

Nevus Lipomatosus Superficialis on the Left Leg

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Nevus lipomatosus superficialis presented as soft, yellowish papules or cerebriform plaques occurring usually on the buttock or thigh, less often on the ear or scalp. We herein report a case of nevus lipomatosus superficialis on the leg. (*Ann Dermatol* 16(1) 28~30, 2004)

Key Words: Nevus lipomatosus superficialis, Leg

Nevus lipomatosus superficialis is a fairly uncommon lesion showing groups of soft, flattened papules or nodules that have smooth or wrinkled surfaces and are skin-colored or pale yellow. Characteristically, the lesions are linearly distributed on one hip or buttock, from where they may overlap onto the adjacent skin of the back or the upper thigh. Other areas, such as the thorax, abdomen, scalp or leg, are only rarely affected. We report a case of nevus lipomatosus superficialis of classical type developed on the leg.

CASE REPORT

A 28-year-old woman presented with linearly distributed, yellowish papules on the inner aspect of left lower leg. These lesions developed during the second decade of life (Fig. 1). She was treated at a private clinic by CO₂ ablation and intralesional injection presumptive of triamcinolon with minimal improvement. Physical examination revealed linearly distributed yellowish papules covered with cicatricial epidermis caused by CO₂ ablation. Laboratory findings including complete blood count, blood chemistry, serum lipid profiles, and urinalysis were within normal limits. On histopathological examina-

tion, mature fat cells were found to be embedded among the collagen bundles in the reticular dermis (Fig. 2). The individual fat cells were mature and normal size. Total excisional surgery was not considered in our case mainly due to patient's disagreement.

DISCUSSION

Nevus lipomatosus superficialis was first described in 1921 by Hoffmann and Zurhelle¹ and consists of an extremely rare idiopathic hamartomatous disorder, characterized histologically by the constant



Fig. 1. Linearly distributed, yellowish papules on the inner aspect of left leg.

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presence of isolated adipocytes or mature adipose tissue in the dermis without connection with the hypodermis.

It is classified into two clinical types: a multiple (classic) type and a solitary type². In the multiple type, the lesions are seen at birth or develop within the first three decades of life and rarely in the elderly.

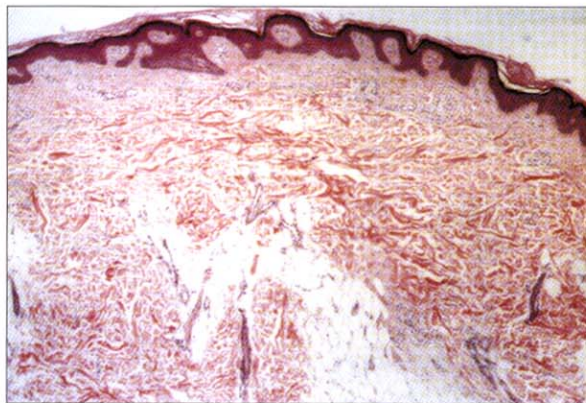


Fig. 2. Mature fat cells embedded among the collagen bundles in the reticular dermis (H&E, $\times 40$).

Morphologically, the lesions are soft, nontender, skin colored to yellow papules and nodules, which often coalesce into plaques varying in size. Their surface is either smooth or wrinkled. These lesions usually remain static, although some continue to extend for many years. The distribution is usually linear, systematized, zosteriform, or along the lines of skin folds. The disorder has a predilection for the pelvic girdle, lumbar area, buttocks, and the upper part of the thighs, with only a few cases occurring on the scalp, face, shoulder, thorax, and abdomen³. The solitary type⁴ consists of a solitary papule or nodule that is indistinguishable with a fibrolipoma or a giant skin tag. It has no favored location and usually appears during the third to sixth decades of life. Our patient presented with linearly distributed, nontender, yellow papules as a multiple type and the lesion developed on the inner aspect of the left leg. Nevus lipomatosus superficialis occurs less often on the leg. Cases reported previously in Korean literature are summarized in Table 1. The lesions in the reported cases occurred mainly on the buttocks, lower back, and thigh and only two cases occurred on the scalp

Table 1. Cases of Classic Type of Nevus Lipomatosus Superficialis Reported in the Korean Literature

Case No.	Sex/Age	Age of Onset	Location	Reference
1	F/37	27	buttock	Kim et al. ⁵
2	M/19	14	lower back, buttock, scalp	Park et al. ⁶
3	M/16	10	buttock	Chung et al. ⁷
4	M/17	8	coccyx	Chae et al. ⁸
5	F/25	10	thigh	Bang et al. ⁹
6	M/15	11	lower back, coccyx	
7	F/24	15	buttock, thigh	Lim et al. ¹⁰
8	M/23	birth	lower back	Bae et al. ¹¹
9	F/35	27	coccyx	
10	F/20	12	lower back	Oh et al. ¹²
11	F/24	19	thigh	
12	F/56	43	buttock	Shim et al. ¹³
13	F/23	13	buttock	
14	M/6	birth	thigh	Kwon et al. ¹⁴
15	F/20	8	shoulder	
16	F/36	21	lower back	Kim et al. ¹⁵
17	M/31	21	back	
18	F/28	18	lower leg	Present case

and shoulder, respectively. To our knowledge, this is the first report of the classic type with multiple lesions in a zosteriform distribution occurring characteristically on the leg in the Korean literature.

Histopathological examination is frequently required for diagnosis of nevus lipomatosus superficialis¹⁶. The presence of isolated adipocytes or mature adipose tissue in the dermis without connection with the hypodermis is necessary for the diagnosis of this disorder. Histological examination in our case revealed clusters of mature fat cells in the dermis without connection with the subcutaneous fat tissue.

Several theories have been proposed for the origin of adipose tissue in nevus lipomatosus superficialis¹⁷: (1) the deposition of fat tissue in the dermis is secondary to some degenerative changes in connective tissue, (2) fat cells result from focal heterotopic development of adipose tissue in the dermis, (3) adipose tissue originates as 'predispose' tissue derived from the blood vessels, and (4) recent electron microscopic studies also suggested that the fat cells derive from a small precursor cell arising from, or lying in close proximity to, blood vessels. However, the true origin of this entity remains unclear.

This is a rare case of nevus lipomatosus superficialis appearing on the leg.

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