

International Journal of Medical Science and Innovative Research (IJMSIR) IJMSIR : A Medical Publication Hub

Available Online at: www.ijmsir.com

Volume – 2, Issue –5, September- October - 2017, Page No.: 451 - 454

Pleomorphic Adenoma of Lacrimal Gland-A Case Report

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Conflicts of Interest: Nil.

Abstract

We present a case of 60 yr old male patient with left upper eyelid swelling. Histopathological evaluation confirmed the diagnosis of pleomorphic adenoma of lacrimal gland. Pleomorphic adenoma is a benign epithelial tumor and presents as a painless, progressive, slow growing superotemporal swelling. The tumor usually found in adults and extremely rare in chidren. Excisional biopsy was done with satisfactory outcome. There is no recurrence.

Keywords-Pleomorphic adenoma,Lacrimal gland.

Introduction

The Pleomorphic adenoma is the most common benign epithelial tumor of lacrimal gland accounting for approximatly 50 percent of all epithelial tumors in this location¹.It is also known benign mixed tumor denotes that the tumors are derived from mixture of epithelial and mesodermal elements².Pleomorphic adenoma of lacrimal gland with similar features with its counterpart developed in salivery gland because the two are exocrine organ that have same histology³.Pleomorphic adenoma mainly presents as a slow growing, painless enlargment of the lateral portion of upper eyelid , progressive proptosis, and downward and nasal displacement of the globe⁴.Other sites there have been cases reported in the eyebrow, lateral lower eyelid, lacrimal sac and even intraocularly⁵.

Case report

The A 60 yr old male presented in the opthalmology department complaining of a swelling in superotemporal quadrant of left upper eyelid for 4 yr duration. There was no history of pain and trauma. On examination the overlying skin did not show any abnormality and pigmentation.On palpation the swelling was nodular, non tender, painless, freely movable. non pulsatile, and irreducible. No bruit was felt.There was no hepatosplenomegaly and lymphadenopathy observed elsewhere in the body.Other physical and hematological examination was normal.Swelling did not cause significant visual disturbances.Bells phenomena was good.On eye examination his visual acuity of left eye was 6/6 and right eye was 6/8. There was no relative afferent pupillary defect.Ocular motility was normal.On slit lamp examination immature senile catract was present in both eyes. The view of fundus was hazy in both eyes because of cataract.Imaging studies show soft tissue density lesion m/s 15x14 mm is seen in lateral aspect of left orbit in relation to lacrimal gland without evidence of bony erosion suggesting the benign nature of lesion. The optic nerve and extraocular muscle was normal.A excisional biopsy was perfomed and lesion was removed en masses. Formalin fixed tissue was received. The size of spesimen 1.8x1.5x1.2 cm with outer surface slightly was nodular.C/S is grey white homogenous. Microscopy showed variegated growth patterns with alternating

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cellular and myxoid areas.Epithelial component shows glandular pattern,solid sheets and trabecular pattern. Epithelial component intermixed with loosely arranged myxoid stroma.In this fig epithelial component is more than the stroma. Blood vessels are also seen.(Fig 1).There is also epithelial units creates solid sheets of cells and trabecular pattern and myxoid stroma.(Fig 2).In(fig 3) plasmacytoid hyaline cells are seen which are typically ovoid, with eccentrically placed nuclei and abundant eosinophilic hyaline cytoplasm.They are not uncommonly dispersed in a myxoid stroma. Plasmacytoid hyaline cells can form solid sheets.

Discussion

The Pleomorphic adenoma of lacrimal gland is a benign epithelial tumor. It is a dual cell neoplasia resulting from mixture of epithelial and myoepithelial element with stroma. The incidence ranges from third to seventh decade of life. It is extremely rare in children.Incidence slightly higher in patient from south east asia with a male predominance⁶.Pleomorphic adenoma of lacrimal gland usually menifests as a slowely progressive painless, nontender, palpable mass in the superotemporal orbital quadrant is present in most patients. These symptoms usually present for over 12 month with no inflammatory signs.Other presenting symptoms or signs include diplopia, an ocular motility disturbances, ptosis, lacrimation etc⁷.Pleomorphic adenoma of lacrimal gland usually involve the orbital lobe of the lacrimal gland, they can involve the palpabral lobe in 10% cases. The palpebral lobe tumors are freely movable, non tender, they do not produce proptosis or bony changes².

Grossly pleomorphic adenomas are usually solitary, grey white, round and ovoid, well circumscribed.Small tumors are smooth, firm, and mobile but large may be bosselated.Tumors are pseudoencapsulated formed by compressed adjacent tissue.The appearance of c/s depends tumor do not invade the bone but they may erode the bone and induce reactive bone formation. Histologically show epithelial component and stromal component. The epithelial component morphologically show various arrangments including ductal, glandular, solid, cystic, acini formation, irregular tubules and sheets of cells. Sometimes foci of squamous metaplasia are seen and sometimes accompanied by keratinized epithelial plugs in lumen. The neoplastic gland have lining composed of two layer Inner cell linning may be cuboidal or columnar and basally located cells displaying features of myoepithelial cells they may be clear, spindle shaped, plasmacytoid appearance and contain angulated, deep staining nuclei. The second component is stroma which may be mvxoid . chondroid, fibrous or even sometimes osseus. The presence and prominence of each component can very in different parts of the same tumor so classified into three histological types 1.predominence of epithelial component. 2.predominence of stroma. 3.In which two components are in a relative equal proportion.On immunohistochemistory pleomorphic adenoma stain positive for epithelium(keratin,Epithelial membrane antigens) and myoepithelium(keratin, Actin, Myosin, fibronectin,S-100). Other major alternative to rule out in differential diagnostics are-Myoepithelioma, oncocytoma, cvstadenoma, adenoid cvstic carcinoma, carcinoma ex pleomorphic adenoma, adenocarcinoma.Management complete surgical excision with anterior and lateral orbitotomy.Pain is a cardinal symptom for patients with adenoid cystic carcinoma but uncommon for patient with pleomorphic adenoma⁸. The prognosis is genarally good.Excisional biopsies are preferable over incisional biopsy in lacrimal gland pleomorphic adenoma because of significant risk of recurrence due to implantation of tumor within the orbit. The risk of malignent transformation has

on the relative proportion of epithelium and stroma. The

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been associated with multiple recurrences and long standing tumors. To reduce the risk of recurrence and malignant transformation tumor should be removed with intact capsule⁹.

Figures and Tables



Fig.1



Fig.2



Fig.3

Conclusion

A Pleomorphic adenoma of lacrimal gland is a benign neoplasm occuring more commmonly in middle aged male.It is a mixed tumor contain both epithelial and mesodermal component.Surgical excision with intect capsule is the treatment of choice. To reduce the risk of recurrence and malignent transformation of the pleomorphic adenomas of lacrimal gland shoud be removed intact without prior biopsy.

Acknowledgements

My gratitude to Dr. Neelu Gupta HOD & Professor, Department of Pathology, SPMC Bikaner for allowing me to publish this case report. Thanks are also due to Dr. Sunita Kulheri for her assistance with the photograhic work.

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