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Epidermoid Cyst of The Eyelid –A Case Report And Review of Literature

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Abstract
Background: *The present study reports a case of epidermoid cyst of the eyelid and emphasizes on clinical features, differential diagnosis,histopathological features and treatment.*
Methods: A 55 year old male patient underwent surgical excision of the mass on the right eyelid of size 1.5 cm x1.5 cm , under local anaesthesia. Upon histopathological examination the the diagnosis was confirmed to be epidermoid cyst.
Results: *On follow up of patient after 2 months ,skin over the lesion was normal with no complications and recurrence reported.*
Conclusions: *Epidermoid cyst can be confused with sebaceous and dermoid cyst on clinical examination, so exact or confirmatory diagnosis can be made on histopathological examination.*
Keywords: *Dermoid Cyst, Epidermoid Cyst, Eyelid, Keratin, Sebaceous Cyst*

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I. Introduction

Epidermoid cysts or epidermal inclusion cysts are the result of implantation of epidermal elements and their subsequent cystic transformation [1]. Epidermoid cysts are generally smooth, soft, freely movable subcutaneous lesions. They may be congenital or secondary to trauma or surgery. Cysts of eyelid typically present during adolescence and late adulthood [2]. Epidermal cysts are more common in men than women. Usually these cysts are benign slow growing and asymptomatic. Occasionally a periocular epidermoid cyst can become infected with bacteria, particularly staphylococcus aureus and streptococcus pyogens. Carcinoma arising from epidermoid cyst is extremely rare.

II. Case Description And Results

A 55 year old male patient visited our OPD with painless swelling on lateral aspect of the right upper eyelid since 5 years. Swelling was gradually progressive in size from a small peanut sized nodule to the present size mass (Fig.1). There was no history of ocular trauma, surgery, pus discharge or inflammation. The lesion was never treated before.On examination, the lateral aspect of right upper eyelid showed a round swelling of 1.5cm x 1.5 cm. On palpation the swelling was firm in consistency, and movable, non-tender and free from underlying tissue. Ocular examination was normal with no visual disturbances.The mass was excised under local anaesthesia, with a horizontal skin incision given over it (Fig.2). Subcutaneous tissue was separated and an excisional biopsy was taken. Skin was sutured in a single layer with 4-0 interrupted silk sutures. Histopathological examination showed a cyst lined by keratinized squamous epithelium resembling epidermis. The cystic lumen was filled with degenerating keratin suggestive of epidermoid cyst (Fig.3).On follow up of patient 8 weeks after surgery, the skin over the area appeared to be healthy with no complications.

III. Discussion

Epidermoid cysts arise from implantation of epidermal rests during embryonal period, occlusion of pilosebaceous unit, or iatrogenic/ surgical implantation of epithelium into mesenchyme. They result from the proliferation of epidermal cells within a circumscribed space of dermis. Epidermoid cysts are indolent in nature, slow to progress and remain asymptomatic unless secondarily infected. A central pore or punctum is an inconsistent finding that may tether the cyst to the overlying epidermis and form a thick cheesy material can sometimes be expressed. In these cases punctum is excised along with the lesion. The cysts are mainly reported from sites of face, the trunk, the neck, the extremities, and the scalp. Certain hereditary syndromes have been associated with epidermoid cysts such as Gardner syndrome, basal cell nevus syndrome, pachyonychia congenita. Gardner syndrome [3] represents one end of the spectrum of the disorder known as familial

adenomatous polyposis. The syndrome consists of intestinal polyps which are predominantly adenomas, together with extracolonic features including osteomas, epidermoid cysts, desmoid tumours and dental abnormalities. Desmoid tumours, although histologically benign, may behave aggressively and can cause death in some patients. Several other neoplasms are also associated with Gardner syndrome. Basal cell nevus syndrome or Gorlin-Goltz syndrome or Nevoid basal cell carcinoma syndrome is a hereditary condition characterized by a wide range of developmental abnormalities and a predisposition to neoplasms. Main clinical manifestations include multiple basal cell carcinomas , odontogenic keratocysts of the jaws, hyperkeratosis of palms and soles, skeletal abnormalities, intracranial ectopic calcifications, and facial dysmorphism (macrocephaly, cleft lip/palate and severe eye anomalies)[4]. Epidermoid cysts occur on the limbs and the trunk in over 50% of cases [5]. These are usually 1–2 cm in diameter and are particularly common around the knee. Human papilloma virus has been associated epidermoid cysts [6]. Histology shows cyst lined by squamous epithelium and cheesy material (keratin). Complications associated with epidermoid cysts include infection, malignant transformation, and rupture. Malignant transformation of epidermal cyst into cutaneous squamous cell carninoma is 0.011 to 0.045% [7, 8]. Differential diagnosis includes sebaceous cyst, lipoma and dermoid cysts. Sebaceous cyst is a common benign cyst beneath the skin in areas with multiple hair follicles. There is blockage of pilosebaceous duct on the skin in cases of sebaceous cysts. Cysts arising from infundibulum of hair follicles are either epidermoid cysts or dermoid cysts. In dermoid cysts dermal appendages are present which are lacking in epidermoid cyst [9, 10]

