

Pleomorphic adenoma of palpebral lobe of lacrimal gland masquerading as skin adnexal tumor of eyelid

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Abstract

Occurrence of Lacrimal gland tumors is rare. Benign epithelial tumors are more common of which pleomorphic adenoma is commonest. They usually occur in the orbital lobe of lacrimal gland however, they may rarely occur in palpebral lobe. FNAC helps to rule out other pathologies and narrows the differential diagnosis. We describe a case of young female who presented with a nodular right upper eyelid swelling, clinically diagnosed as a skin-adnexal tumor. On FNAC, diagnosis of Chondroid syringoma of skin adnexa was given. Histopathologically however it was confirmed to be Pleomorphic adenoma of lacrimal gland. Although rare, possibility of both chondroid syringoma and pleomorphic adenoma of *palpebral lobe* of lacrimal gland should be considered in case of a mobile, nodular swelling in the upper eyelid. FNAC aids in diagnosis, however, histopathological examination remains the diagnostic gold standard.

Key words: Lacrimal gland, Epithelial tumors, Chondroid syringoma, Pleomorphic adenoma

Introduction

Lacrimal gland is a bi-lobed exocrine secretory gland located in the supero-lateral and extra-conal region of the orbit [1]. The orbital lobe is larger than the palpebral lobe. The lacrimal gland is a non-encapsulated gland composed of ducts and acini [2].

Tumors of lacrimal gland are rare in fine needle aspiration practice [3]. Amongst all, the most common epithelial tumor is pleomorphic adenoma [4,5]. Lacrimal gland pleomorphic adenoma occurs commonly in second to fifth decades of life and has

slight female preponderance. The most frequent symptom is a painless palpable mass in the upper external quadrant of the orbit or less frequently a nodular mass in the eyelid [6].

FNAC helps to rule out lymphoma, pseudotumor or malignancy, and thus aids in early diagnosis and to plan appropriate treatment to help preserve vision and prevent malignant transformation in benign tumors [7]. However, the definitive diagnosis is made on histopathological examination.

Case report

A 26-year-old female presented with a nodular swelling in the right upper eyelid near the outer canthus of the eye of one month duration. It gradually increased in size and was not associated with pain or disturbance in vision. The subcutaneous swelling measured 0.5 cm in diameter, firm in consistency, non-tender and freely mobile.

On fine needle aspiration cytology, the smears were cellular which showed presence of epithelial cells in clusters, sheets, ducts and singles with mild anisonucleosis and scant cytoplasm. Few bare nuclei with strands of myxoid stroma and occasional hyaline globules could also be appreciated. A diagnosis of chondroid syringoma of skin adnexa was given (figure 1a & b).

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The swelling was excised completely with appropriate margin and sent for histopathological examination. Grossly, the resected tissue was sent in two bits. On cut section, one of the bits showed grey white areas and was firm in consistency.

Microscopically, there were clusters of epithelial cells arranged in groups and ducts surrounded by myoepithelial cells. Also myoepithelial cells were seen to be surrounded by and embedded in myxoid stroma. A diagnosis of pleomorphic adenoma of lacrimal gland was made (figure 2a & b).

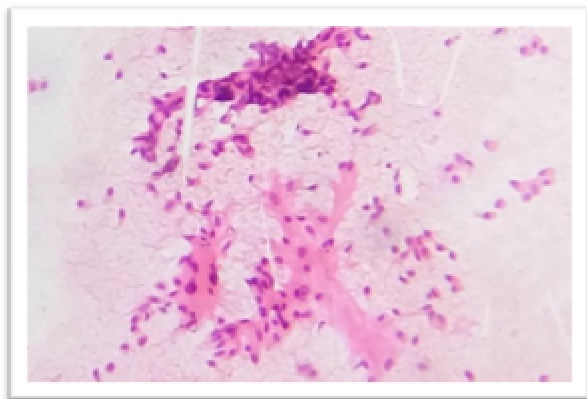
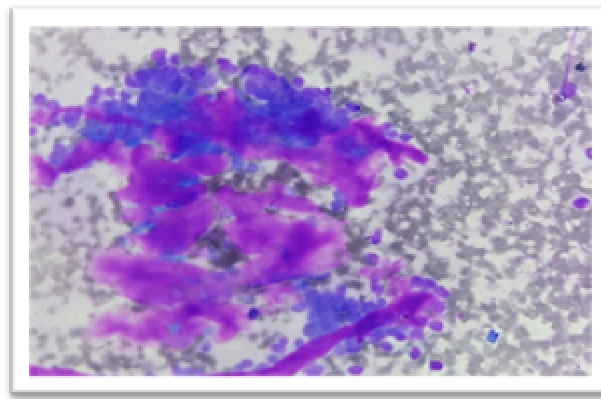
**Figure 1 a:****Figure 1 b:**

Figure 1: FNAC 40x, (a: H&E, b: Wright's); Epithelial cells in clusters, Myoepithelial cells in singles, Presence of Hyaline globules.

