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CASE REPORT
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Cutaneous pilar leiomyoma completely treatable by surgical resection, a case report.

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ABSTRACT… Background: Cutaneous pillar leiomyoma (CPL) is a benign skin tumour of errector pili muscles and is rare condition. Clinically it appears as small nodule which are in the form of small groups. These are tender to touch, pressure, cold, and emotional stimuli. Different modalities have been tried to reduce pain and discomfort. Surgery is a treatment of choice in lesion which are very tender and associated with disturbance of social life. The objective of treatment in to achieve complete cure from pain with functional and aesthetic improvement. **Case:** A case of a male patient age 28 years, with multiple cutaneous leiomyomas on the left anterior chest wall and lateral chest wall. On clinical examination there were multiple nodular skin lesions that manifested as brownish erythematous. The lesions increased gradually during the last 2 years, extending to the left lateral chest wall. Complete surgical excision of tumor was done, followed by coverage with split thickness skin graft taken from the thigh. Patient was followed up fortnightly up to six month. Results: After surgical treatment, there was complete pain relief and acceptable cosmetic outcome, which allowed the social reintegration. **Conclusion:** Cutaneous pilus leiomyomas is difficult to treat. The radical resection of tumor is important to resolve the symptoms with prevention of tumor recurrence.

Key words: Cutaneous Leiomyoma, Chest Wall, Pain, Split Thickness Skin Graft.

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INTRODUCTION

Tissue of origin of leiomyoma is smooth muscle and are benign. These tumor takes origin from arrector pili muscle (pili leiomyoma), dartos muscles (dartoid leiomyoma), and angioleiomyoma.[1,2] In 1854 Virchow described this condition.[3] It appears in 2nd to 3rd decade of life in form of papule or nodule with diameter less than 2 cm, colour brownish, smooth surface, and with firm in consistency. On palpation these tumour do not invade to dermis and are fixed to skin.[5] In more than 80% of the multiplicity is common[6], and most commonly affects trunk, extremity and face. Asymmetrical pattern is the most common.[1] Dermatomes distributed linear rows have been described. Lower limbs are common location for isolated tumour. Usually these develop in the papillary dermis but these can also originate from deeper cutaneous planes.[1] Familiar multiple cutaneous leiomyomas described by Kloepfer et al, an autosomal dominant inheritance with incomplete penetrance.[6]

Incidence of tumour is same for all genders, preference specific to ethnicity has not been mentioned in previous studies re.[3] Multiple CPLs can have uterine leiomyoma's. Cutis et uteri leiomyomatosis or Reed's syndrome familiar multiple piloleiomyoma with uterine leiomyoma's.[3] It can have spontaneous pain or aggravated by cold and other stimuli .Pressure on nerve fibers in tumour secondarily leads to pain .Cause of pain can be contraction of muscle fibers.[3] Pain is aggravated in winter season. Important differential diagnosis are Leiomyosarcoma, angiolipoma, glomus tumours, eccrine spiradenoma, neurofibroma, lipoma, and blue nevus.[3,6]

Objective of this case study was to achieve cure from pain with functional and aesthetic improvement.

CASE REPORT

A male patient of 28 years old, presented with multiple cutaneous leiomyomas on the left anterior chest wall and lateral chest wall. On clinical examination there were tender cutaneous nodules with brownish to erythematous in colour. For the last 2 years these lesion increased in size progressively.

Histological examination of incision biopsy revealed two tissue fragments showing skin with an underlying circumscribed nodular lesion showing proliferation of spindle cells in clusters and fascicle. The individual cells have elongated nuclei and moderate amount of cytoplasm. No increased mitotic activity or areas of necrosis are identified in the lesion foci. No malignant evidence was observed in speciman. Immunostains: Desmin: Positive, SMA positive. Preoperative photography was done. All base line blood tests were normal. Excisional of lesion with one cm margin was done to achieve complete clearance followed by split thickness skin graft harvested from thigh. Tie over bolster dressing was done. Donor area was dressed with Bactigrass dressing and dry gauze and sterilized cotton and crepe bandage applied on it. Patient was followed fortnightly for six months.