IV. Figures

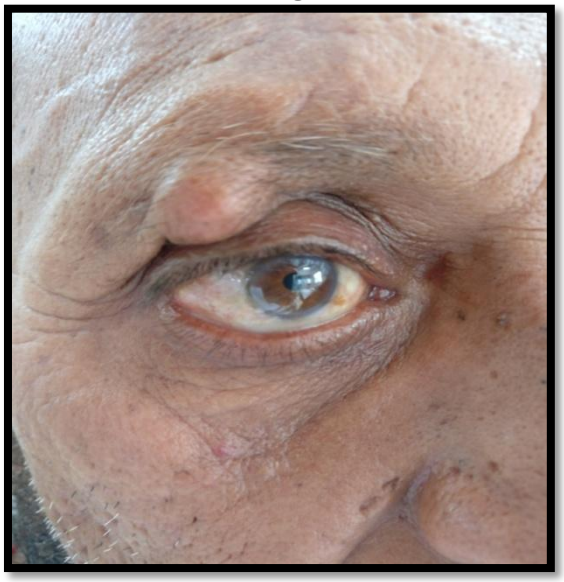

Fig 1. Pre-operative view of eyelid mass

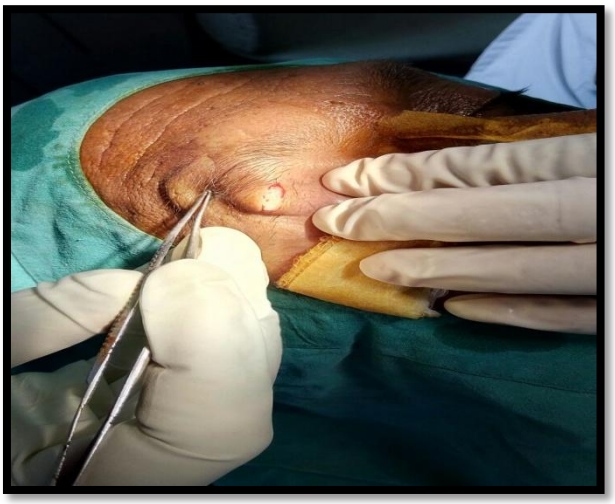

Fig 2.Incision over the eyelid mass

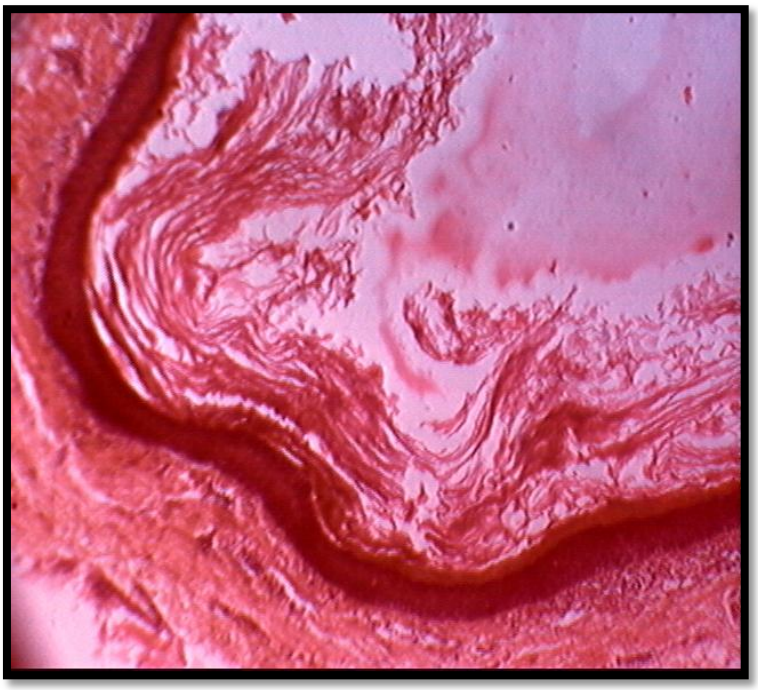

Fig 3. High power view showing stratified squamous epithelium with degenerated keratin

V. Conclusion

Epidermoid cyst can be confused with sebaceous and dermoid cyst on clinical examination ,so exact or confirmatory diagnosis can be made on histopathological examination.Although epidermoid cyst is mostly benign in nature with very low malignant transformation rate, the treatment of choice is surgical excision with regular follow up of the patient. Care should be taken to excise the cyst in total with the keratin producing lining of the cyst to avoid possible malignant transformation.

Acknowledgements

The authors report no conflicts of interest related to this study.

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