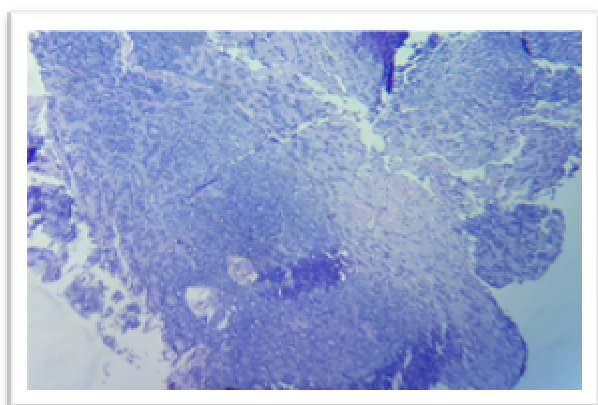
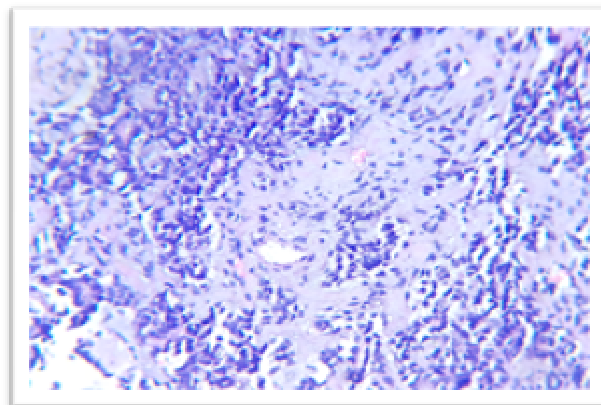
**Figure 2a****Figure 2b**

Figure 2: Histopathology H & E (a: Scanner, b: 40x); Tumor cells scattered in myxoid stroma, forming vague ducts and acini. Epithelial cells are in clusters and myoepithelial cells appear to 'melt' into the stroma.

Discussion

Tumors of the lacrimal gland occur in <1 per 1,00,000 population per year [8]. Lacrimal gland tumors comprise about 5 to 25% of all the orbital masses [9]. They are divided into epithelial and non-epithelial tumors. Epithelial tumors of the lacrimal gland and of which pleomorphic adenoma is the commonest, are more frequently encountered as compared to the non-epithelial tumors [1, 2]. The incidence of pleomorphic adenoma in the literature has been reported to be 9–27% of all the lacrimal gland tumors [5, 10].

Pleomorphic adenomas usually occur in the second and fifth decade of life, and incidence is slightly more in females [6]. The present case, also a female of age 26 years, presented with a nodular swelling in the right eyelid. Pleomorphic adenoma of the lacrimal gland usually manifests as a slowly progressive, painless superolateral orbital or a palpable mass. The chronicity, the absence of pain, and the radiological evidence of no bony fossa erosion, suggest that a lacrimal gland mass is benign rather than malignant [6, 10].

Case Report

These tumors are epithelial in origin. Ductal epithelium develops into the epithelial component. The cells in the myoepithelium form the stroma [11, 12]. Although pleomorphic adenomas commonly involve the orbital lobe of the lacrimal gland, they can involve the palpebral lobe in about 10% of cases [6]. The palpebral lobe tumors are freely movable, non-tender, and present for a shorter duration. They do not produce proptosis or bony changes [13, 14]. Pleomorphic adenomas arising in the palpebral lobe are excised with some normal lacrimal gland tissue [13]. Similar clinical picture was seen in present case where the patient presented with a small nodular mass in the eyelid of just one month duration.

FNA reveals cellular smears mixed with stromal epithelial fragments dispersed singly and in sheets with fibrillar chondromyxoid stroma. The cellular component consists of relatively uniform oval, plasmacytoid or spindle cells with round to oval, eccentric nuclei, bland finely granular chromatin with inconspicuous nucleoli. Cells with plasmacytoid appearance have eccentric nuclei with abundant cytoplasm. Spindle or rounded cells are present within the stromal fragments [7]. Fine needle aspiration of the present case revealed such cytological features (figure 1a & b).

Chondroid syringoma is a tumor of sweat glands which presents with similar microscopic picture on fine needle aspiration showing biphasic population of cells in fibrillary and chondromyxoid stroma [15]. Since the site of nodular mass in present case is eyelid which also has sweat glands, Chondroid syringoma forms one of the most important differentials of pleomorphic adenoma of palpebral lobe of lacrimal gland [16]. Therefore, on FNAC, the possibility of present case being chondroid syringoma was also considered.

Grossly, pleomorphic adenoma is grayish white, bosselated, solitary and well circumscribed from the normal gland. It is covered by a thin pseudocapsule formed by compressed connective tissue and reactive fibrosis. Small tumor nests may be seen outside the pseudocapsule (satellite lesions) and these cause a high incidence of recurrence when a margin of normal tissue is not removed with the tumor. The cut surface shows soft mucinous areas alternating with tough fibrous areas [11, 12].

Histopathological examination shows the mixture of epithelial and mesenchymal elements that led to the

term benign mixed tumour [11]. The epithelial components are variably sized ducts containing an inner cuboidal to columnar epithelium and an outer flattened, spindle-shaped myoepithelial layer. The myoepithelial cells undergo metaplasia to form myxoid tissue, cartilage, and bone (figure 2a & b). Focal squamous metaplasia and keratin production may be observed [12, 17, 18].

The best management is complete excision of the tumor. To minimize any tumor seeding from microscopic extensions through the pseudocapsule, an adequate margin of the surrounding lacrimal gland should be taken and the tumour bed be inspected to prevent recurrences from satellite lesions [6, 17].

Conclusion

Pleomorphic adenoma of palpebral lobe of lacrimal gland, although uncommon should be considered as a differential diagnosis along with chondroid syringoma in cases of firm nodular eyelid swellings [19]. Pleomorphic Adenoma is the most common epithelial tumor of the lacrimal gland which occurs mainly in the orbital lobe and rarely in palpebral lobe. FNAC can help differentiating benign from malignant tumors. Definite diagnosis is given by histopathological examination. This allows appropriate and targeted approach towards the management of the tumor.

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