Original Research Paper

Volume - 13 | Issue - 06 | June - 2023 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Pathology

PILOMATRICOMA: A RELATIVELY RARE TUMOUR OF THE SKIN AT UNCOMMON SITE: A CASE REPORT

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ABSTRACT Pilomatricoma is a benign neoplasm of hair follicle matrix cells, commonly occurs in female of childhood and young age group. Most common in head and neck region. Only few cases with preoperative FNAC have been reported. We report a case of 22 years old male patient presenting with firm nodular lesion in left axilla since 5 months. Cytological evaluation of lesion revealed keratin debris, cluster of basaloid cells & giant cells and provisional diagnosis of Pilomatricoma was made which was subsequentely confirmed on histology and Von-kossa stain for calcium was also positive favoured calcification. Pilomatricoma more common in female but we reported in male and clinically this case presented as axillary lymphadenopathy but it was diagnosed as pilomatricoma of axillary region. Axillary involvement is relatively uncommon and can be mistaken for lymphadenopathy and other soft tissue lesion. Pilomatricoma often misdiagnosed preoperatively but this case was provisionally diagnosed as pilomatricoma on FNA smear.

KEYWORDS : Pilomatricoma, Basaloid cells, Giant cells, Calcification, Axilla.

INTRODUCTION

Pilomatricoma, also known as calcifying epithelioma of Malherbe was first described by Malherbe and Chenantais in 1880 as a calcified tumor, originating from the sebaceous glands(1). Forbis and Helwig discovered that the cell of origin for pilomatricoma is the outer sheath cells of hair follicle root(2). It is usually asymptomatic, solitary, slow growing, painless lesion and most commonly found in the head and neck region presenting as firm, dermal nodule covered by normal skin(3). These tumor commonly occurred in first or second decade of life. In rare cases, pilomatricoma can show malignant transformation. Pilomatrix carcinoma is rearely uncommon with low malignant potential but high local recurrence(4).

CASE REPORT

A 22 years old male patient with a left axillary nudular lesion presented in surgery OPD. Clinician evaluated the lesion as axillary lymphadenopathy and reffered to our department for FNAC. On examination it was firm, non-tender, non-mobile swelling measuring 1.5x1.5 cm. in the left axilla with gradually increase in size since 5 months (fig 1). There was no history of associated pain or history of trauma. The swelling was covered by normal looking skin. The patient was made comfortable, and the palpable mass was made prominent and cleaned with 70% isopropyl alcohol and FNAC was done aseptically.

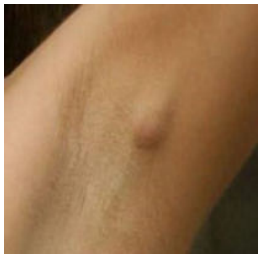
Smears were made from the aspirated material, after air dried and fixation smear was stained with May-Grunwald-Giemsa stain and was observed.

Microscopic examination of aspirated material shows moderately cellular smear with tight clusters of basaloid cells as well as some singly dispered round to oval cells with scanty cytoplasm, medium sized hyperchromatic, mildely irregular nuclei and few cells showing prominant small nucleoli(fig 2 a). Along with basaloid cells, admixed many multinucleated giant cells and keratin debries were also noted(fig 2 b). On the basis of above finding a provisional diagnosis of Pilomatricoma was made and biopsy advised.

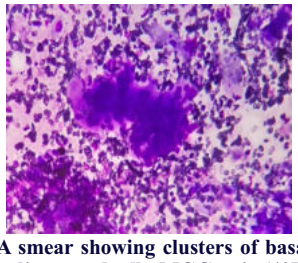
Surgically resected specimen received at our department, was subjected to histopathological examination. Specimen was fixed in 10% formalin, processed and embedded in paraffin blocks, serially cut to get sections of 3-5 microns thickness, stained with haematoxylin & eosin and viewed under microscope. Von Kossa stain was done to look for calcification.

The section examined revealed features of pilomatricoma with islands of basophilic cells and shadow cells, areas of calcification along with giant cell reaction(fig 3 a & b).

