

Oncocytic mixed nasal tumour

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Abstract

A case report of a rare tumour, not yet documented at this site, showing a characteristic histological appearance is described.

Key words: Mixed salivary gland tumour; Nose

Introduction

The existence of mixed nasal tumours (pleomorphic adenomas) is a well-recognized, rare phenomenon (Compagno and Wong, 1977; Prager *et al.*, 1991). They tend to arise from the nasal septum and behave as low grade neoplasms (Batsakis, 1974).

Oncocytomas as a pure entity are most frequently associated with salivary glands, predominantly the major salivary glands and notably the parotid gland (Batsakis, 1974). Oncocytic change within tumours and indeed the presence of low grade salivary neoplasms composed entirely of oncocytic cells (oncocytomas) has been the subject of recent review (Blanck *et al.*, 1970; Brandwein and Huvos, 1991).

The case presented illustrates the phenomenon of oncocytosis within a benign mixed nasal tumour.

Case report

A 67-year-old Caucasian male presented with a seven-month history of right-sided, unilateral nasal obstruction with associated watery rhinorrhoea. There was no sneezing nor history of allergy. The condition was painless and epistaxis had not been observed.

The presence of a unilateral nasal polyp and its appearance as a turgid rugose lesion filling the middle meatus was the cause of immediate concern, and CT scan was requested which revealed a space-occupying lesion within the nasal cavity expanding into the right antrum (Figure 1). The orbital margin appeared intact although pressure erosion of the anterior wall of the antrum was noted.

The patient had a long history of angina controlled by sublingual glyceryl trinitrate and was considered fit to proceed to EUA and biopsy. The initial diagnostic biopsy showed fragments of a tumour composed of ribbons and trabeculae of epithelial cells with an oncocytic appearance i.e. the cells were strikingly eosinophilic with condensed basal nuclei (Figure 2). Electron microscopy (Figure 3) confirmed that the cytoplasmic eosinophilia was due to abundant mitochondria.

Post-operatively angina occurred which responded to his routine treatment, and ECG with serial cardiac enzymes did not support the occurrence of a myocardial infarction. Prior to proceeding to resection of the lesion further cardiac studies including stress ECG and Echo-cardiogram revealed severe triple coronary artery disease requiring bypass surgery.

Once fully recovered he proceeded to right maxillectomy and histological examination of the entire specimen revealed ribbons

and festoons of oncocytic epithelial cells with abundant hyalinized stroma. In some areas this stroma surrounded the epithelial cells to give a cylindromatous appearance. This latter finding was only focally evident and lacked the cribriform epithelial islands seen in adenoid cystic tumours. The definitive diagnosis of a mixed nasal tumour (pleomorphic adenoma) with extensive oncocytic change was therefore made in view of the presence of hyalinized stroma, which was not seen in the original biopsy, rather than the rarer still pure oncocytic tumour.

To our knowledge no record of such a lesion at this site has been recorded so far.

Discussion

The incidence of reported oncocytomas affecting the major salivary glands is 0.5–0.7 per cent (Eneroth, 1964; Tandler *et al.*, 1970; Brandwein and Huvos, 1991). This contrasts with pleo-

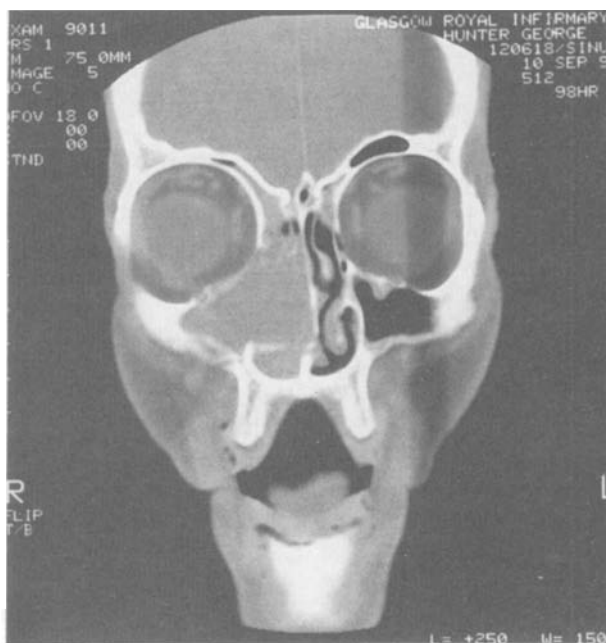


FIG. 1

Coronal CT scan of head showing a space-occupying lesion within the nasal cavity and expanding into the right antrum.

