CASE REPORT

Beyond the Surface: A Chronic Polypoid Mass Over the Lower Back That Finally Spoke!

Archana Shetty[1], Arjun Rao[1], Sharath Kumar[2], Aparna Muralidhar[1], Zeeshan Sheik[1]

ABSTRACT

Nevus Lipomatosus Superficialis (NLS) is an uncommon benign hamartomatous lesion characterized by ectopic adipose tissue within the dermis. Accurate diagnosis relies on histopathology, as clinical features may overlap with other common benign cutaneous tumours having fibrous and adipose tissues. We report a case of a 60-year-old male who presented with a longstanding, asymptomatic, soft, skin-covered polypoid mass over the lower back. The lesion, present for fifty years had progressively enlarged in size over several years without associated pain or ulceration. Clinical examination revealed a soft, cerebriform mass with a wrinkled surface. Histopathological analysis demonstrated mature adipocytes embedded within the collagenous dermis, confirming the diagnosis of NLS. This case highlights the importance of considering NLS in the differential diagnosis of soft, cutaneous lesions in adults. Recognition of this entity is critical to prevent misinterpretation. Complete surgical excision remains the treatment of choice and has an excellent prognosis with low recurrence rates.

Keywords: Adipose tissue, hamartoma, lipoma, polyps.

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INTRODUCTION

Polypoid swellings of skin comprise a histologically diverse group of lesions. While majority are benign, categorizing them often becomes a conundrum owing to their diversified tissue composition. Majority of lesions are a combination of adipose and fibrous tissue , but depending on the site, predominant tissue and presence of supportive features the diagnostic terminologies may vary. Nevus lipomatosus superficialis a type of hamartomatous lesion of adipocytes is one such less known entity misinterpreted as more commoner lesions such as skin tags, lipofibromas, haemangiomas and focal dermal hypoplasia.[1,2] Recognizing the entity correctly helps ensure complete removal and appropriate patient counselling ensuring that the patient record accurately reflects the true pathology encountered. This case highlights the importance of histopathological examination in establishing the correct diagnosis when clinical presentation alone may be misleading.

CASE REPORT

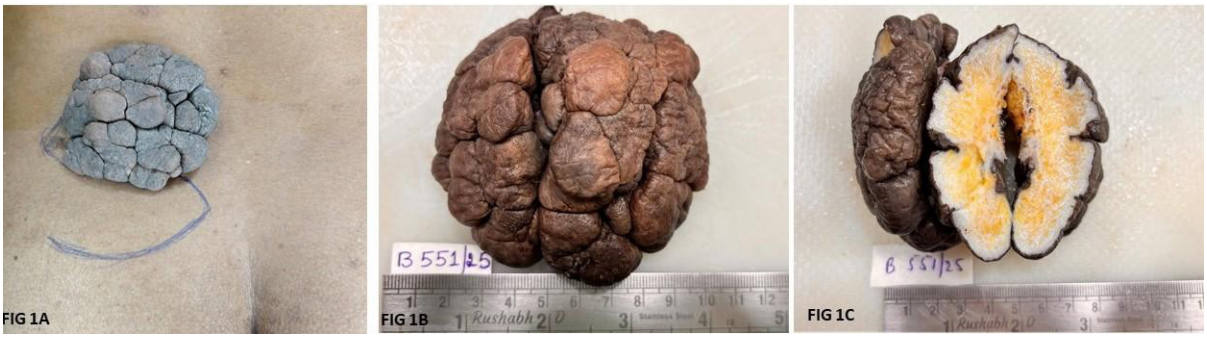
A 60-year old male farmer visited the surgical out-patient department (OPD) with a protruding swelling in the region of lower back, which had been present since fifty years. The swelling which was gradually growing and causing discomfort to the patient due to friction while lying down on

1. Department of Pathology, Dr. Chandramma Dayananda Sagar Institute of Medical Education & Research, Dayananda Sagar University, Ramanagara, Karnataka 562112, India.
2. Department of Surgery, Dr. Chandramma Dayananda Sagar Institute of Medical Education & Research, Dayananda Sagar University, Ramanagara, Karnataka 562112, India.