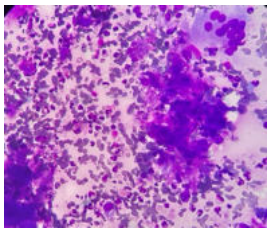
Von-Kossa stain for calcium was also positive(fig 4)



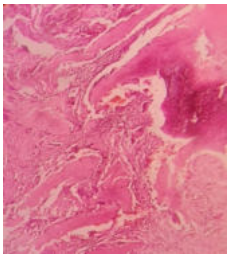
(Fig 1)- Nodular swelling in left axilla.



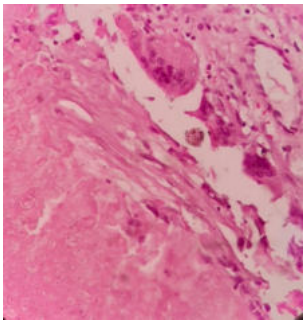
(Fig 2 a) FNA smear showing clusters of basaloid cells (Arrow) along with few disperesed cells. MGG stain (40X)



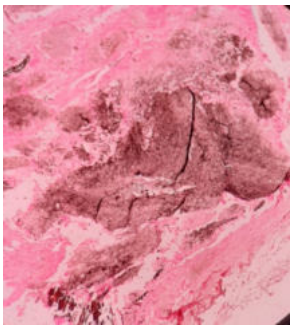
(Fig 2 b) Showing keratin debris (Arrow), & giant cells. MGG stain (40X)



(Fig 3 a) Section showing calcium deposit (Arrow) & anucleate squamous cells (Ghost cells) H&E (10X).



(Fig 3 b) Section Showing anucleate squamous cells (Ghost cells) & giant cells (Arrow) H&E (40X).



(Fig 4) Von kossa stain positive for calcium (Arrow).

DISCUSSION

Pilomatricoma (calcifying epithelioma of Malherbe) is a benign skin appendageal tumor with differentiation towards hair follicle matrix cells. These tumors are most common in 0-20 years of age group[5].

Pilomatricoma is typically found in head and neck region, though it has been reported in upper extremities and other sites. In a large series of 346 pilomatrixomas, about 15.3% were seen in upper extremities[6]. There have been few reports of pilomatricoma occurring in the arm in the existing literature[7,8]. Pilomatrixoma presents usually as a single asymptomatic nodule. The skin over the tumour is mostly normal but occasionally may have a reddish or bluish discoloration[9]. Pilomatrixomas are often misdiagnosed on preoperative evaluation. Wells et al found that the referring diagnosis was incorrect in 94% of cases, and the preoperative diagnosis was incorrect in 57 percent[10]. In an another series of 346 pilomatrixomas, the preoperative diagnosis was accurate and consistent with the pathological diagnosis of pilomatrixoma in only 28.9 percent of cases[6]. Kumaran et al. reported a correct preoperative clinical diagnosis in 46 percent following retrospective review of 78 excised pilomatrixomas[11]. Differential diagnoses of these lesions of pilomatrixoma based on histological features include epidermal inclusion cyst, dermoid cyst, squamous cell carcinoma, basal cell carcinoma, some follicular neoplasms such as trichoblastoma, and giant cell lesions[13]. Yencha MW et al reported calcification in 70-85 percentage of cases[3], we also found Von Kossa stain positive for calcium.

Treatment of choice of pilomatricoma is marginal resection and recurrence rate is low, ranging from 0 to 3 percent[12].

This case has importance because of preoperative diagnosis of pilomatricoma on FNA which was further confirmed on histopathological examination and Von kossa stain.

Conclusion

Pilomatricoma is a benign tumour of the skin, which is superficially located .Clinically this case presented as axillary lymphadenopathy but it was diagnosed as pilomatricoma of axillary region, however pilomatricomas are most commonly seen in head and neck region.

This case is reported because of its location i.e. in axilla and clinically misdiagnosed as axillary lymphadenopathy. Pilomatricoma is more common in female but this was a male patient. We suggest that clinician and cytopathologist should always considered pilomatricoma as differential diagnosis in any lesion which is painless, non-tender, firm in architecture and small in size.

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