ORIGINAL RESEARCH PAPER
Volume - 12 | Issue - 04 | April - 2023 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

PILOMATRICOMA: A CASE REPORT AND REVIEW OF LITERATURE

General Surgery

Pawan Tiwari General Surgery, SGT Hospital, India.
Amandeep Singh General Surgery, SGT Hospital, India.
Shailender Koul General Surgery, SGT Hospital, India.
Madhu Tiwari Anesthesia, SGT Hospital, India.
Rudrax Bhatt* General Surgery, SGT Hospital, India. *Corresponding Author

ABSTRACT

Background: Pilomatricoma is a benign tumor of hair matrix differentiation and has been classically described as comprising of basaloid and shadow cells admixed with multinucleated giant cells and areas of calcification. However, there are a diverse range of histologic features this tumor displays that are often unrecognized. **Methods:** The study includes case report of a 43 year old woman from Gurgaon with nodular mass at back with recent onset and rapid progression who presented to SGT Hospital. Patient was admitted and had undergone wide local excision. Specimen was sent for histopathology. **Results:** Excised specimen sent for histopathology had a histologic diagnosis of pilomatricoma. Hematoxylin and eosin-stained slides were reviewed which shows Ghost celols. **Conclusion:** Pilomatricoma, although considered a tumor of hair matrix differentiation, can show cellular evolution toward the other parts of the hair follicle. The diagnosis is established based on an excisional biopsy. The treatment of choice is surgical excision with a clear margin Recurrence with adequate excision is low.

KEYWORDS

Pilomatricoma, Hair matrix, Differentiation

INTRODUCTION

Pilomatrixoma, also referred to as pilomatricoma or calcifying epithelioma of Malherbe, is an uncommon benign tumor with differentiation towards both the hair matrix and cells arising in the cortex. Pilomatrixoma is classified within the family of skin adnexal tumors[1]. These are commonly misdiagnosed, benign neoplasms of the skin, thought to arise from hair follicles. They most frequently appear as solitary, firm nodules, exhibiting a normal to pearl white epidermis. Calcium deposits are present in well over half the lesions identified. Thus, the skin lesion is also described as a calcifying epithelioma.

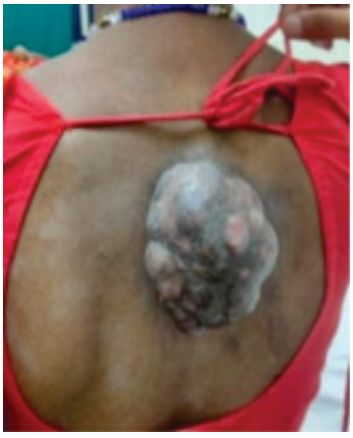
Case Report

A 43-year-old woman from Gurugram presented to the General Surgery Department SGT Hospital in September 2022, with a nodular mass on the back of recent onset and rapid expansion. The patient was otherwise well, with no constitutional symptoms and no significant past medical history.

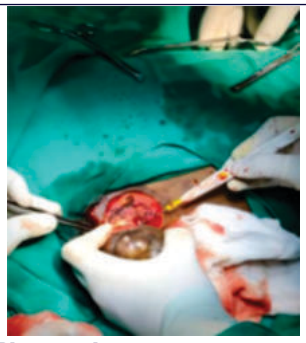
On Inspection a nodular mass of 10*10 cm was present with places of 1-2 cm sized multiple ulcers. There were no prominent veins and skin over mass was dusky.

On Palpation, all inspectory findings were confirmed. A nodular mass of 10*10 cm size was present. Mass was firm in consistency, mobile and non-adherent to deeper tissues.

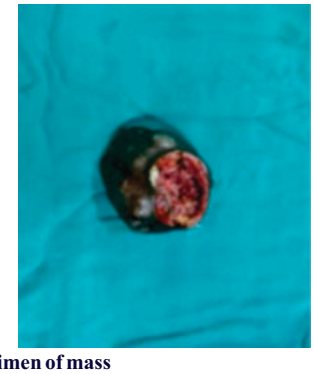
Draining areas showed no enlarged lymph nodes. Patient was posted for excision and biopsy and specimen was sent for histopathology.