Correspondence to: Dr. Aparna Muralidhar, Department of Pathology, Dr. Chandramma Dayananda Sagar Institute of Medical Education & Research, Dayananda Sagar University, Ramanagara, Karnataka 562112, India.

the back. There were no other similar swellings anywhere else on the body. Systemic examination and routine laboratory tests were within normal limits. On examination, the lesion was superficial, pedunculated, exophytic, polypoid mass with filiform projections measuring 8 cms across. No subcutaneous tissue involvement was noted. Overlying skin was hyperpigmented. Owing to the large size, rapid increase in size and local discomfort a surgical excision was planned. The patient underwent wide surgical excision under local anaesthesia. A drain was placed as the size of the incision was large. The specimen which was submitted for histopathological examination measured 8 cm × 5 cm × 4 cm. Cut section was soft to firm with yellow to white fibrous areas (Figure 1).

Figure 1: A) a polypoid swelling over lower back;



B) gross of the mass showing cerebriform surface with ridges and grooves; C) cut section showing yellow and white fibrous areas.

Microscopy showed a lining of stratified squamous epithelium exhibiting hyperkeratosis, parakeratosis, papillomatosis and with a few keratotic cysts. Increased pigmentation of the basal layer was noted. Beneath the epithelium was predominantly mature adipose tissue admixed with fibrous tissue. Foci of congested blood vessels were noted. Focal myxoid change and entrapped adnexal glands surrounded by adipose tissue were also present (Figure 2). Correlating with history , clinical findings, plane of lesion and histopathological findings a final diagnosis of Nevus Lipomatosis Superficialis was conferred. After three days, drain was removed and patient was asked to come for a follow up during which sutures were removed as wound healing was satisfactory.

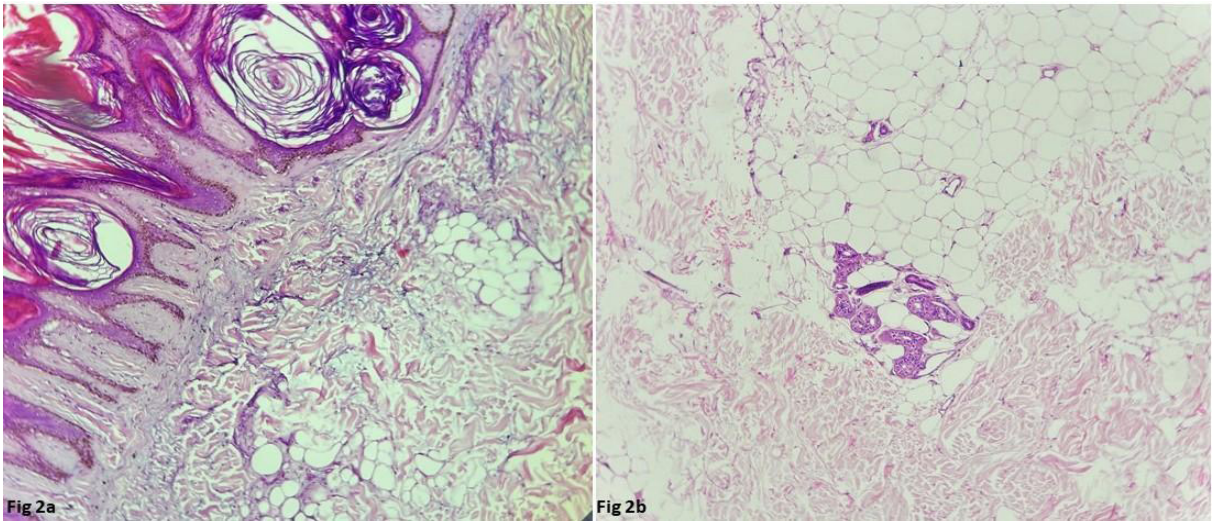


Figure 2: Microphotograph showing – a) lining of stratified squamous epithelium with acanthosis, papillomatosis and basal cell hyperplasia; b) mature adipocyte lobules surrounding adnexa and scattered fibrous tissue (H&E stain; × 400 magnification).

