

# Pilomatricoma of the eyelid

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## ABSTRACT

Pilomatricoma is an uncommon benign tumor considered to be hamartoma of hair matrix. Here we present a case of 27 year old male patient who had solitary swelling over the right upper eyelid. On the basis of clinical and histopathological background, the diagnosis of pilomatricoma was made.

**Key words:** Hair matrix; Hamartoma; Pilomatricoma

## INTRODUCTION

Pilomatricoma was first described by Albert Hippolyte Malherbe and J. Chenantais as calcifying epithelioma in 1880 A.D [1]. Later on, in 1949 Lever and Griesemer suggested the hair matrix cells to be the origin of the tumor and finally in 1961 Forbis and Helwig proposed the currently accepted name “pilomatricoma” [2,3].

Clinically, the lesion appears as a slowly enlarging, irregularly shaped, rock hard, nodular, non tender mass freely movable over the subcutaneous tissue. The skin usually has reddish to blue discoloration due to dilated blood vessels and chalky white nodules may be seen through the skin. There is typically no history of inflammation or trauma [4]. In this article we present a case of pilomatricoma involving the eyelid.

## CASE REPORT

A 27 years old male presented to the hospital with a small painless nodular lesion in the right upper eyelid for 5 years. The history of the patient revealed no pain, previous inflammation or trauma. On examination, a small, round, non-tender, rock hard, nodule was present on right upper eyelid (Figs. 1 and 2). There was hair shaft emanating from the summit of the nodule. It had normal skin color, but chalky white

nodules could be seen through the healthy appearing skin. The patient was referred to ophthalmology department where the lesion was excised and sent for histopathological examination which confirmed the diagnosis of pilomatricoma showing a biphasic population composed of basaloid germinative cells and eosinophil shadow cells with a few foci of dystrophic calcification.

## DISCUSSION

Pilomatricoma is an ectodermic tumour originating from pluripotential precursors of hair matrix cells. It can present at any age. It demonstrates a bimodal peak presentation during 1<sup>st</sup> and 6<sup>th</sup> decades of life, about 40% of cases occur in patients younger than 10 years of age and 60% of cases occur within the first two decades of life. Its more common in females than in males [5]. Clinically, it manifests as asymptomatic, benign solitary, soft and friable to hard nodule measuring 0.5 cm to 5.0 cm. It is subcutaneous slow growing tumor which may or may not be attached to the skin and mobile over underlying structures. It may also present as multiple and nodular pattern in 2% - 10% of the cases. An activation of  $\beta$  catenin gene CTNNB1 mutation may be the cause for development of familial pilomatricoma [6]. Multiple and familial pilomatricomas are associated with Steinert's myotonic dystrophy, Gardner Syndrome, Turner Syndrome

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**Figure 1:** A single nodule present over the upper eyelid margin with hair shaft emanating from the centre of the nodule.



**Figure 2:** Closer view of the pilomatricoma of the upper eyelid showing hair shaft emerging from the summit of the nodule.

and Trisomy 9 [7]. Among lesions that need to be differentiated from a pilomatricoma include epidermal inclusion cyst, sebaceous adenoma, dermoid cyst, epidermoid cyst and vascular tumors.

Histologically, pilomatricoma is characterized by a mass made up by basaloid cells in periphery, ghost cells in central part and calcification and sometimes ossification. The ghost cells represent necrotic areas of previously vital basaloid cells. The calcification and ossification areas appear progressively in necrotic areas. Ghost cells are pathognomonic of pilomatricoma [8].

Presenting age of 27 years, eyelid affliction, male sex and absence of any predisposing factors like trauma make our case an uncommon presentation of pilomatricoma and hence reported.

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