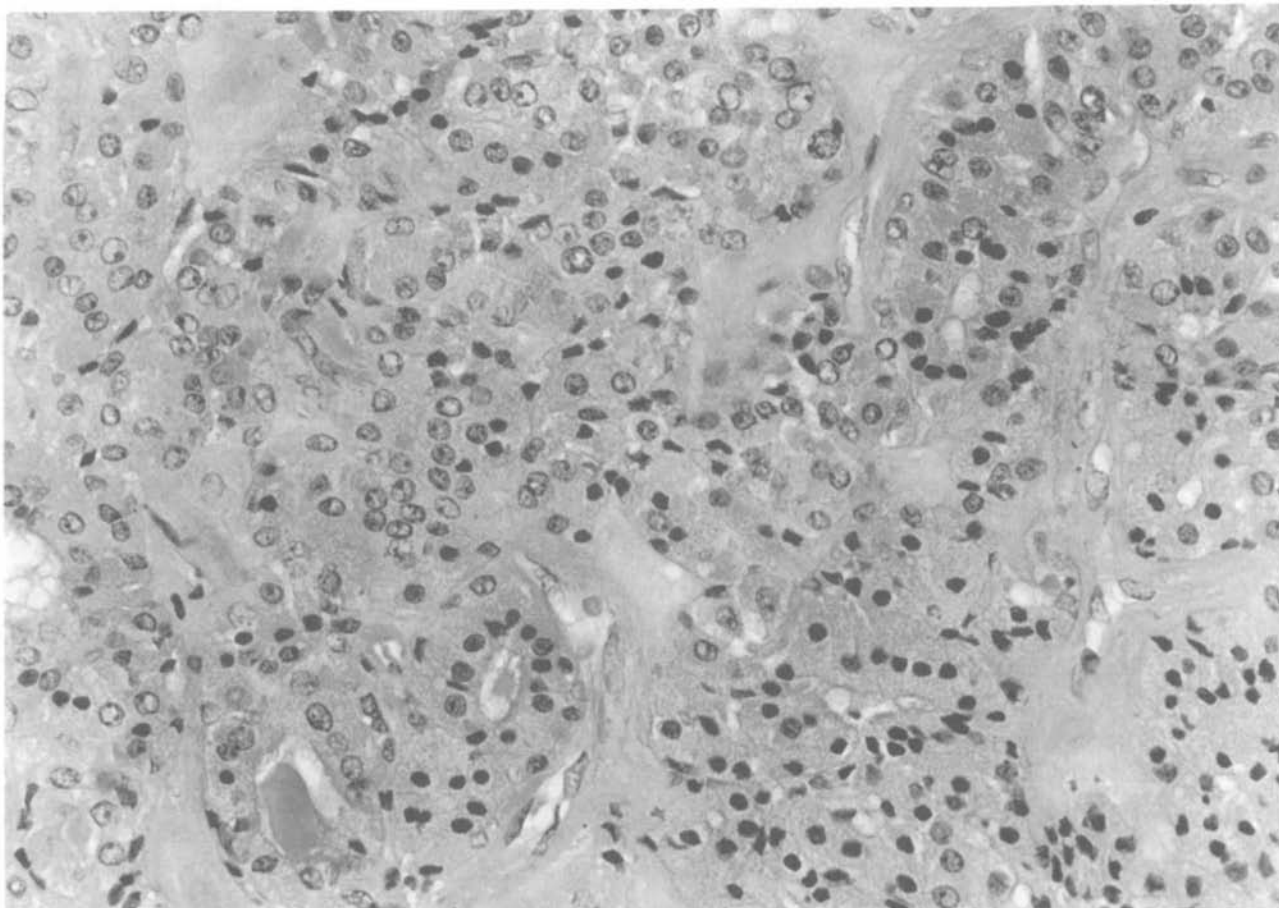


FIG. 2

Tumour composed of ribbons and trabeculae of epithelial cells with an oncocytic appearance. The open nuclei with prominent nucleoli are easily identified. (H&E \times 90).

