LARGE PEDUNCULATED LIPOFIBROMA OF THE THIGH: A RARE ENTITY

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Abstract: Pedunculated lipofibroma is a rare form of nevus lipomatous cutaneous superficialis. They are usually solitary lesions found around the thighs, buttocks, and trunk; thought to have a predilection for pressure areas. There are two types of lipofibromas; sessile or pedunculated. They are mostly asymptomatic but can cause symptoms as they grow larger affecting daily activities. Treatment is not indicated in smaller lesions, except for cosmetic purposes. Herein we present this rare benign lesion with an unusually large size.

INTRODUCTION

Pedunculated lipofibroma, also known as a solitary form of Nevus lipomatosus cutaneous superficialis, is a relatively rare form of benign connective tissue proliferation that develops as a result of ectopic adipose tissue in the dermis [1]. Lipofibromas usually appear as large, solitary, slow-growing, skin colored, compressible, pedunculated to dome-shaped, nodules or plaques and occur on the buttocks, upper thighs, and non-pelvic areas, such as the axillae, arms, knees, ears, and scalp [1].

CASE PRESENTATION

A 28-year-old female presented to our surgical clinic with a 2-year history of right popliteal swelling that progressively increased in size over time. The swelling was associated with excoriations on both sides that were in contact with her thighs on walking. Over time, the swelling grew large enough to hang from a stalk attached to her right popliteal area with no discharge or pain. She visited several peripheral hospitals with no relief or cure and was then referred to our institute for further management.

On examination, she was nutritionally well, not pale, with vitals within normal range. On local examination, there was a large pedunculated mass arising from the right popliteal region, measuring 8 x 6 cm, with regular margins, skin overlying the swelling had excoriation marks. The mass was firm and mobile from the stalk, with no tenderness on palpation (Fig. 1). Examination of other systems was essentially normal.

Her laboratory findings revealed a normal leukocyte count of 5 x 10^9/L, a hemoglobin of 12 g/dl and a normal platelet count of 389 x 10^9/L. After counseling, the mass was resected as a whole with its stalk under local anaesthesia and submitted for histopathology analysis (Fig. 1).
Microscopically, the histopathological sections showed stratified squamous epithelium. The subepithelial tissue shows lobules of mature adipose tissue separated by thin fibrous septae and congested vessels and gave an impression of Benign Lipomatous Lesion favouring lipoma in right popliteal region. She was then followed after 3 months in our outpatient clinic where the wound had healed well with no swelling in the excised area suggesting no recurrence.

DISCUSSION

Lipomas are the most common benign soft-tissue tumors and have many subtypes including lipofibroma, angiolipoma, myxoid lipoma, spindle cell lipoma, pleomorphic lipomas and intramuscular lipoma [2]. Lipofibroma is a rare benign hamartomatous condition first described by Hoffmann and Zurhelle in 1921.

Clinically, there are two main presentations: the classic type develops throughout the first three decades of life and manifests at birth as a cluster group of soft, smooth papules or nodules, most typically on the pelvic girdle with a gluteal preference. As seen in the index case [3], the second form consists of a single, domed, sessile papule that typically develops in adulthood. Mehergan et al. (1975) named the latter condition pedunculated lipofibroma due to its unique clinicopathological characteristics [4]. As distinct clusters of ectopic mature adipocytes within the reticular dermis, pedunculated lipofibromas can also be histologically differentiated from other benign papillomas, such as acrochordons, seborrheic keratoses, nevocellular nevi, verrucae, neurofibromas, fibroepithelioma of Pinkus, and eccrine poroma [1, 5]. When lipomas weigh more than 1000 g or measure larger than 10 cm, as in the index example, they are referred to be giant lipomas[6]. The exact cause of pedunculated lipofibroma is unknown, however a number of theories have suggested that degenerative changes in the dermal collagen and elastic tissue, subcutaneous adipose tissue displacement into the dermis, and adipose tissue origination and differentiation from dermal vessel walls are the possible causes of adipose tissue deposition in the dermis [7].

Although the exact cause of lipomas is unknown, some research has shown a genetic component, with genetic abnormalities present in roughly two-thirds of cases. Apart from the potential hereditary connection, an alternative explanation suggests a direct positive correlation between soft tissue trauma and the development of lipomas [5]. Apart from the aforementioned risk factors, obesity, alcohol misuse, liver illness, and glucose intolerance are additional potential associations that could result in lipomas.

Pedunculated lipofibromas are not life-threatening, but they can occasionally create ulcers, or cause the patient to experience various functional or cosmetic inconveniences. Giant ones can also interfere with day-to-day activities [8, 9]. For these kinds of lesions, surgical excision is the only effective treatment option; no cases of recurrence have been documented. Other reported treatments for pedunculated lipofibromas include cryotherapy and diode laser surgery [1, 10].

Lipofibromas are rare benign growths mostly seen over the upper thighs, buttocks and trunk. They are slow-growing lesions and can be confused with other benign papillomas hence diagnosis can be confirmed by histopathologic findings. The preferred treatment of lipofibroma is surgical excision and cryotherapy can be another viable option.