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### Case report

## Giant Trichoblastoma of leg: A rare uncommon site presentation.

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#### ABSTRACT

Trichoblastoma is a benign dermal basaloid epithelial and stromal neoplasm showing complex architectural relationship between the epithelium and stroma reminiscent of germinal hair follicle. It shows differentiation toward the primitive hair follicle. It presents as slowly growing, solitary, well-circumscribed nodule, located predominantly in the head and neck with predilection for the scalp. The trunk, proximal extremities and the perianal and genital regions may be affected. It is rarely encountered in the distal extremities. Majority of Trichoblastoma are less than 2 cm in size with occasional examples of giant trichoblastoma sometimes reaching several centimeters.

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#### Introduction

Trichogenic adnexal tumors are rare neoplasms, the vast majority of which are benign have been separated in the past into Trichoblastic fibromas, Trichogenic Trichoblastomas and Trichogenic myxomas according to their relative contents of epithelial and mesenchymal components. [1] Trichoblastoma is well circumscribed symmetrical dermal tumors with no epidermal connection, and in their giant form, extends to subcutis. [2] It is rarely encountered in distal extremities. Any age group except young children is affected, with most patients in the fifth to seventh decade. [3] Here we report a case of giant trichoblastoma presented on lower extremity (knee).

#### CASE REPORT:

A 50 year old Hindu male presented with swelling over medial side of left knee since one year. Swelling was firm to hard in consistency with 5x5x4 cm in size. X-Ray AP -Lateral Left knee show early osteoarthritis changes in left knee joint and soft tissue swelling near knee. The swelling was not attached with bone. There was no history of diabetes or hypertension, no lymphadenopathy, no organomegaly. On systemic examination no abnormality was found. On routine investigation, Hb was 13.2 gm%, TC was 10900/cmm, Platelet count was 3,10,000/cmm. and ESR 14 mm per hour. Clinical diagnosis was (?) malignant soft tissue tumor.

Patient was treated with local excision and tumor was sent for histopathological examination.

On gross examination mass was skin covered, well circumscribed, nodular soft tissue structure, measuring 5x5x4 cm with at one place covering skin showing centrally ulcerated area

measuring 0.4 cm in diameter. Cut surface showed multilobated grayish-white solid areas. [Figure- 1] Multiple sections from the specimen were studied. Microscopic examination showed well-circumscribed mass of epithelial cell forming various-sized lobular nests, lobules and sheets with variable amount of stroma. Cells were oval to elliptical shaped small, basophilic with scanty cytoplasm and peripheral palisading. [Figure-2] Tumor was situated in deeper dermis away from superficial epidermis. [Figure-3] The histopathology diagnosis was given trichoblastoma. It was treated with local excision.

**Figure :** Gross photograph of tumor showing well circumscribed tumor with a uniform white cut surface.



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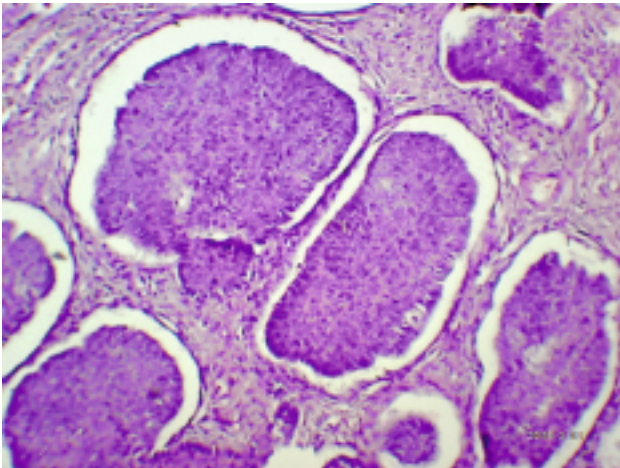
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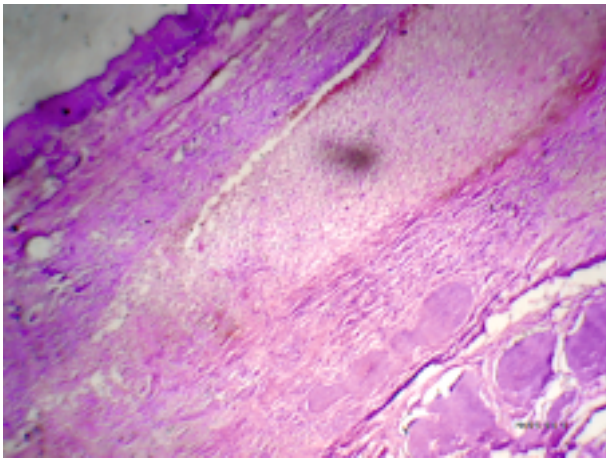
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**Figure 2. Photograph showing epithelial cell forming various-sized lobular nests with stroma and peripheral palisading. (H&E, 40X)**



