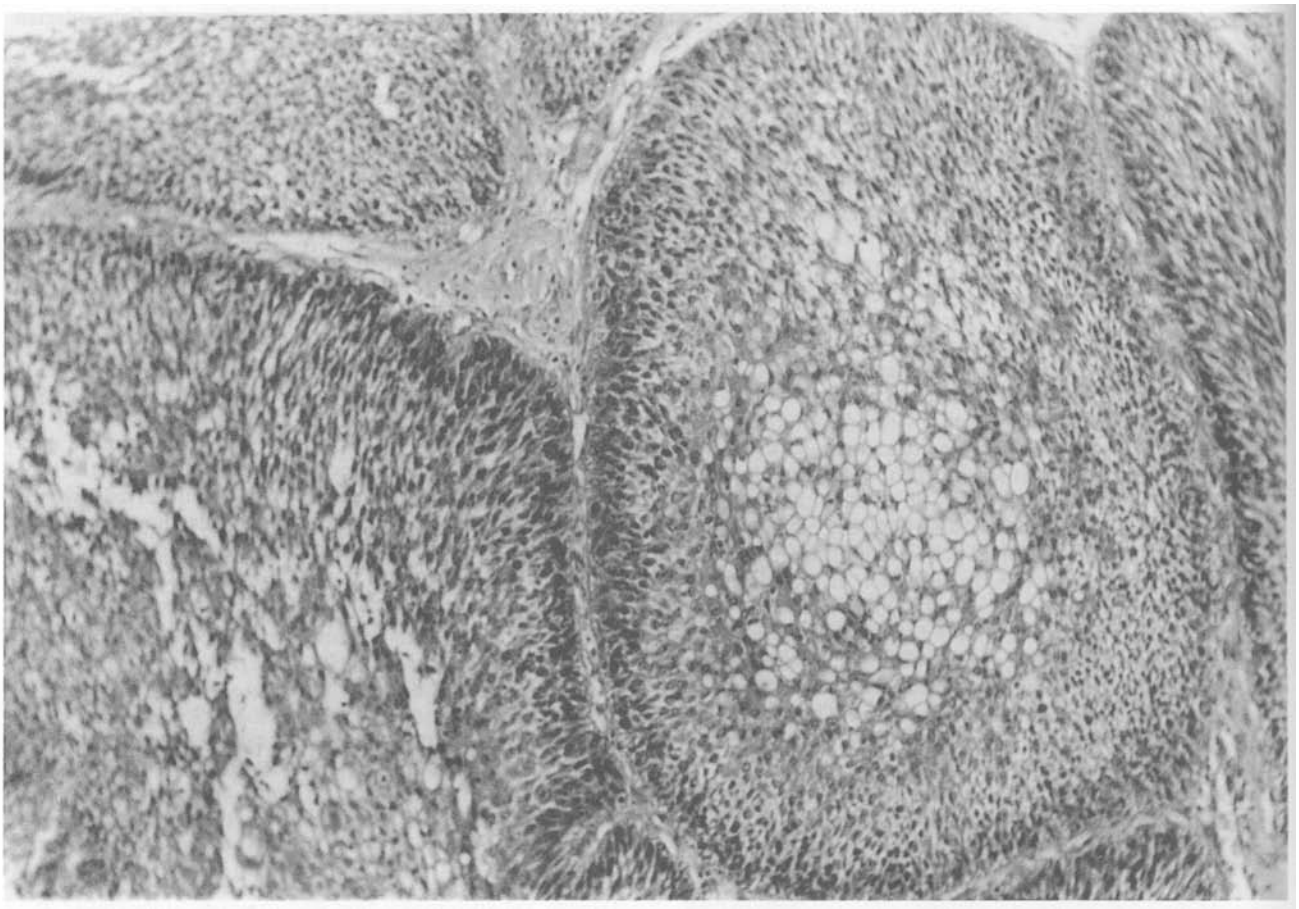


FIG. 4

Higher magnification: shows invagination of the depth of tumour stroma by proliferating squamous epithelium (H & E original magnification ×160).

radical surgery should be contemplated which not only reduces the recurrence rate but may avoid future malignancy.

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