

Gran lipomatosis del cordón inguinal que simula hernia inguinoscrotal. Presentación de caso

Large Lipomatosis of the Inguinal Cord Mimicking Inguinoscrotal Hernia. Case Presentation

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RESUMEN

En la región inguinal pueden aparecer masas diferentes a las hernias, esto hace necesario diferenciar los lipomas, como causa de tumores paratesticulares. El objetivo de este estudio es presentar infrecuente lipomatosis excesiva del cordón inguinal que simula una hernia inguinoscrotal encarcelada crónica. Se trata de un paciente masculino de 71 años, que acude a consulta por el aumento de volumen en la región inguinoscrotal. Durante el transoperatorio se constata que existe un gran tumor graso alargado de 30 cm, con relación a las estructuras del cordón, sin evidenciar un saco herniario. Se disecciona y se envía para estudio histopatológico con resultado de lipomatosis del cordón espermático. Es poco conocido la histogénesis de las lipomatosis profundas, tampoco aparece literatura suficiente que aborde el tema y aunque puede estar presentes donde haya tejido adiposo, es un reto cuando se presenta como un gran tumor inguinoscrotal.

Palabras clave: lipoma, lipomatosis dolorosa, hernia inguinoscrotal

Descriptor: lipoma/diagnóstico; adiposis dolorosa; cordón espermático; hernia; hernia inguinal

ABSTRACT

Masses other than hernias may appear in the inguinal region, making it necessary to differentiate lipomas as a cause of paratesticular tumors. The objective of this study is to present an infrequent case of excessive lipomatosis of the inguinal cord mimicking a chronic incarcerated inguinoscrotal hernia. This is a 71-year-old male patient who consulted due to increased volume in the inguinoscrotal region. During the intraoperative period, a large, elongated fatty tumor measuring 30 cm was found, related to the structures of the cord, with no evidence of a hernial sac. It was dissected and sent for histopathological study, resulting in lipomatosis of the spermatic cord. The histogenesis of deep lipomatosis is poorly understood, nor is there sufficient literature addressing the topic, and although it can be present wherever adipose tissue exists, it is a challenge when it presents as a large inguinoscrotal tumor.

Keywords: lipoma, lipomatosis dolorosa, inguinoscrotal hernia

Descriptors: lipoma/diagnosis; adipose dolorosa; spermatic cord; hernia; hernia, inguinal

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INTRODUCTION

Lipomas are tumors of adipocytes and can arise anywhere in the body. By definition, they are benign neoplasms that cause symptoms due to the adjacent structures they displace; they are encapsulated and lack internal nodules and thick septa. They are homogeneous, but sometimes contain calcifications or hemorrhages secondary to trauma.⁽¹⁾

A clinical similarity may exist between lipomas and malignant liposarcomas. The Magnetic Resonance Imaging (MRI) and Computed Tomography (CT) scan characteristics shown to be associated with liposarcomas rather than lipomas include tumor size larger than 10 cm, presence of thick septa (greater than 2 mm), presence of non-adipose areas, and lesions composed of less than 75 % adipose tissue.^(1,2)

Lipomas are effectively treated with simple excision that goes beyond the tumor capsule, while the treatment of liposarcoma involves a more complex resection with attention to correct margins, ideally within the context of a specialized multidisciplinary team in soft tissue sarcomas.^(3,4)

Lipomas can be single or multiple and are composed of normal fat, arranged in lobules separated by fibrous tracts. Their capsule is delicate. They are generally small but can reach large dimensions. They occur between 40 and 60 years of age but can also occur in children. Lipomas present as slowly growing masses, without symptoms of pain or functional impairment. Their classification and treatment are challenging and sometimes controversial.^(5,6)

The incidence of lipomas is 2.1 per 1,000 inhabitants. They are multiple in 5% of cases and can develop anywhere there is adipose tissue. (5) Lipoma of the cord represents the herniation of retroperitoneal fat through the internal inguinal ring and should be ligated with a suture and excised.⁽¹⁾

Bulging of the inguinal region represents the main diagnostic finding in most hernias of this area. Most patients experience vague pain or discomfort in the region, but one-third of cases are asymptomatic. Inguinal hernias usually do not cause much pain unless they become incarcerated or strangulated. If there is no physical manifestation, other causes of pain should be suspected. Some patients experience paresthesia due to compression or irritation of the

inguinal nerves by the hernia. Masses other than hernias may appear in the inguinal region, making it necessary to differentiate cord lipomas as a cause of paratesticular tumors.⁽⁷⁾

