



## SOLITARY NEVUS LIPOMATOUS SUPERFICIALIS: A TWIN CASE REPORT

### Pathology

**Pretty Singh**

Senior Resident, Department of Pathology, S.G.P.G.I.M.S., Lucknow (Uttar Pradesh) 226014

### ABSTRACT

Nevus lipomatosus superficialis (NLCS) is an uncommon benign hamartomatous skin lesion characterised by the presence of lobules of mature adipose tissue among the collagen bundles of the dermis. We report two such cases, who presented to our department in a period of two months with solitary form of this rare skin malformation.

### KEYWORDS

Nevus lipomatosus superficialis, benign hamartoma, cutaneous hamartoma, skin lesion, adipocytes.

### INTRODUCTION:

NLCS is a rare cutaneous hamartoma of adipocytes that is characterized by the presence of mature adipocytes in papillary and reticular dermis. It appears in two forms; classical and solitary. we present two cases of solitary NLCS who presented to our department within a period of two months.

### CASE PRESENTATION:

**CASE 1:** A 54 year old female presented with history of single, skin-colored, pedunculated, soft, asymptomatic nodule of size 2 × 2 cm on the posterior aspect of the right thigh for 10 years. The patient complained of off and on itching and ulceration and occasional bleeding episodes due to recurrent friction. There was no history of any neurological deficit or sudden increase in size of the lesion. General physical examination did not reveal any cafe-au-lait spots, loss of sensation or sudden increase in the size. Skin overlying the lesion was discolored and ulcerated. Thus the patient was posted for excision.

**CASE 2:** A similar case of a 33 year old male who presented with a warty solitary lesion of the back, which measured 1.2x1cm. It was gradually progressive in size, soft and non-pedunculated. It was not associated with any sudden increase in size or pain. However, there was mild itching and ooze due to friction with clothes. Localized excision of the lesion was done and sent to us for evaluation.

Excised specimens were sent for histopathological evaluation. The specimens were skin covered polypoidal masses, measuring 3x2x2cm (Case1 Fig 1,2) and 1x1x0.5cm (Case 2). Cut surface of the polypoidal mass showed fat underlying (Fig 2, case1) the skin and extending upto the subcutis. Representative sections were taken and standard H&E stained slides were evaluated. On histopathological examination, sections showed a polypoidal mass covered with a thinned out attenuated keratinized stratified squamous epithelium, with areas of ulceration. The underlying zone showed thinned out collagenized superficial dermis with entrapped largely unremarkable dermal appendages. The lower dermis was completely replaced by mature adipose tissue which was largely un-encapsulated. Intervening collagenous bands and thin walled congested blood vessel were also noted. The junction of the adipose tissue and the dermal collagen showed proliferating thin walled congested blood vessels associated with mononuclear inflammatory infiltrate. Thus a diagnosis "nevus lipomatosus superficialis" was rendered for both the cases. (Fig3-6:case 1,2)

**DISCUSSION:** Nevus lipomatosus superficialis is a rare benign idiopathic skin, hamartomatous malformation characterized by the presence of ectopic mature adipose tissue in the dermis. It was first described in 1921 by Hoffman and Zurhelle.(1) Nevus lipomatosus superficialis is more commonly present from birth, but can appear later in life; there is neither sex predilection nor familial trend in this disorder. Two clinical types are known: the classical type and the solitary type. In the classical type, lesions are congenital or they develop usually during the first two to three decades of life. It comprises of multiple, soft, nontender, pedunculated, cerebriform, skin-colored papules or plaques, usually situated in the region of pelvic girdle. These lesions are usually slow growing and can reach upto large size if left untreated (2,3). They usually remain static in size.(4) Occasionally, they may ulcerate, due to external trauma or ischemia. The solitary form usually occurs after the age of 20 years, presenting with a single nodular lesion with no site of predilection.

The exact etiopathogenesis of NLCS is not yet understood. There are

multiple hypotheses regarding development of this neoplasm. The proposed pathogenesis includes adipose metaplasia in dermal connective tissue, developmental displacement of adipose tissue; alternatively, the lesions could be explained by the possible origin of adipocytes from the pericytes of dermal vessels. (5,6) Few authors have depicted relation of 2p24 deletion was found in nevus lipomatosus superficialis.(7)

Clinically, the differential diagnosis includes neurofibromatosis, hemangioma or fibroepithelial polyp all of which can be distinguished histologically.

Treatment is usually done for cosmetic reasons and simple surgical excision is curative.(8,9) These lesions are generally not associated with systemic abnormalities and development of malignancies in this abnormality have not been reported.

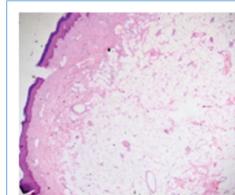
**CONCLUSION:** Such cases though not aggressive, rather simple are interesting due to their rare occurrence. Two such similar cases presenting within the duration of two months, has been a rarity in our department, in history and so forth.



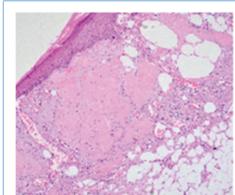
Case1: Polypoidal lesion with hyperkeratinized to ulcerated surface.



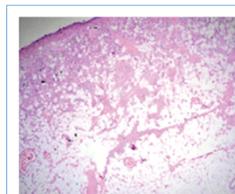
Case 1: Cut section of gross, fatty areas in dermis extending to deeper planes.



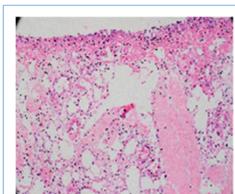
Case 1: H&E: (200x)Mature adipose tissue in the superficial dermis



Case 1: (400x) Abrupt collagenization in the superficial dermis, with infiltrative adipose tissue border.



Case 2:(200x) Ulcerated epithelium, superficial dermis shows infiltrative mature adipose tissue, proliferating blood vessels and inflammatory infiltrate.



Case 2: (400x): Ulcerated epithelium, thin walled blood vessels and abrupt collagenization.

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