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Acinic cell carcinoma of the nasal cavity: A case report

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INTRODUCTION

Acinic cell carcinoma is a relatively rare neoplasm of the salivary glands. These tumours account for between 2.3 and 4% of all tumours of the major salivary glands (Foote and Fraxel, 1953). Their incidence in salivary tissue other than the major salivary glands is low and dominated by origin from minor salivary glands of the oral cavity (Inoue et al., 1984). On the other hand, the first documented case of acinic cell carcinoma of the sinonasal tract was presented by Goldman and Manace (1971). Since then, only seven cases have been reported in the literature (Manace and Goldman, 1971; Spiro et al., 1973; Sakai et al., 1977; Perzin et al., 1981; Ordonez and Batsakis, 1986; Tomomatsu et al., 1986; Hanada et al., 1988) (Tabe 1).

In this report, the eighth case of acinic cell carcinoma arising in the sinonasal tract is reported.

CASE REPORT

A 60-year-old women was admitted to our department on February 6, 1986, with recurrent episodes of epistaxis for two months. Clinical examination revealed a few polypoid lesions in the medial meatus (Figure 1). The lesion biopsied bled easily and copiously. No enlarged cervical lymph nodes were identified. Biopsy of the lesion resulted in a pathological diagnosis of acinic cell carcinoma (Figure 2), and electron microscopy revealed large secretory granules in the tumour cells (Figure 3). The tumour, the common wall between the maxillary sinus and nasal cavity, and the middle and inferior turbinates were removed by the Denker procedure (Figure 4). The patient was discharged 14 days later and is still well without recurrence or development of a new lesion two years later.

Recently, we deparaffinized and rehydrated the tissue specimen, which had been fixed in 10% buffered formaldehyde solution, then stained it by means of the avidin-biotin complex immunoperoxidase technique. The tumour stained for

Table 1. Acinic cell carcinomas of the sinonasal tract.

investigators	sex	age	symptom	site	recurrence
Manace and Goldman (1971)	F[1]	49	nasal obstruction	right ethomoidal sinus and antrum	13 M (-)[4]
Spiro et al. (1973)	-[3]	-	-	nasal cavity	-
Sakai et al. (1977)	M[2]	36	epistaxis	bilateral antrums	6 M (-)
Perzin et al. (1981)	F	75	nasal obstruction and epistaxis	left nasal cavity	-
Ordonez et al. (1986)	F	60	epistaxis	right nasal cavity	-
Tomomatsu et al. (1986)	F	56	epistaxis	left antrum	16 M (-)
Hanada et al. (1988)	M	60	nasal obstruction	right nasal cavity	36 M (-)

[1] F=female; [2] M=male; [3] -=not stated; [4] 13 M (-)=no recurrence after 13 months

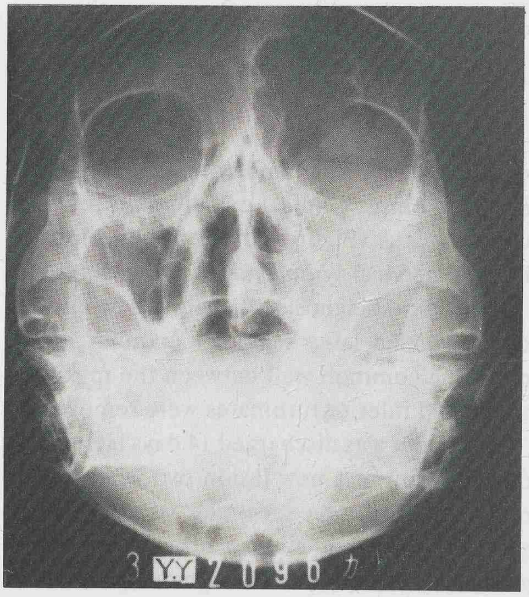

Figure 1. Waters' view of the skull. Note an opacification in the left maxillary antrum and a soft tissue density in the left nasal space.

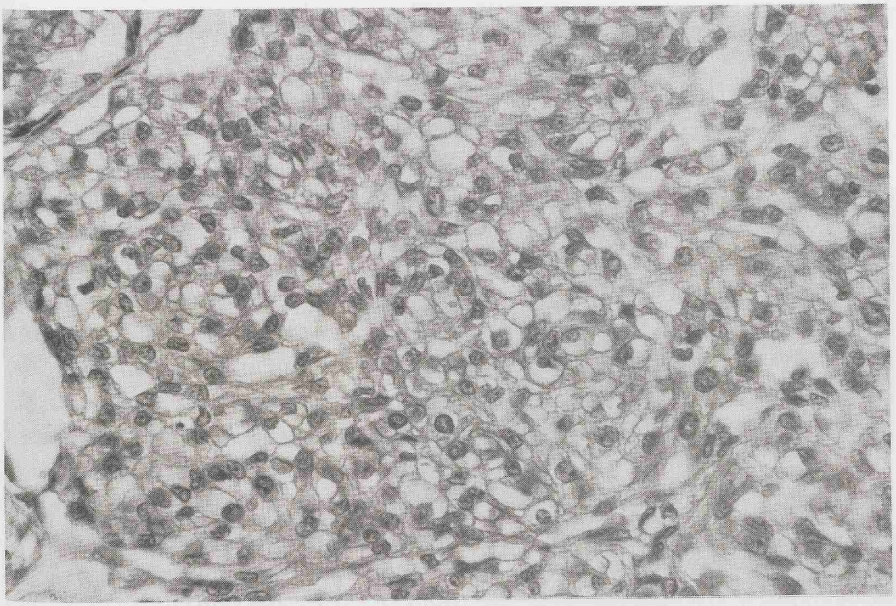

Figure 2. Hematoxylin and eosin section of the surgical specimen showing acinic cell carcinoma, × 400.

