

## UNUSUAL PRESENTATIONS OF NEVUS LIPOMATOSUS CUTANEOUS SUPERFICIALIS – A CASE REPORT AND REVIEW OF LITERATURE

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### ABSTRACT

Nevus lipomatosus cutaneus superficialis is an uncommon skin lesion which is characterised by the presence of clusters of mature fat cells among the collagen bundles of dermis. There are two types – Classic and solitary, both of which present with asymptomatic, soft, skin coloured nodules. We present two such cases with the review of their unusual presentations in history.

#### Key words:

Cutaneous Superficialis

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### INTRODUCTION

Nevus lipomatosus cutaneus superficialis (NLCS) is a rare idiopathic benign hamartomatous cutaneous lesion characterized by the presence of mature ectopic fat in the dermis. Hoffman and Zurhelle were the first to report this rare developmental skin anomaly in 1921.<sup>[1]</sup> The classical type clinically presents as asymptomatic, groups of multiple, soft, nontender, skin colored to yellow papules, and nodules which are either sessile or pedunculated with a smooth, wrinkled, or cerebriform surface.<sup>[2]</sup> Herein, we report one such case of classical NLCS in a 40-year-old male having multiple painless swellings over left gluteal region and lower back.

### CASE PRESENTATIONS

**Clinical details:** A 40-year-old male came to the Dermatology department of our hospital with complaints of multiple, painless swellings over his left gluteal region and lower back region for a duration of 10 years. The lesions started small and gradually increased in size and number. No history of trauma/atopy/itching/discharge from the lesion was associated. On examination, multiple, soft, compressive nodules were noted on the left gluteal region and upper left thigh. The lesions were non-tender and some of them showed mild pigmentation.

A 4 mm skin punch biopsy was taken and sent to the Pathology department for histopathological examination.

**Histopathological findings:** Sections from the punch biopsy showed epidermis with increased pigment laden cells in the

basal layer and papillary dermis showed small aggregates of mature adipocytes amongst the collagen bundles, along with few dilated blood vessels.

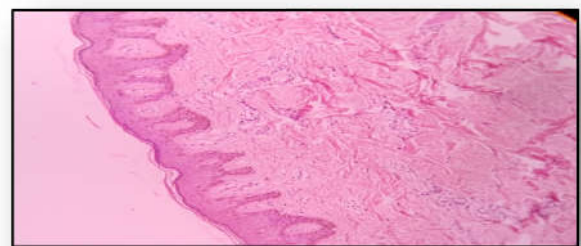


Fig 1 Mature adipocytes surrounding the capillaries noted in the papillary dermis, 10X

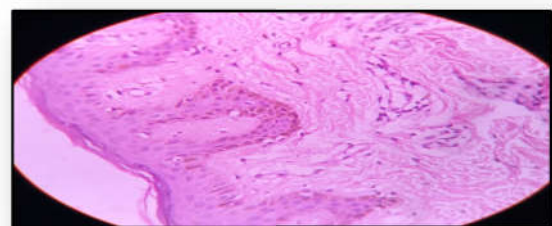


Fig 2 Superficial dermis showing mature adipocytes with large vacuolated cytoplasm and eccentrically placed nuclei, found in clusters and singles, 40x

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Considering the above features, a diagnosis of Nevus Lipomatosus superficialis was given.

## DISCUSSION

Nevus lipomatosus as the name implies represents a nevoid anomaly characterized by the presence of mature ectopic fat in the dermis. Classical NLCS has a predilection for pelvic girdles, buttocks, gluteal region, back, and abdomen. The lesion may be present at birth or infancy (nevus angiolipomatosus of Howell) or may emerge in the first two decades.<sup>[3]</sup> The solitary lesions have no gender and site predilection and may occur at unusual site like scalp and clitoris have been reported.<sup>[2],[3]</sup>

The etiopathogenesis of NLCS is still unknown. Many theories have been postulated. Hoffman and Zurhelle proposed that it is the degenerative changes in the dermal collagen and elastic tissue which causes the deposition of adipose tissue in the dermis.<sup>[3]</sup> Other hypothesis includes adipose metaplasia of dermal connective tissue or representing a true nevus resulting from focal heterotopic development during embryonic life. Electron microscopy supports the view that they may originate from the pericytes as immature lipocytes containing numerous small lipid droplets are found in the vicinity of capillaries.<sup>[4]</sup> Deletion of 2p24 in the NLCS has been reported recently.<sup>[5]</sup>

Differential diagnosis of NLCS includes nevus sebaceous, skin tag or fibroepithelial polyp, neurofibroma, lymphangioma, lipofibroma, focal dermal hypoplasia (Goltz syndrome), lipomatosus, and Michelin tire baby syndrome.<sup>[2],[4]</sup> Histopathological examination helps in the differentiation. There is absence of fat cells in the dermis in skin tag. In lipofibroma skin, appendages are absent in the dermis, but a dermal collection of fat cells are present.

Goltz syndrome is associated with several ectodermal and mesodermal deformities, and clinically, the patient presents with syndactyly, hypoplasia of nails, teeth, and hairs. Microscopically, there is extreme attenuation of collagen and absence of skin appendages in the dermis. There is no continuity of the fat cells with the subcutis in lipomatosus.<sup>[6]</sup>

Recurrences and malignant transformations are rare, and therefore, treatment is medically not required. A surgical incision is curative though not necessary done only for cosmetic purposes.<sup>[2]</sup>

## CONCLUSION

To conclude, the pathologist should be aware of this rare cutaneous hamartomatous lesion of the skin, and early diagnosis is required so to eliminate the extensive reconstruction of the defect and to reduce the postoperative scar formation.

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