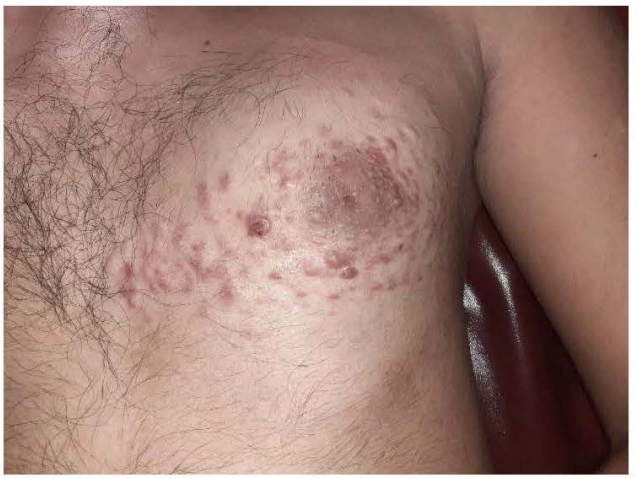

Figure-1. Pre-op Leiomyoma, Rt anterior chest wall.

The postoperative course was uneventful, with complete graft take. Functional and cosmetic outcome was evaluated by consultant plastic surgeon with five year post fellowship experience.

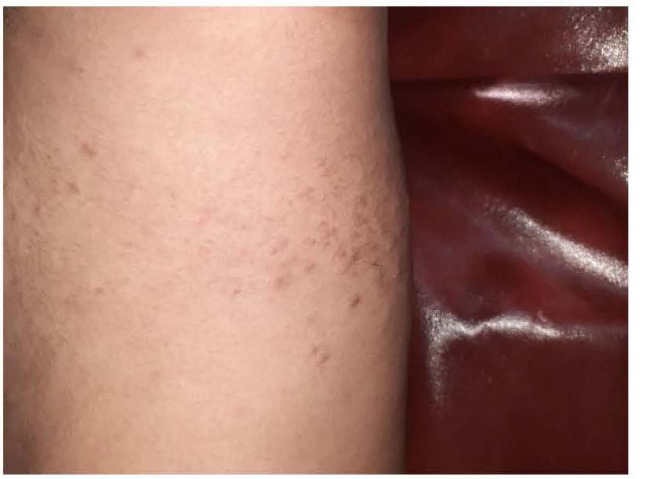

Figure-2. Pre-op:Rt Lateral Chest wall.

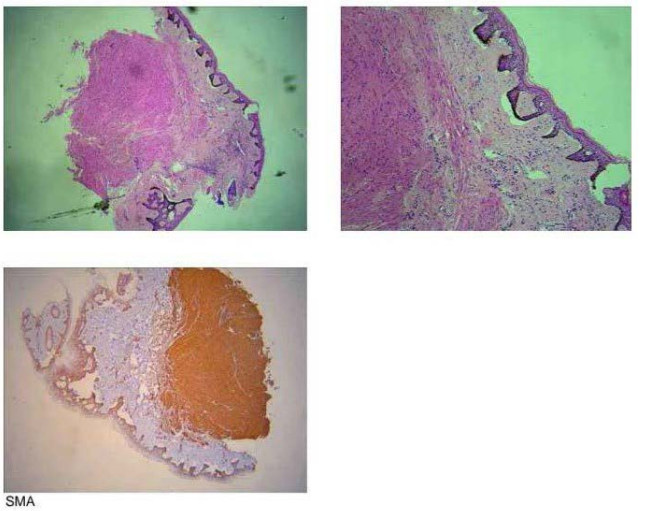

Figure-3. Spindle cell on H& E stain.

