CASE REPORT

LEIOMYOMA CUTIS WITH MUCOID DEGENERATION

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ABSTRACT: INTRODUCTION: Leiomyoma cutis is an uncommon lesion which presents as a painful cutaneous plaque or nodule. **CASE REPORT:** We report a patient who presented with painful nodule which was clinically diagnosed as leiomyoma and an excision biopsy was sent. In the histopathological examination we found apart from the evidence of leiomyoma, there was also evidence of mucoid degeneration. This mucoid degeneration in a leiomyoma was an unusual association and hence this report.

KEYWORDS: Leiomyoma cutis, mucoid degeneration.

CASE HISTORY: A 40 years old male presented with the complaints of a swelling for the past 3 months. The pain was progressive in nature and became severe at times which subsided with anti-inflammatory drugs. There was no history of any other specific treatment.

On examination there was a 3 cm size swelling with smooth surface present on the flexor aspect of right forearm. It was severely tender.

A clinical diagnosis of leiomyoma cutis was made on the basis of painful nodule. Excision biopsy was done for confirmation.

MACROSCOPY: Single grayish brown soft tissue measuring 1 x 1 cm. Cut section showed a grayish white colored tissue.

MICROSCOPY: Epidermis was unremarkable. In the subepidermal zone, there was a tumor comprising of smooth muscle cells distributed as sweeping interlacing bundles with cigar shaped nuclei (Figure 1 & 2). There was occasional area of mucoid degeneration (Figure 5 & 6) with areas of hyalinization (Figure 3 & 4). Arrectores pilorum muscle (Figure 5 & 6) was prominent. Entire leiomyoma was vaguely circumscribed.

HISTOLOGICAL DIAGNOSIS: Leiomyoma cutis with "Mucoid degeneration".

DISCUSSION:

Leiomyoma cutis is a benign smooth muscle neoplasm and there are 5 types.

1) Multiple piloleiomyomas	}	both arising from
2) Solitary piloleiomyomas		arrectores pilorum muscle
3) Solitary genital leiomyomas	-	arising from dartoic, vulvar or mamillary muscles
4) Solitary angioleiomyomas	-	arising from muscle of veins
5) Leiomyomas with additional mesenchymal elements ¹		

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MULTIPLE PILOLEIOMYOMAS: This is the most common type which presents as small, firm, red to brown intradermal nodules. The commonly affected sites are trunk and extremities. Uterine leiomyoma is rare association¹. They are composed of interlacing bundles of smooth muscle fibers along with intermingled collagen bundles².

SOLITARY PILOLEIOMYOMAS³: Stout described solitary leiomyoma way back in 1937. It presents as intradermal nodules that are larger than multiple piloleiomyoma measuring up to 2cm in diameter. These are more common in females¹.

SOLITARY GENITAL LEIOMYOMAS: These are located on the scrotum, labia majora or rarely on nipples. Genital leiomyomas are intra dermal and are mostly asymptomatic¹.

Tavassoli and Norris in a review of 32 vulvar leiomyomas, noted myxoid change and an epithelioid phenotype of the cells, features not encountered in pilar leiomyomas⁴.

SOLITARY ANGIOLEIOMYOMAS: They are usually subcutaneous and the site most commonly affected is lower extremities. Pain and tenderness are evoked by most angioleiomyomas. They are encapsulated and contain numerous vessels. They contain only small amounts of collagen. They have been divided into a capillary or solid type, a cavernous type and a venous type¹.

LEIOMYOMA WITH ADDITIONAL MESENCHYMAL ELEMENTS

LIPOLEIOMYOMA: They have long intersecting bundles of bland smooth muscle mixed with the additional mesenchymal elements of nests of mature fat cells¹.

CUTANEOUS ANGIOLIPOLEIOMYOMAS: It is a rare acquired asymptomatic tumor, always acral. It has a strong male predominance. It can be considered as angioleiomyoma with fat cell modulation. Elastic lamina completely or partially rims the vascular channels¹.

Conventional uterine leiomyomas can show various types of degeneration. These are found frequently in pelvic region with less prominent vascular pattern. Widely scattered smooth muscle cells in a myxoid matrix are seen. Cells are larger with abundant eosinophilic cytoplasm arranged in small packets or loose particles⁵. Such a type of mucoid degeneration was not described in a case of cutaneous leiomyoma.

Mucoid degeneration is the degeneration observed in solid tumors due to progressive vascular occlusion and ischemia.

Mucoid degeneration in this case may be due to slow progressive ischemia or due to constant handling of the nodule.

DIFFERENTIAL DIAGNOSIS: One differential diagnosis that can be thought of is Fibroma /Neurofibroma. This can be easily found out by morphologic features of cells as follows: Leiomyoma cutis has cigar shaped/plump nuclei and moderate amount of cytoplasm which is pink in colour whereas Neurofibroma has elongated cells with tapering ends and wavy nuclei.

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EQUIPMENT USED:

Nikon Coolpix 8400.

X - denotes the power of the objective.

Stain used – H & E.

Fig 1 : H & E stained . 10x

Fig 2 : H & E stained . 20x

Lesion in subepidermal zone composed of spindle shaped elongated cells with abundant cytoplasm , cigar shaped nuclei ,distributed as sweeping interlacing bundles .

Fig 3 : H & E stained . 10x

Fig 4 : H & E stained . 20x

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Smooth muscle cells seen as sweeping bundles with cigar shaped nuclei and areas of Hyalinization.

Fig 5 : H & E stained . 10x

Fig 6 : H & E stained . 20x

Skin with lesion showing arrector pilorum muscle , pilosebaceous unit , mucoid degeneration (black arrow) of Leiomyoma.

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