**Figure 3. Photograph showing Tumor cell nests in deeper dermis away from normal epidermis. (H&E, 10X)**



**Discussion:**

Trichoblastoma is a benign neoplasm with primitive hair follicle formation. [4] These tumors showed an inductive relationship between epithelial and mesenchymal components analogous to hair bulb and dermal papilla, with a topographic organization similar to that seen in the skin. [2,4] In 1970 Headington divided neoplasms of the hair germ (trichogenic tumors) into four groups: purely epithelial without inductive changes (trichoblastomas), mixed epithelial-mesenchymal with inductive changes (Trichoblastic fibromas), mixed epithelial-mesenchymal with inductive changes and advanced hair follicle formations (Trichogenic Trichoblastomas), and predominantly mesenchymal with an abortive dermal hair papilla (Trichogenic myxoma). [4] Ackerman uses the term trichoblastoma for neoplasm that are constituted mostly of follicular germinative cells but also for a variety of trichogenic adnexal tumor which are referred by others as Trichoepithelioma, Trichoblastoma, Trichodiscoma and Trichfibroma. [5] Other authors use the term trichoblastoma(T B) for all benign cutaneous neoplasms that are

constituted mostly of germinative follicular cells, and distinguish five patterns: large nodular, small nodular, cribriform, racemiform, and retiform. [1] Histologic differentiation of trichoblastoma ranges from rudimentary to mature forms of bulbs and papillae, outer and inner root sheaths, and hair. [1]

Trichoblastomas are most commonly mistaken for conventional Trichoepithelioma and Basal cell carcinoma. Trichoblastoma is much larger than the conventional Trichoepithelioma and situated in the deep dermis and subcutaneous tissue while the latter is centered in the mid dermis. [3] Trichoblastoma shows less keratinization and is devoid of epidermal or follicular origin. Trichoblastoma and basal cell carcinoma (BCC) have some overlapping clinical features. But, it is important to distinguish between the two lesions because treatments and prognosis are completely different. The lack of epidermal origin, more conspicuous stroma with prominent papillary mesenchymal bodies and absence of retraction artifact between the tumor epithelium and stroma are useful diagnostic features in excluding basal cell carcinoma.

Trichoblastomas are solitary, small and well-circumscribed lesions that occur in the deep dermis and subcutaneous tissue, on any hair follicle-bearing location but the preferred anatomical sites are the head (especially face and scalp), the neck, and more rarely trunk and proximal extremities. The perianal region also appears to be a site of predilection. It rarely present on lower extremities. They can arise at any age, but are more common in adults (fifth to seventh decades) with no sex predilection. The majority of trichoblastomas are less than 2 cm in size, but as in our case, giant Trichoblastomas can sometimes be seen, reaching several centimeters (up to 10 cm). [6] They should be isolated because they may be confused with malignant neoplasm owing to their size and frequent post excision relapse. Abrupt keratinization within the nests, with keratin cyst formation, is less frequently seen than in conventional trichoblastoma. During surgery, the tumor typically can be shelled out from the adjacent tissue. [6]

This case illustrates a rare clinical variant of Trichoblastoma with unusual site (lower extremity) and unusual size (5X5X4cm). This can be misleading for malignancy. The clinical diagnosis was malignant soft tissue sarcoma. But the slowly progressive course of the tumor in our patient, together with histological benignity led to the correct diagnosis and simple excision is curative.

**CONCLUSION:**

We have described an unusual variety of Trichogenic tumor with relation to site and size. Knowledge of histopathologic features of Trichoblastoma will allow correct management of the patient such benign adnexal tumors must be kept in mind to prevent misdiagnosis as other benign or malignant tumors.

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