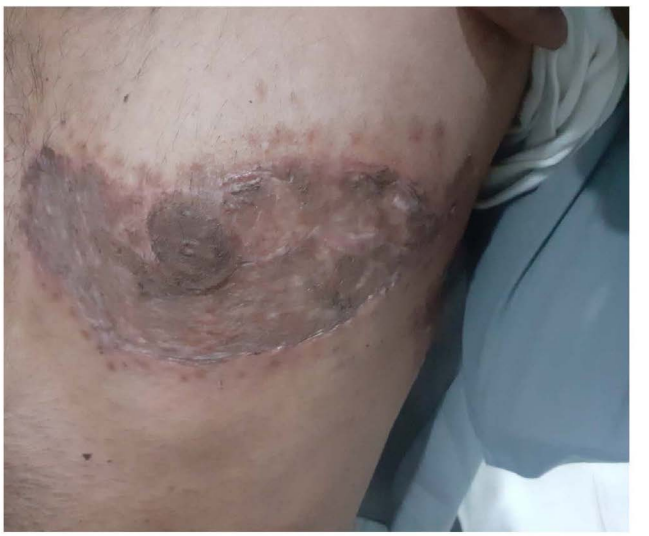

Figure-4. 6 month after Surgery: Rt Anterior Chest Wall.

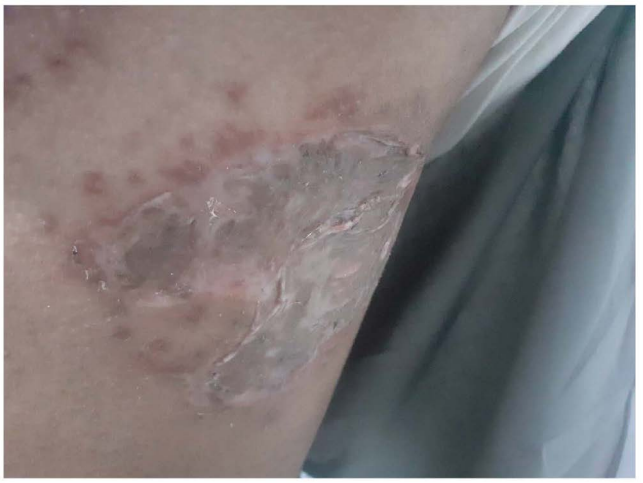

Figure-5. Rt lateral Chest wall: 6 month after Surgery.

Complete resolution of symptoms (pain) in anterior and lateral chest wall area which enabled patient to re-integrate in social life. Quality of chest scars were acceptable and progressively improving with scar therapy. No recurrence was observed over six month of excision.

DISCUSSION

Leiomyomas are benign smooth muscle tumor, most commonly found in the uterus (>90%), skin (<3%), and gastrointestinal tracts (1.5%). Their development in head and neck structures accounts for < 1% of cases. Exact origin of tumor is still uncertain, and they arise from the proliferation of muscle cells or aberrant undifferentiated mesenchyme as described in literature WHO classified this in three types (leiomyoma, angioleiomyoma and epithelioid leiomyoma) .Cutaneous leiomyomas are benign, that present as disseminated, segmental, or isolated form. They have Heterozygous mutation (type-1) while a homozygous gene mutation with expression of segmental defects in the affected segment (type II)[11-1] is also observed. Leiomyoma can originate from the errector pili muscle. These tumours affect adolescent people and usual location in extremities is extensor surface. The lesions are often multiple and very painful. In more than 90% of cases pain is main symptom.

Histologic characteristic of CPL is spindle-shaped cells arranged in clusters that resemble to smooth muscle bundles. These are acapsule and usual location is mid to deep dermis. The nuclei are elongated, monomorphic. Immunohistochemically tests and different Stains are used to identify vascular leiomyoma's (Desmin, vimentin, Masson trichrome, actin, and myosin) Surgical removal is always is a treatment of choice in isolated and large symptomatic cutaneous lesion. Aesthetically the excision of multiple CPLs is a difficult problem and is less effective. The recurrence of these lesions is common in multiple cutaneous leiomyomas. After excision, more than 50% recurrence rate occurs in 6 month time period.[3]

Our case report resulted in complete cure of the lesion with resolution of symptoms and no recurrence observed over six month follow up time.

CONCLUSION

Cutaneous pilus leiomyomas is difficult to treat. The radicle resection of tumor is important to resolve the symptoms with prevention of tumor recurrence. However further studies and follow up time is required to validate this treatment option with the optimal achievement of functional and aesthetic results.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	Iftikhar Alam	Principal contributor, Conceptualization and design of research work, Data collection, Statistical analysis, interpretation of data, Writing of manuscript.	
2	Abdul Malak Mujahid	Drafting literature search, final review, Literature search, statistical analysis, revision of manuscript, review of resutls and final approval.