

Large Extra-Articular Lipoma of the Knee: An Unusual Case Report

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Abstract

Case Report

Introduction: Solitary lipoma is the most common soft tissue tumor. It is a benign proliferation of mature adipocytes. The functional squatting and social discomfort motivates surgical removal after eliminating the malignant degeneration. **Case Report:** We report the case of a 64-year-old diabetic, hypertensive patient under treatment who was referred to us for the management of a pre-patellar lipoma measuring 96 × 53 × 80 mm. Physical examination showed a massive tumor with a lipomatous consistency. Nuclear magnetic resonance imaging (MRI) shows no signs of malignancy. Intraoperatively, removal of the tumor was without difficulty with a cleavage plane between the skin and the tumor. Now the patient is relieved of the overweight on his knee and can perform his squatting movements. **Conclusion:** Although benign in nature, large lipoma is often a source of significant functional discomfort. Its treatment is surgical. The surgeon's obsession remains the malignant degeneration whose risk is proportional to the size of the lipoma.

Keywords: Lipoma; knee; complete excision.

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INTRODUCTION

Lipoma is the most frequent tumor of all benign soft tissue tumors (16 to 50% depending on the studies) [1-3]. It is much more frequent than liposarcoma. Its pathogenesis is poorly understood, but it is usually considered to be a true mesenchymal tumor whose development is independent of metabolism and diet. Often unique (80 to 95% of cases), the typical lipoma is a homogeneous and circumscribed fat mass [4].

CASE REPORT

This is a 64-year-old patient, with a history of diabetes and hypertension under treatment, who for 18 years has had a mass on the anterior surface of the right knee that was painless and gradually increasing in volume (Figure 1). An ultrasound of the right knee was performed and returned in favor of impure fluid or

tissue formation in the anterior part of the knee. An MRI of the right knee was performed and shows a well limited, oval, subcutaneous anterior knee formation with regular contours, in hyper signal, not rising after gado injection, measuring 96 × 53 × 80 mm, which is in favor of a lipomatous knee formation (Figure 2).

The surgery was performed under spinal anesthesia. A large soft encapsulated mass of the knee was located subcutaneously and in front of the patellar tendon. Complete excision was performed successfully with rigorous hemostasis. The resected mass was a polylobular fatty mass, measuring 9×5×8 cm in size, and then skin closure (Figure 3).

Histological examination confirmed the diagnosis of lipoma and excluded malignancy (Figures 4, 5). The postoperative course was uneventful, and the patient left the hospital on the third postoperative day.



Fig-1: Voluminous mass of the anterior surface of the right knee

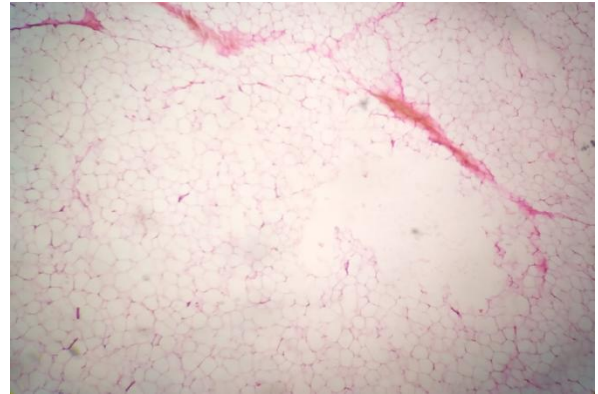


Fig-4: Microscope image showing tumor proliferation made of adipose lobules (HE x 100)

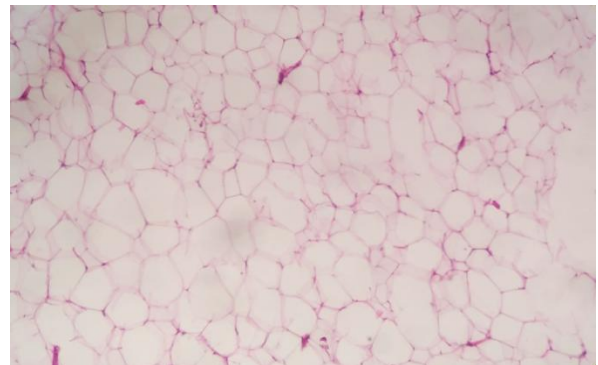


Fig-5: Microscope image showing adipocytes which are regular without atypia and mitosis (HE x 200)

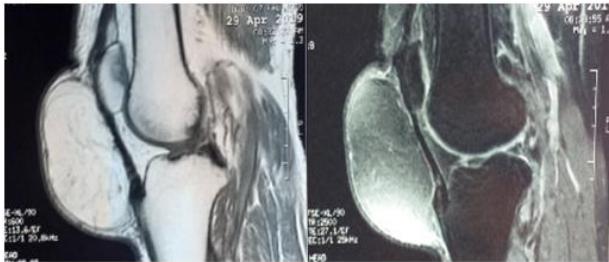


Fig-2: MRI appearance in favor of subcutaneous lipomatous formation of the anterior aspect of the knee



Fig-3: Tumor after resection was an encapsulated fatty mass, measuring 9×5×8 cm in size

DISCUSSION

Giant lipomas affect women more often than men and occur between the fourth and fifth decade of life. The complaint is essentially aesthetic since they are massive and unsightly in appearance. But the functional discomfort is far from negligible. They can arise from either deep or superficial structures and be single or multiple (lipomatosis) [6]. Lipomas are commonplace soft-tissue tumors, and can be found anywhere in the body [7]. Lipomas have a predilection for the trunk and are the most uncommon tumors of the knee [8]. An increased incidence of lipomas is associated with obesity, diabetes mellitus, elevation of serum cholesterol, radiation, familial tendency, chromosomal abnormalities [9]. MRI scanning is essential in the search for signs of malignant degeneration [5]. The Lipoma manifests as a high intense signal in T1-w and T2-w sequences, which is analogous to the signal intensity of the subcutaneous fatty tissue [10]. When treatment of lipoma is warranted, complete surgical excision is advised and it is easily performed because the capsule that surrounds the tumor presents a clear cleavage plane [11]. Macroscopically, lipomas are soft, yellow or tan coloured mobile structures which are generally well defined from surrounding tissues. Histologically, they are composed of well-defined adipose tissue with a fibrous capsule [12]. Malignant change of lipoma to liposarcoma is virtually unknown and should be considered [13].

CONCLUSION

Large extra-articular lipoma of the knee is a very rare entity, and many cases might be ignored due to their silent nature. Although benign in nature, large lipomas are often a source of significant functional discomfort. Its treatment is surgical. The surgeon's obsession remains malignant degeneration.

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