



Case Report

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Focal Necrosis in Orbital Pleomorphic Adenoma

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Abstract:

Pleomorphic adenomas (PA) are common benign tumours of the lacrimal gland. Necrosis in PA is unusual and should raise a suspicion and screen for malignancy. We hereby present a case report of pleomorphic adenoma with necrotic foci in the orbit of a 44-year-old lady and a review of current literature for focal necrosis in orbital pleomorphic adenoma.

Keywords

Focal necrosis; Pleomorphic adenomas; Lacrimal gland

Introduction

Lacrimal gland tumours are rare entities that only comprise 9% of orbital lesions. Of those 9% of cases, only 10% are pleomorphic adenomas [1]. Pleomorphic adenomas (PA) are the most common benign tumours of the lacrimal gland, which exhibit pleomorphism of epithelial components. However there are certain histological characteristics in pleomorphic adenomas, which may raise suspicion of atypia and prompt further investigation. Auclair and Ellis et al. [2] has noted that areas of necrosis, hypercellularity, hyalinization, cytological atypia, capsule extension or violation may be predictors of malignancy.

Case Report

44-year-old Caucasian lady presented with residual painless left upper lid swelling 6 months after being poked in the left eye by her infant son. A firm cystic lesion was palpated in the superior lateral orbital rim. The rest of the ocular examination was normal. Computer Tomographic scan of the orbits (Figures 1-3) revealed a large encapsulated cystic mass extending from the inferior portion of the left lacrimal gland. A posterior orbitotomy with excisional biopsy of the lesion was performed. This yielded histology of pleomorphic adenoma with cellular myoepithelial areas containing focal necrosis. Cytological atypia and mitotic activity were absent. The patient recovered well post operatively with no complications.

Discussion

Orbital pleomorphic adenomas normally present as painless enlarging lesions. Atypical forms of presentation which have been reported include orbital inflammation mimicking orbital cellulitis,



Figure 1: CT Orbits showing well encapsulated lesion in the superior lateral orbit (marked by green arrow).

painful swellings and even bony erosion on orbital imaging [3,4]. Casado et al. [4] described a case of painful eyelid swelling resembling dacryoadenitis that was biopsied to be pleomorphic adenoma with areas of necrosis. These necrosis foci could have contributed to the painful presentation

The presence of necrosis in a pleomorphic adenoma is highly unusual. Such cases, if reported, have largely been found in minor and major salivary glands [5,6]. Sen et al. [7] noted cystic degeneration in approximately 15% of their series of 32 patients. Mechanisms for necrosis have been attributed to spontaneous tumour infarction within the tumour, trauma (that may be surgically induced secondary to fine needle aspiration), drug-induced vasoconstriction and thrombo-occlusive vascular changes.

Our patient did not present with painful orbital mass. The necrosis foci appear to be related to the mild trauma sustained prior to presentation, though the latter was mild.

In summary, the presence of necrotic foci in a painless presentation of lacrimal pleomorphic adenoma requires complete removal of the tumour capsule during excision biopsy as there is a risk of malignant transformation.

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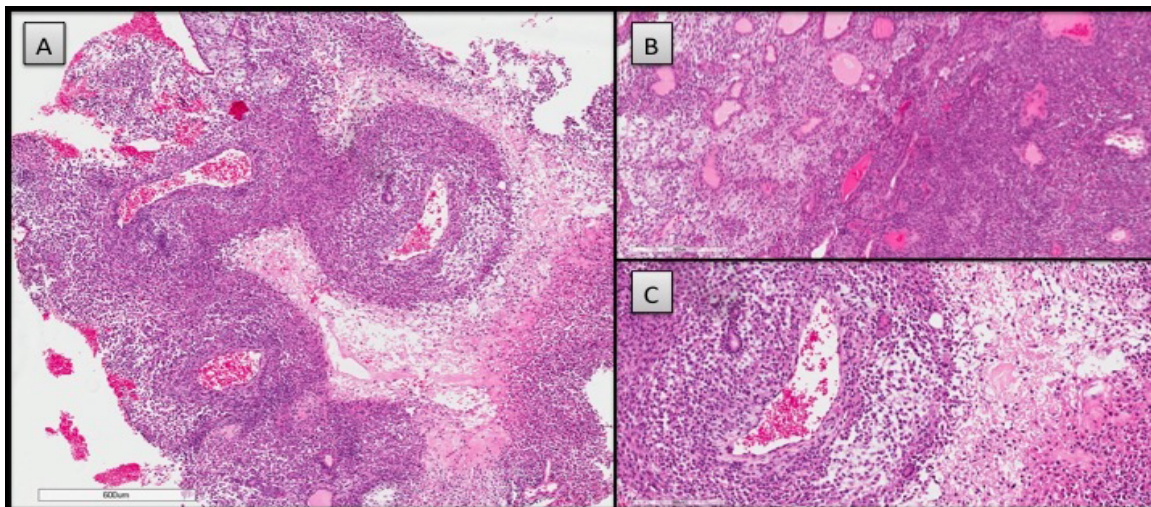


Figure 2: A: 600 µm field of view (low magnification view of tumour). B: 300 µm field of view (polymorphous mixture of spindle cells in a myxoid background showing a pleomorphic matrix with myoepithelial cells surrounding ductules and merging into stroma). C: 200 µm field of view (Cells exhibiting myoepithelial features with plasmacytoid component that is most common in pleomorphic adenomas. Mitotic activity and cytological atypia is not seen).

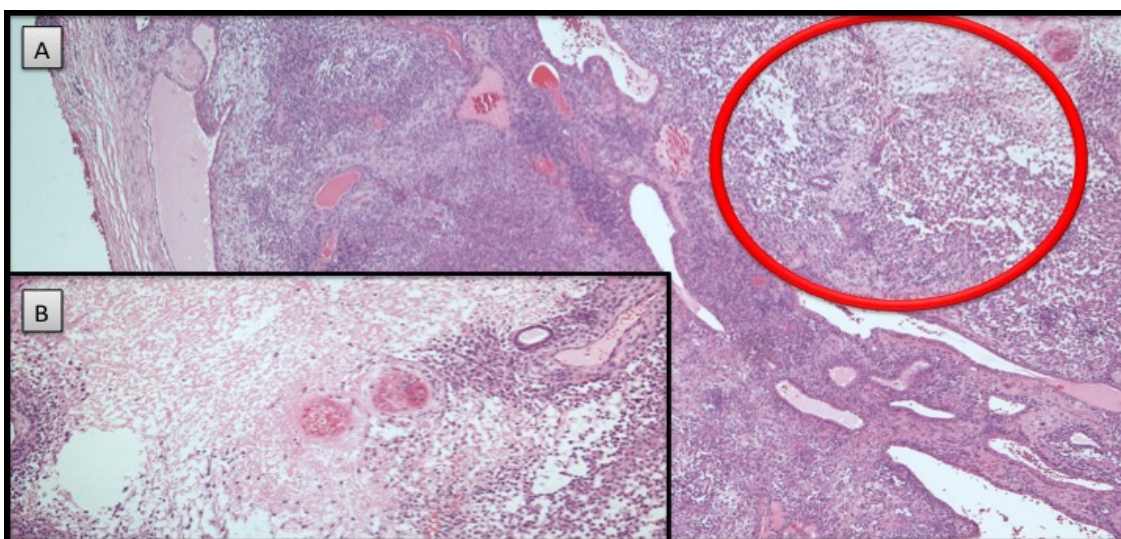


Figure 3: Necrotic foci marked by red circle seen in tumor section. A: Low powered view. B: High powered view.

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