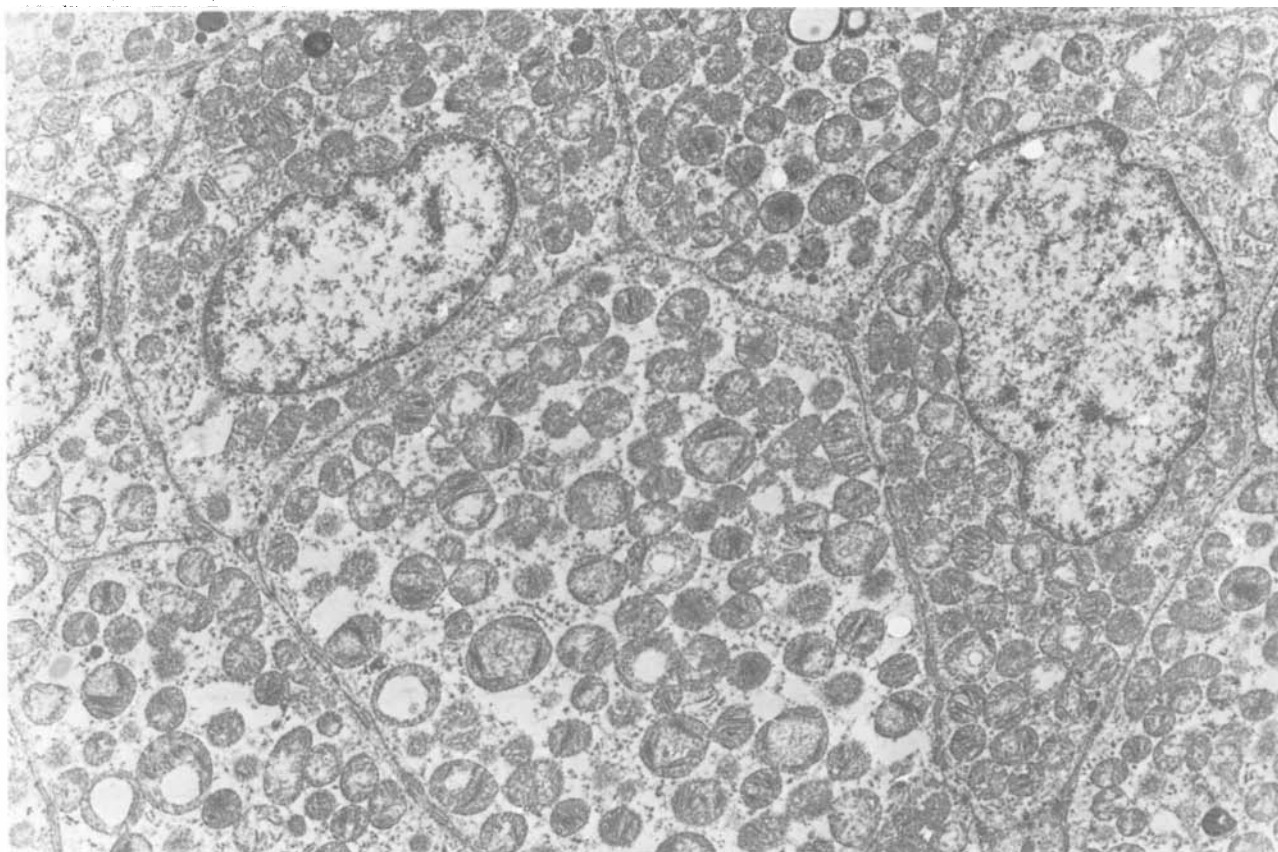


FIG. 3

Electron microscopy showing closely packed epithelial cells with abundant mitochondria (\times 7800).

morphic salivary adenomas (PSA) in which the incidence involving the parotid gland is 80 per cent (Shaheen, 1987) and that of the submandibular gland is eight per cent (Prager *et al.*, 1991). Nasal involvement by PSA is rare mostly arising from the nasal septum occurring in the third to sixth decade of life with an equal male : female ratio (Compagno and Wong, 1977; Brandwein and Huvos, 1991).

The significance of oncocytic change is uncertain. However, it would seem to imply that the tumour is likely to behave in a less aggressive manner than otherwise (Blanck *et al.*, 1970; Brandwein and Huvos, 1991).

Histologically oncocytes appear as large epithelial cells with extreme cytoplasmic granularity and acidophilia (Figure 2). Electron microscopy (Figure 3) reveals the characteristic abundance of mitochondria which typify the lesion and which confer its striking pink appearance in standard haematoxylin and eosin staining (Tandler *et al.*, 1970; Brandwein and Huvos, 1991).

Local recurrence is reported in 10 per cent of parotid oncocytomas and in no case of submandibular gland lesion (Brandwein and Huvos, 1991); in this study they speculate that pseudopod extension beyond the margin of excision accounted for recurrence. Furthermore they state that 'aggressive' histological features such as perineural spread, nuclear pleomorphism and evidence of tumour infiltration through the capsule does not predict behaviour and long-term prognosis as many cases manifesting such features have long-term survival following further excision.

The case presented illustrates the phenomenon of oncoytosis within a benign mixed tumour and would therefore, hopefully, have a good prognosis following resection.

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