

Canalicular adenoma of the parotid gland

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Abstract

Canalicular adenomas are a rare form of benign tumour that occur in salivary glands, occurring mainly in the upper lip and minor salivary glands of the buccal mucosa. The authors report the fifth case and the first in the otorhinolaryngological literature of a canalicular adenoma of the parotid gland. Its specific histological features are difficult to detect on fine needle aspiration and its multifocal nature can lead to recurrence and this must be considered in the clinical management.

Key words: Parotid Neoplasms; Adenoma

Case Report

A 71-year-old lady presented to the ENT clinic with a painless right pre-auricular swelling of three months duration. An ultrasound scan and fine needle aspirate suggested a parotid lesion containing a pleomorphic adenoma and a superficial parotidectomy was performed. Histology revealed a lesion with an anastomosing and trabecular arrangement of epithelial cells with canalicular formation. The tissue also demonstrated well-demarcated sparsely cellular stroma with myxoid features and prominent vascularity (Figures 1 to 3). She has made an uneventful recovery and remains under clinical review.

Discussion

Canalicular adenoma is a rare tumour of the salivary glands. It is classified under the general heading of monomorphic adenoma and was originally thought to be a variant of basal cell adenoma. Although it had been alluded to as a separate entity by several authors,^{1,2} work published in 1984 by Daley *et al.*³ finally disputed this belief: 'Canalicular adenoma is ... a component of the monomorphic adenoma group which is not related to any of the subtypes of basal cell adenomas'. The exact classification was debated and then confirmed by pathologists through the 1980s^{4–8} due to histological, immunohistochemical and ultrastructural evidence culminating in the WHO classification of salivary gland tumours establishing canalicular adenoma as a distinct entity.⁹ This is a benign tumour that usually arises in the minor salivary glands, with the lip and buccal mucosa being common sites of occurrence.¹⁰ Growth of this tumour in the parotid gland is extremely rare, and to date has only been reported in two sources in the literature,^{3,11} neither of which have been in otorhinolaryngological journals.

The work by Daley *et al.* involved analysis of 73 canalicular adenomas and 39 basal cell adenomas and their clinical features. Canalicular adenomas in the parotid accounted for three out of the 73 cases (four per cent), compared with basal cell adenomas where 34 of 39 cases

occurred in the parotid gland (87 per cent).³ The tumour was found in patients aging from 38 to 87 years old and in an equal sex distribution, although other publications would suggest that age of incidence is usually over 60 with a slight female predilection.^{12–14} The tumours studied in Daley's group had no recurrence 10 years after excision, but this is not borne out by other authors. The usual presentation of these tumours is as painless swellings of the upper lip, but it is known that the lesion can sometimes be multifocal^{4,12–14} and it is this multifocal nature that can lead to recurrence, which may be over 10 years later.¹²

Canalicular adenomas are histologically distinguished by cuboidal-columnar cells in anastomosing ducts, canaliculi and cords.^{3,4,6–8,11,15,16} The cytoplasm is pale and the nuclei ovoid. The stroma is poorly collagenized and contains mucohyaline (PAS positive) material with delicate lattice-like vascularity. Electron microscopy reveals few and small desmosomes with fewer tonofilaments compared to a basal cell adenoma.^{3,7,8,15,17}

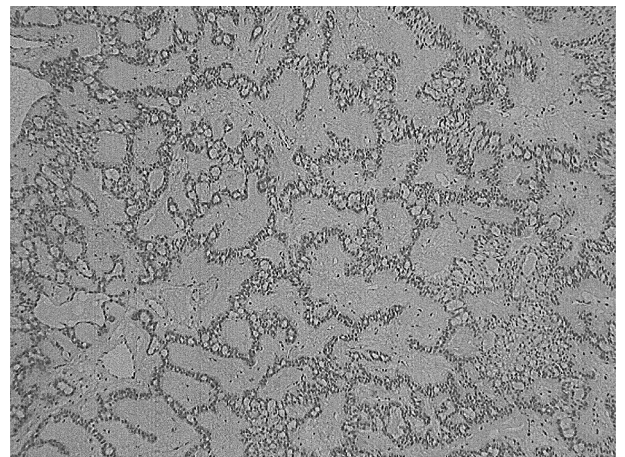


FIG. 1
Canalicular adenoma (H & E ; ×100).

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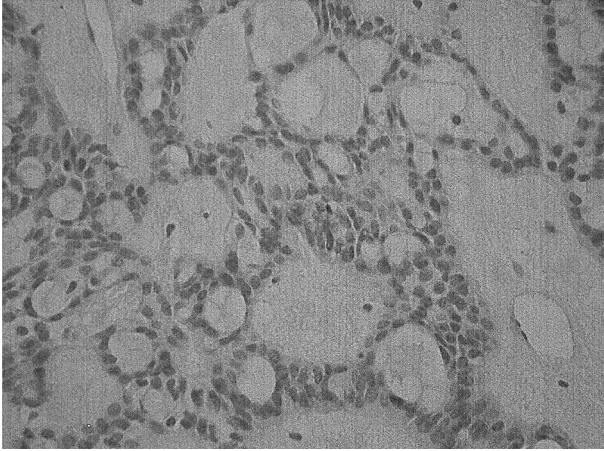


FIG. 2
Canalicular adenoma (H & E; $\times 400$).

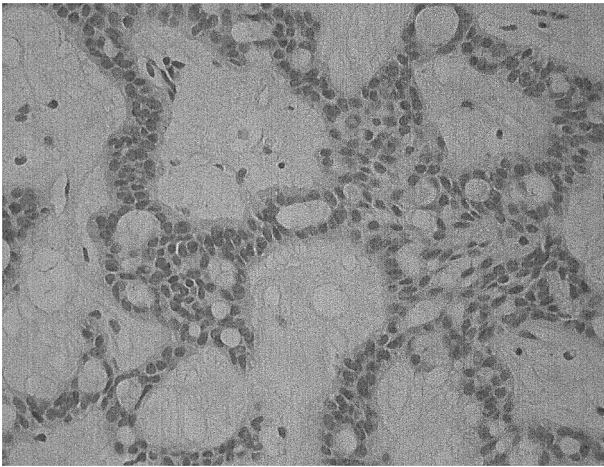


FIG. 3
Canalicular adenoma (H & E; $\times 400$).

There are also occasional intracytoplasmic clusters of tangled microfilaments, single, thickened basement membranes, no nuclear inclusion bodies and moderately developed Golgi apparatus in the apical portions of cells.

- **Canalicular adenomas are a rare form of benign salivary gland tumours usually occurring in upper lip and minor salivary glands of the buccal mucosa**
- **The authors report the fifth case in the literature**
- **Its specific histological features are difficult to detect on fine needle aspiration and its multifocal nature can lead to recurrence**

Canalicular adenoma is unlikely to be diagnosed pre-operatively with fine needle aspiration or on clinical suspicion, but unlike other benign tumours may need longer follow up post-operatively due to its tendency towards multifocal occurrence and late recurrence.

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Mr C M Philpott takes responsibility for the integrity of the content of the paper.

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