Paratesticular tumors account for 7 to 10 % of intrascrotal swellings. Of these, tumors of the spermatic cord and scrotal tunics represent 75 to 90% of the total, with up to 70% being benign. The main differential diagnoses include inguinal hernia, hydrocele, and chronic epididymitis.⁽⁸⁾

These tumors are characterized by being unilateral, firm in consistency, slow-growing, and variable in size, ranging from 1.5 to 30 cm. They are often painless, and sometimes the patient consults the physician due to a sensation of scrotal heaviness.

Ultrasound (US) is the primary imaging study used for their assessment, with a sensitivity of 95 to 100 %, through which they are distinguished from testicular and epididymal tumors. However, ultrasound findings are usually variable and nonspecific, so CT and MRI are needed to more precisely define the exact location of the tumor, the morphological characteristics of the tissue, and determine its extension to neighboring organs.^(3,4,8)

The objective of this study is to present an infrequent case of excessive lipomatosis of the inguinal cord mimicking a chronic incarcerated inguinoscrotal hernia.

CASE PRESENTATION

Patient Information

71-year-old male patient of Italian origin, residing in Cuba for over 20 years. Upon questioning, he reports apparent good health history. He was referred from his local health area to the general surgery clinic due to a non-painful increase in volume in the left groin area extending to the testicle, as reported by the patient.

Diagnostic Evaluation

Positive physical examination findings:

-Globular, depressible abdomen that follows respiratory movements, non-tender to palpation. Present bowel sounds.

-Digital rectal examination: no hemorrhoids or visible tumor, normotonic sphincter, empty rectal ampulla, no internal hemorrhoids or tumor within reach of the finger.

-A large increase in volume is observed in the left inguinoscrotal region with buried penis, non-painful, irreducible, and without color changes; this was interpreted as a chronic in-

carcerated left inguinoscrotal hernia.

Relevant complementary tests:

•**Hematological:**

- Hematocrit: 0.50
- Leukogram: 8.5×10^9 , P-0.67, L-0.33
- Blood chemistry within normal parameters.

•**Imaging:**

Normal abdominal ultrasound.
Testicular ultrasound reporting a hernial sac with content. Fat predominates, making it difficult to visualize other structures.

Therapeutic Intervention

-Surgical intervention:
Surgery was scheduled with the diagnosis of chronic incarcerated left inguinoscrotal hernia, and the operation to be performed was inguinal hernioplasty using the Lichtenstein technique.

During the intraoperative period, after skeletonizing the spermatic cord, a large, elongated, fatty-appearing tumor measuring approximately 30 cm was evident, in close relation to the cord structures, with no evidence of a hernial sac, although there was significant weakness of the posterior wall of the inguinal canal. See Figures 1 and 2.

The entire lesion was carefully dissected from the cord structures until it was completely freed; it was sent for histopathological study. See Figure 3. Hernioplasty was performed according to the selected prosthetic technique.

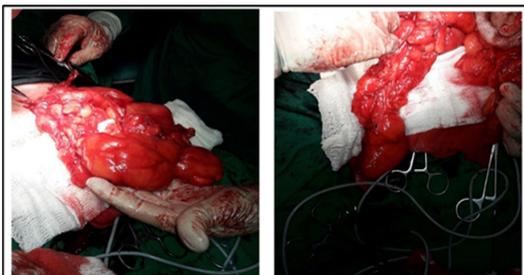


Figure 1. Lesion once the cord has been skeletonized. Extensive lipomatosis of the spermatic cord is observed throughout its entire length



Figure 2. Lipomatosis of the inguinal cord throughout its entire length

The entire lesion was carefully dissected from the cord structures until it was completely freed; it was sent for histopathological study. See Figure 3. Hernioplasty was performed according to the selected prosthetic technique.



Figure 3. The image shows the lesion already resected for histopathological study

Follow-up and Outcomes

During the postoperative period, the patient presented a complication of a hematoma at the surgical site. This was evacuated spontaneously due to partial dehiscence of the surgical wound, which subsequently closed by secondary intention.