DISCUSSION

Nevus Lipomatosis Superficialis (NLS) is a rare hamartomatous lesion of the skin presenting as multiple or solitary papules, usually occurring on the lower trunk, buttocks, or upper thighs. Patients' history reveals these hamartomatous lesions to be present since birth or to have appeared in the first two decades. Postulated theories of development are - adipose metaplasia occurring as a degenerative change in the connective tissue of dermis, heterotopia of adipocytes, hamartomatous changes of mesodermal adipocytes and development of mature adipocytes from primitive lipoblasts by mesenchymal perivascular cells. Given that giant NLS formations are not medically harmful, treatment pursued is generally a result of the patient's cosmetic concerns.[3] The histopathology of NLS is characterized by the presence of ectopic fat in the reticular and papillary dermis, making upto 10-50% of the lesion. This usually does not extend to the subcutaneous adipose tissue. The adipocytes usually form aggregates around merocrine glands or blood vessels but may be present between collagen bundles as well. Increased pigmentation, acanthosis, and basket weave hyperkeratosis have been seen in the epidermis as in our case.[4] Adnexal structures are scattered in the lesion and though reduced in number are histologically normal.[5] NLS should be differentiated from other commoner lesions like lipofibromas, skin tags or fibroepithelial polyps, hemangiomas, lymphangiomas, and focal dermal hypoplasia.[6,7] Fibroepithelial polyps (FEPs) or acrochordons are benign skin tumors of ectodermal and mesenchymal origin. Most common locations are neck, axilla, submandibular, inguinal region or in the genital tract. Insulin resistance and obesity have been proposed as contributory factors that promote the growth of FEPs which can rarely grow to huge sizes. The term 'acrochordon' is used for the smaller lesions, while FEP is generally used for larger lesions.[8] One proposed theory suggests that these lesions may represent a hamartomatous growth of the lamina propria that slowly enlarges over time. The other differential considered was fibrolipoma- a microscopic variant of lipoma, characterized by a significant fibrous component interspersed among lobules of fat cells and entrapped adnexal structures. The World Health Organization classification categorizes fibrolipoma as a histological variant of conventional lipoma. Commonly affected sites are buttocks and upper thighs. However back, shoulders, knees, neck , ears and regions subjected to pressure may be affected.[9] Lipofibromas grossly can be sessile or pedunculated. These are typically asymptomatic; however, their expansion may result in the development of symptoms that impede normal daily functioning. Histologically they consist of mature adipocytes blended with fibrous connective tissue.[10] Points of differentiation between the three are given in the Table 1.

Table 1: Differentiating features of fibroepithelial polyp, fibrolipoma, and nevus lipomatosus[8-10]

Features	Fibroepithelial Polyp	Fibrolipoma	Nevus Lipomatosus
Typical Site	Neck, axilla, groin	Subcutaneous tissue (neck, back, shoulders)	Lower back, buttocks, pelvic girdle
Onset	Middle-aged to elderly	Adults	Congenital or early childhood
Clinical Appearance	Soft, pedunculated, skin-colored lesion	Firm, lobulated subcutaneous mass	Soft, non-tender papules or nodules that are smooth, wrinkled, or have a cerebriform (brain-like) appearance with ridges and grooves
Histopathology	Acanthotic epithelium with fibrovascular core, entrapped adnexa, no adipose tissue	Epidermis normal or thinned , abundant mature adipocytes with dense fibrous stroma, often encapsulated	Normal or pappilomatosis of epidermis, adipose tissue without encapsulation admixed with fibrous stroma, no encapsulation, reduced adnexal structures

To summarize, in literature there are multiple names for lesions having similar or overlapping histopathological findings but differing in clinical presentations. In the case presented, gross appearance, plane of swelling, site and clinical history coupled with supporting microscopic features favoured a diagnosis of nevus lipomatosis superficialis.

CONCLUSION

This case underscores the importance of considering nevus lipomatosis superficialis (NLS) in the differential diagnosis of long standing soft polypoid skin lesions. Histopathological examination clinched the diagnosis in our case. Awareness of this entity is crucial to distinguish it from other common cutaneous lesions such as lipomas, fibroepithelial polyps, or connective tissue nevi. Early recognition and accurate diagnosis prevent unnecessary interventions, and treatment is primarily for cosmetic purposes or when symptomatic.

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