

NAEVUS LIPOMATOSUS CUTANEOUS SUPERFICIALIS (A report of three cases)

Kamla Gupta, A K Gupta and Mahesh Gupta

Three female patients aged 30, 55 and 4 years had large tumour-like masses which were progressively increasing in size for the last 4, 5 and 4 years respectively. Excision of these lesions and histopathology revealed mature fat cells in the middle and lower dermis, interspersed between collagen bundles and surrounding the blood vessels. These findings are characteristic of naevus lipomatosus cutaneous superficialis.

Key words : Naevus lipomatosus cutaneous superficialis.

Naevus lipomatosus cutaneous superficialis is a rare developmental anomaly of the skin. Since its original description by Hoffmann and Zurhelle,¹ only a limited number of cases have been described in the world literature.^{2,3} From India, only two cases of this condition have so far been reported.^{4,5} The present report of three cases is a further addition to the small number of cases of this rare anomaly.

Case Reports

Case 1

A 30-year-old female had a soft tissue swelling on the back of right thigh for the last four years. The swelling was gradually progressive and had a papillomatous skin surface. The swelling was excised under the clinical diagnosis of papilloma. On gross examination, the skin-covered soft tissue mass measured 17×8×4 cm. The skin was wrinkled, convoluted and papillomatous (Fig. 1). Cut surface showed fat extending up to the skin.

Case 2

A 55-year-old female complained of gradually progressive swelling on the back of left buttock for the last five years. The swelling was painless, non-tender and had a wrinkled skin surface. A clinical diagnosis of squamous cell papilloma

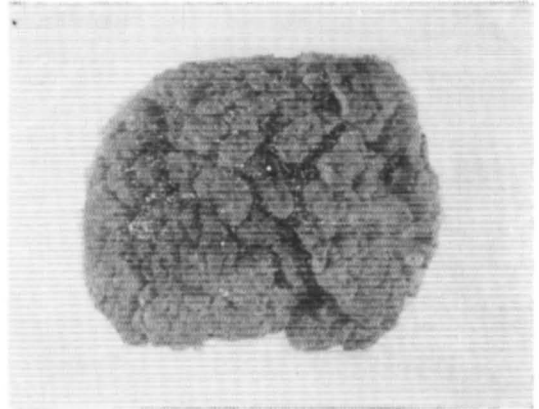


Fig. 1. Lobulated external appearance of the naevus lipomatosus cutaneous superficialis.

was made and the swelling was excised. On gross examination, the oval skin-covered soft tissue mass measured 4 × 2 × 1.5 cm, and was soft in consistency. Skin was slightly papillomatous and showed fat on cut surface.

Case 3

A female child aged four years had a swelling on the lower part of left thigh adjoining the knee region since birth. The swelling was gradually increasing in size and was lobulated. A clinical diagnosis of neurofibroma was made and it was excised. Gross examination showed a skin-covered soft tumour-like mass measuring 7 × 5 × 3 cm. The mass was deeply lobulated. Each lobule was 1-3 cm in diameter. Cut surface showed fat (Fig. 2).

From the Departments of Pathology and Surgery, Govt. Medical College and Rajindra Hospital, Patiala, India.

Address correspondence to : Dr. Kamla Gupta.

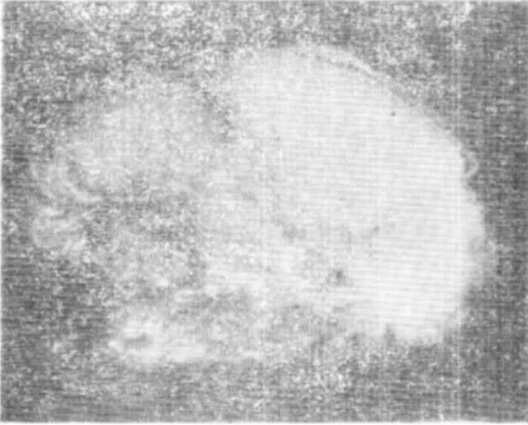


Fig. 2. Cut surface of the specimen showing fatty tissue extending upto epidermis.

Haematoxylin and eosin stained sections from all the three cases revealed groups of mature fat cells in the middle and lower parts of the dermis, often extending up to the subpapillary zone. The fat was interspersed with collagen bundles and at places, it seemed to surround the blood vessels (Fig. 3). Epidermis showed hyperkeratosis, acanthosis, papillomatosis, follicular plugging and hyperpigmentation of the basal layer.

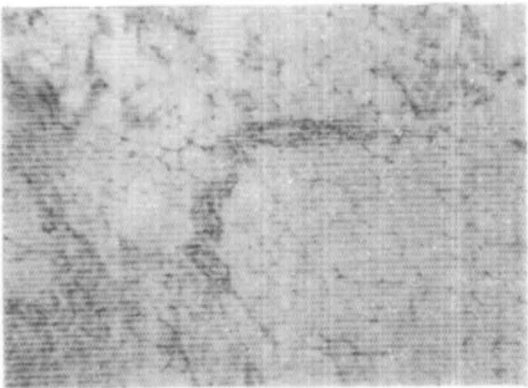


Fig. 3. Fatty tissue interspersed with collagen bundles and surrounding the blood vessels. (H and E $\times 100$).

Comments

Naevus lipomatosus cutaneus superficialis is a rare condition with distinctive clinical and histopathological features. Two clinical types are described, i. e. the large plaque type, and the solitary nodular type. No sex preponderance has been mentioned in the literature. However, all the three cases seen by us were females and all were of solitary nodular type.

The condition is considered to be a naevoid disorder since it frequently starts at birth or early childhood, though sometimes it may appear much later, even in old age. Sites of predilection include buttocks, lower part of the back and upper thighs.

Microscopically, groups or strands of mature fat cells are found embedded among the collagen bundles in the middle and lower dermis. Sometimes, fat may extend upto the subpapillary zone. In deeper dermis, fat cells may surround large blood vessels. Serial sections may show connections of the dermal aggregates of fat with subcutaneous fat. Epidermal changes are secondary and include hyperkeratosis, acanthosis and pigmentation of basal layer.

Histogenesis of this condition is still disputed. Formerly it was believed to be caused by fatty degeneration of collagen tissue, but it is now considered to be a naevoid anomaly showing presence of ectopic fat in dermis. In early lesions, mononuclear cells differentiating into lipoblasts have been identified around the proliferating capillaries. This finding suggests that fat cells in this condition are derived from the perivascular mesenchymal tissue, recapitulating the way the fat develops in the embryonic life.³

References

1. Hoffmann E and Zurhelle E : *Über Cinen naevus lipomatides cutaneus superficialis derlinken glutalgend*, Arch Dermatol Syphilol, 1921; 130 : 327-333 (quoted by Siddappa et al, 1982).
2. Finley AG and Musso LA : *Naevus lipomatosus cutaneus superficialis (Hoffmann-Zurhelle)*, Brit J Dermatol, 1972; 87 : 557-564.

3. Jones EW, Marks R and Pongschirun D : Naevus superficialis lipomatosus (A clinicopathological report of twenty cases), *Brit J Dermatol*, 1975; 93 : 121-133.
 4. Shroff HJ, Moses JM, Gadgil RK et al : Naevus lipomatosus cutaneous superficialis, *Ind J Dermatol Venereol Leprol*, 1971; 37 : 227-230.
 5. Siddappa K, Mahipal OA and Chandrasekhar HR : Naevus lipomatosus cutaneous superficialis (Case report), *Ind J Dermatol Venereol Leprol*, 1982; 48 : 282-286.
-