The histopathological study resulted in excessive lipomatosis of the spermatic cord. The patient remains in follow-up consultation with favorable evolution, with no local recurrence of the lesion to date.

Ethical Considerations

The management of the case was carried out according to the protocols established in the institution, following the ethical principles of the Helsinki Declaration, and with the approval of the Scientific Research Ethics Committee. Written informed consent was obtained from the patient for the publication of this clinical case, guaranteeing the confidentiality of his personal data.

DISCUSSION

Lipoma is the most common of all paratesticular tumors, accounting for up to 45% of the total. It is most frequent between the fourth and fifth decades of life; it is a common finding during inguinal hernia surgery, the nosological entity with which the differential diagnosis must be established.⁽⁸⁾

It is characterized by increased volume at the level of the inguinal canal, and can even extend into the corresponding hemiscrotum. Upon palpation, they are painless, renitent, mobile, and soft in consistency, often accompanying an inguinal hernia. Most are small, ranging from

one to three cm, although some are 10 cm or more and are then considered giant. Their weight can range from a few grams to just over three kg. On other occasions, they are not associated with a hernial sac and can be a cause of chronic inguinal pain in some patients.⁽⁸⁾

The histogenesis of deep or subfascial lipomas is poorly understood; nor are there sufficient case reports or publications in the literature addressing the topic. Despite knowing they can be present in adipose tissue, it is a diagnostic challenge when they present as a large inguinoscrotal tumor.

The infrequency of paratesticular tumors means there are no publications of large case series, especially of malignant ones, making it difficult to establish consensus on their therapeutic management.⁽⁸⁾

Compared to the present case, the literature reports a 45-year-old male with a history of vasectomy who consulted the emergency department for a painful right inguinoscrotal mass of two days evolution, without signs of intestinal obstruction.⁽⁹⁾ Upon examination, a hard, painful, non-reducible tumor was palpated in the right inguinal region. With a diagnosis of incarcerated inguinal hernia, emergency surgery was performed, revealing a large tumor measuring 20 x 15 x 8 cm of lipomatous appearance dependent on the right spermatic cord, which turned out to be a well-differentiated liposarcoma of the spermatic cord.⁽⁹⁾

In another case similar to the current one,⁽¹⁰⁾ they report a patient who came to the clinic upon noticing a painless inguinal mass. Preoperative imaging tests revealed a space-occupying lesion requiring surgical excision. The pathology report revealed a giant osteolipoma independent of bone structures, an entity with few cases published in the literature.⁽¹⁰⁾

In the present case, the reason for consultation was the long-standing, uncomplicated increase in volume in the inguinoscrotal region, so surgical treatment was electively scheduled. In Cuba, due to resource issues, performing a CT scan for this diagnosis is not usual despite it offering details not specified in the ultrasound. Therefore, the physical examination and the testicular ultrasound, which reported a hernial sac with fatty content that hindered the visualization of other structures, led to the diagnosis of chronic incarcerated inguinoscrotal hernia.

On many occasions, due to the characteristics

of the fatty tissue of cord lipomas and their insignificant size, histopathological study is not indicated, and the sample is discarded. However, in the present case, due to the size of the lesion, its study was required due to the possibility of a malignant lesion.

A deep, large tumor beneath the fascia is a sarcoma until proven otherwise. The size at which suspicion should arise is 5 cm, with dimensions at diagnosis for soft tissue sarcomas of the limbs ranging between 8 and 10 cm. However, size as the sole criterion for referring a patient with a soft tissue lesion to a reference center is debatable, as it has been observed that 10% of malignant lesions can measure less than 5 cm and more than half of benign lesions can be larger than 5 cm.⁽¹¹⁾

Lipomas located in soft tissues are difficult to diagnose. CT and MRI can aid in diagnosis, but only microscopic and immunohistochemical examination confirm the differential diagnosis with a possible liposarcoma, a malignant tumor that represents 20% of all adult sarcomas.^(12,13)

Lipoma is the most common of all paratesticular tumors, constituting a frequent finding during surgery for inguinal hernia, presenting as a small tumor mass, unlike the present case which manifested as extensive lipomatosis of the spermatic cord. Wherever adipose tissue is present, it is a diagnostic challenge when it presents as a large inguinoscrotal tumor.

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Conflict of Interest:

The authors declare that there are no conflicts of interest regarding the publication of this article.

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