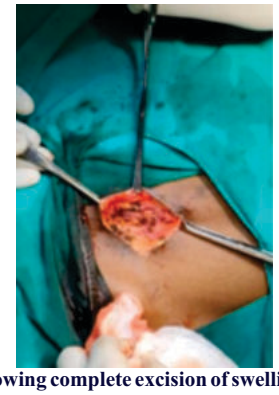
On Intra-operative Procedure:



Per-operative Photograph

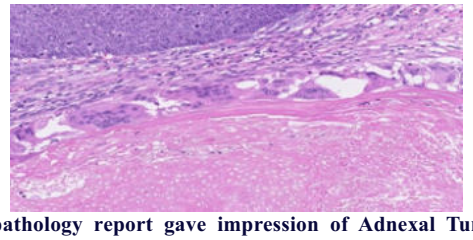


Excised Specimen of mass



Photograph showing complete excision of swelling

Photograph showing wound repair after excision



Histopathology report gave impression of Adnexal Tumour: Pilomatrixoma

DISCUSSION

Pilomatricoma were first described by Malherbe and Chenantais in 1880 as a benign neoplasm of sebaceous gland origin.[2] It was not until later that the lesion was understood to be a calcifying epithelioma that arises from hair follicle matrix, hair cortex, follicular infundibulum, outer root sheath, and hair bulge.[3] Pilomatricoma is a term first used by Jones and Campbell in 1969, when they discovered presentations of subcutaneous lesions in a pediatric population, with similar unique histological features occurring in adults. Pilomatricoma manifest as a benign, cutaneous, firm, solitary lesions of the face, neck, and upper extremities. The difficulty with diagnosing pilomatricoma lies with their variant morphology and sometimes unusual appearance similar to more common lesions. The presentation of these subcutaneous nodules may resemble benign lesions such as a keratoacanthoma, ossifying hematoma, and fibroxanthoma, or malignant lesions such as squamous cell carcinoma. Diagnostic identification of this lesion is important because, although extremely rare with fewer than 20 cases described in the literature, pilomatricomas can undergo malignant transformation into a pilomatrix carcinoma.[4–6] Most pilomatricoma occur on the head and neck of middle age to elderly patients. The rate of malignant transformation is difficult to assess due to overall disease rarity and lack of specific features that can distinguish whether a malignant pilomatricoma has arisen de novo or if it represents the malignant transformation from a preexisting pilomatricoma.[7]

Ultrasound has demonstrated the highest accuracy rates between 28.9 and 46 percent. There is also literature citing some diagnostic discriminative findings on ultrasound that may distinguish pilomatrixomas from other subcutaneous tumors: heterogeneous echotexture, internal echogenic foci in scattered-dot pattern and a hypoechoic rim or posterior shadowing.[8] The only truly reliable means of diagnosis remains pathological evaluation. The classic histology is said to be defined by the presence of ghost or shadow cells and basophilic cells. At low power the histological pattern usually seen in pilomatrixoma is of a well-circumscribed nodulocystic tumor. While predominantly seen within the lower dermis, extension into the subcutaneous tissue is not uncommon.

Treatment is surgical resection with wide margins of 1–2cm. Following excision, pilomatricoma recurrences are relatively rare, with an overall rate of 2.6%.[5,9,10] The rarity of this lesion provides little evidence for follow-uprecommendations after excision. One study's treatment population remained free of recurrence during follow up that ranged from 3 to 37 months.[10] Surgical excision of this tumor is a sufficient and curative treatment, with excellent postoperative prognosis for both cosmesis and to prevent the possibility of malignant transformation. Our patient was followed up and showed no recurrence and was asymptomatic.

CONCLUSION

In conclusion, we report a case of a large lesion with concerning features for a pilomatrixoma. Pilomatrixoma usually presents as an asymptomatic nodular single mass. The skin overlying the lesion is usually normal or may have reddish or bluish discoloration. These lesions are usually well circumscribed, spherical, or ovoid and sometimes encapsulated. Giant pilomatrixoma, as in the presented case, is unusual. The diagnosis is established based on an excisional biopsy. The treatment of choice is surgical excision with a clear margin Recurrence with adequate excision is low.

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