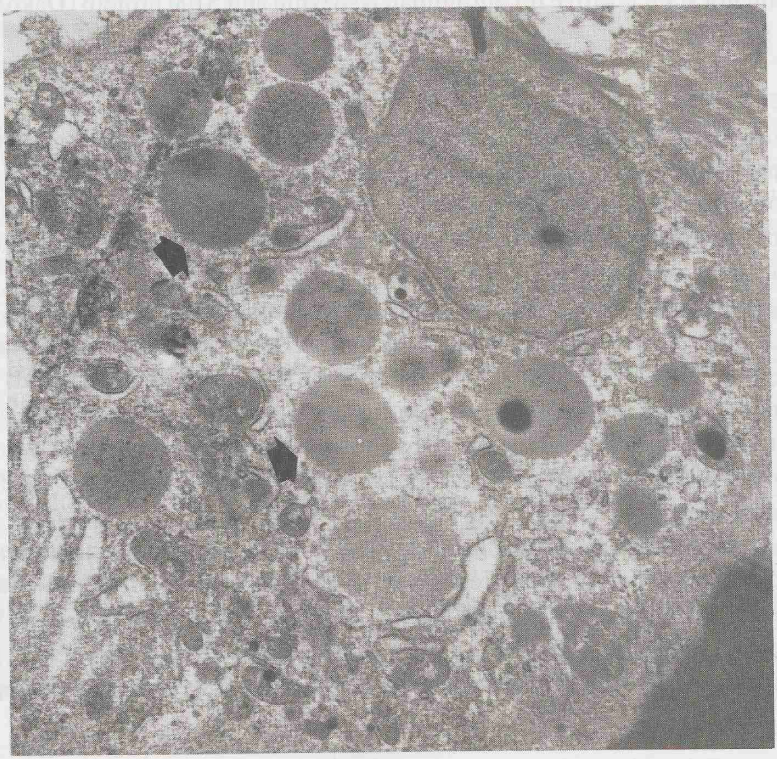

Figure 3. Electron micrograph of an acinic cell carcinoma. Note secretory granules (arrows), × 10,000.

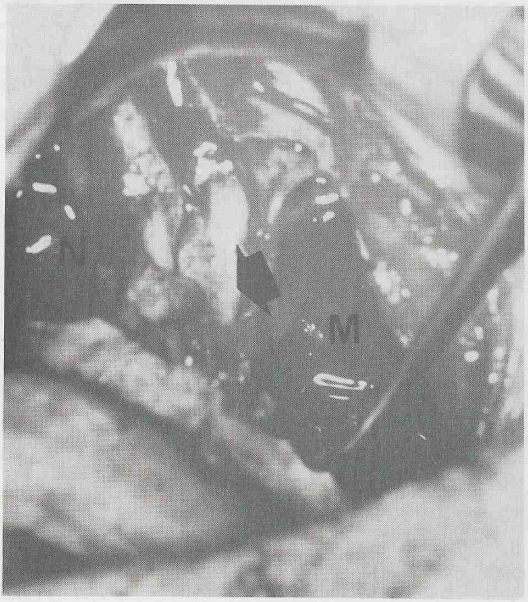

Figure 4. Tumour (arrow) in left nasal cavity (Denker procedure). M = maxillary sinus; N = nasal cavity.

anti-human secretory piece and antihuman lectoferrin (Dako Japan Co., Kyoto), but did not stain positive for antihuman lysozyme and S100 protein (Dako Japan Co., Kyoto).

DISCUSSION

Salivary tissue is widely distributed throughout the mouth, pharynx, nasal cavity and paranasal sinuses. The glands are present in virtually the entire submucosa of the orosinonasal cavity. They are collectively referred to as the minor salivary glands, whereas the parotid, submandibular and sublingual glands are considered major salivary glands.

The glands in the nasal cavity are smaller than those in the oral cavity, but these glands are nevertheless subject to neoplasms, as are the major salivary glands (Ranger et al., 1956). Acinic cell carcinoma of the minor salivary glands most commonly arises in the oral cavity. On the other hand, occurrence of acinic cell carcinoma originating in the sinonasal tract has been seldom reported. Only seven patients with acinic cell carcinoma arising in the sinonasal tract have been found (Table 1).

Acinic cell carcinomas are believed to arise from the intercalated duct reserve cells, and the phenotypic expression of acinic carcinomas correlates with the degree of differentiation from the intercalated duct reserve cells (Batsakis, 1980). Histopathologically, it is easy to differentiate acinic cell carcinoma from other tumours, because routine hematoxilin and eosin stain usually reveals basophilic

granules in the cytoplasm of acinic cell carcinoma cell and the granules are also positive with PAS staining. In this case, secretory piece and lactoferrin immunoreactivity was also detected in the tumour cells. It suggests that the tumour may arise from a cell capable of differentiating into acinar cells and intercalated-type duct components (Warner et al., 1985).

Acinic cell carcinomas usually occur in the parotid gland and are considered low grade. However, since simple excision of the tumours is inadequate, they frequently recur locally, in the regional lymph nodes, or at distant sites. Surgical treatment of these tumours must include removal of sufficient adjacent normal tissue.

Although definite conclusions concerning the surgical treatment of acinic cell tumours of the sinonasal tract cannot be drawn from this small series of patients, treatment of acinic cell carcinoma of the sinonasal tract, like that of all major salivary glands, will result in a better prognosis if surgical exploration and widely excision of the lesion is performed. It remains to be established whether the female preponderance observed among the patients with acinic cell carcinoma of the sinonasal tract is coincidental or not, though patients with acinic cell carcinoma of the oral cavity have demonstrated this sex predilection (Inoue et al., 1984).

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