

Case Report

Case report of a giant lipoma in the inguinal-perineal area

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Abstract: Introduction: Lipomas are benign tumors that occur in the back, shoulder, neck, and extremities. Giant lipomas of the inguinal-perineal area are extremely rare. Case report: We present a case of a 63-year-old man with a giant lipoma in the inguinal-perineal area. Ultrasound examination showed a heterogeneous hyperechoic mass (14.6 × 8.3 cm) located in the inguinal area, presumably an inguinal hernia. Computed tomography (CT) results showed fat tissue radiographic patterns, and lack of enhancement of the left inguinal area extending to the lateral scrotum. The patient underwent an operation and a radical resection was performed. Histology results revealed a lipoma. At the 1-month follow-up, the patient did not show any evidence of recurrence. Conclusion: Giant lipomas occurring in the inguinal-perineal area are extremely rare and are easily confused with other lesions in the groin area. We recommend a detailed preoperative adjunctive examination such as CT. Open surgical complete excision is the ideal treatment.

Keywords: Giant lipoma, inguinal-perineal area, surgery

Introduction

Lipomas are the most common benign tumors of connective tissue and often occur in middle age [1]. Lipomas vary in size from 1 to 25 cm. Most lipomas are very small, with 80% of lipomas less than 5 cm and are rarely larger than 10 cm. Lipomas larger than 5 cm are considered giant lipomas [2]. Giant lipomas cause severe health problems due to nerve or organ compression, including lymphedema and pain syndromes. They also cause social challenges, such as dressing difficulty and anxiety, which affect patients' quality of life [3]. Giant lipomas are benign tumors that commonly occur in the subcutaneous tissue of the back, shoulder, neck, and extremities. They are extremely rare in the inguinal-perineal area. The first perineal lipoma was reported by Myers in 1923 and several cases of congenital perineal lipoma in neonates were reported thereafter [4, 5]. The cause of these tumors remains unclear; however, injury is thought to be a factor. It is difficult to differentiate a perineal lipoma from an inguinal hernia [6]. Misdiagnosis may negative-

ly affect the choice of treatment strategy, and even cause secondary injury to patients. In this report, we present a case of a 63-year-old man with an asymptomatic giant lipoma in the inguinal-perineal area, causing considerable psychological stress due to the disfiguration of the patient's appearance. Our report of the successful diagnosis and treatment of this case may inform other clinicians' understanding of the common masses in the perineum, promoting good differential diagnosis, especially with inguinal hernia, to make a clear diagnosis of perineal lipoma.

Case report

A 63-year-old man presented with a voluminous lump on the left side of the inguinal-perineal area. He reported a gradual size increase of this painless inguinal lump in the past 20 years, during which he did not seek medical examination or treatment such as a biopsy since the mass did not affect functioning. Five months prior, the mass had enlarged to the size of a fist, and the patient chose to visit the hospital for

Giant lipoma in the inguinal-perineal area

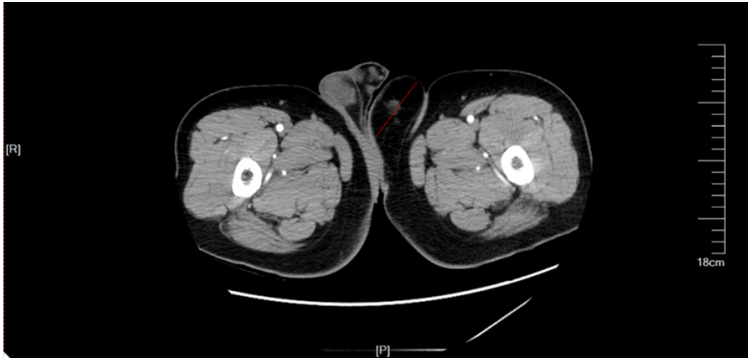


Figure 1. Contrast-enhanced CT image depicting a giant lipoma of the inguinal perineal area.

treatment. The patient had no previous history of inguinal trauma, infection, or urologic symptoms. Personal and family history were not remarkable. Clinical examination at the time of presentation at the urology clinic revealed a nodular non-tender mass adjacent to the left groin area that did not enter the scrotum downward. Passive or active reduction into the abdominal cavity was not possible. The light transmission test was negative.

Ultrasound examination showed a heterogeneous hyperechoic mass (14.6 × 8.3 cm) located in the inguinal area, presumably an inguinal hernia; however, no abnormality was found in the left testicle and epididymis. Clinically, a large irreducible indirect inguinal hernia was suspected. Contrast-enhanced computed tomography (CT) was performed, showing fat tissue radiographic patterns and lack of enhancement on the left side of the inguinal area extending to the lateral scrotum (**Figure 1**). Blood tests revealed tumor marker levels within the normal range. These findings were indicative of a lipoma, but malignancy was not excluded. Following a multidisciplinary discussion, the patient was qualified for surgery.

Surgical exploration was performed through the incision on the surface of the mass near the perineal area under general anesthesia (**Figure 2**). During surgery, we observed a well-encapsulated mass that was laterally adjacent to the thigh muscle and medially adjacent to the scrotum and spermatic cord. The head of the mass was disconnected from the abdominal cavity. An irregularly shaped mass of approximately 14.5 × 9.5 cm that had a yellow lipoma-like texture, was then completely exfoliated and resected. The left inguinal canal was not

opened, and the right spermatic cord and corpora cavernosa were safely spared. Histopathology confirmed the diagnosis of lipoma (**Figure 3**). The patient recovered well without complications postoperatively and was discharged on the third postoperative day.

There was no tumor recurrence at the 5-month follow-up visit. The patient's wound healed well, and his quality of life had greatly improved.

Discussion

The exact prevalence of lipomas is higher than reported because most patients with lipomas are asymptomatic. Although benign lipomas can arise in any location in which fat is normally present, giant lipomas in the inguinal perineal area are extremely rare. Francesca Tocchioni et al. reported three consecutive cases of perineal lipoma associated with external genital anomalies occurring in infants and suggested a congenital cause [7]. However, the patient in our case was older than 60 years. Due to the large size of the lesion and difficulties in its diagnosis and treatment, a correct diagnosis and reasonable treatment are essential. We report our experience with a giant lipoma in the inguinal perineal area in an elderly patient.

Lesions in the inguinal area may be neoplastic or non-neoplastic, and the clinical manifestations of these diseases are very similar. Neoplastic lesions include lipoma, epidermoid cyst, and synovial sarcoma. Lipoma is a rare occurrence in the perineal area in adults. The regions of origin in perineal lipomas are not fully detectable. Lipomas grow slowly and do not infiltrate adjacent tissues. They are often found as painless masses that are extremely large [8]. Giant lipomas are easily confused clinically and radiologically with atypical lipomas or well-differentiated liposarcoma and depend on postoperative biopsy for diagnosis [9]. The basic manifestation of inguinal lipoma is an occasional painful mass. A gradual increase in volume over a period of months or years is a common manifestation. Non-neoplastic lesions include hernias, Kimura disease, hematoma, and inflammation [10]. Different lesions in the

Giant lipoma in the inguinal-perineal area

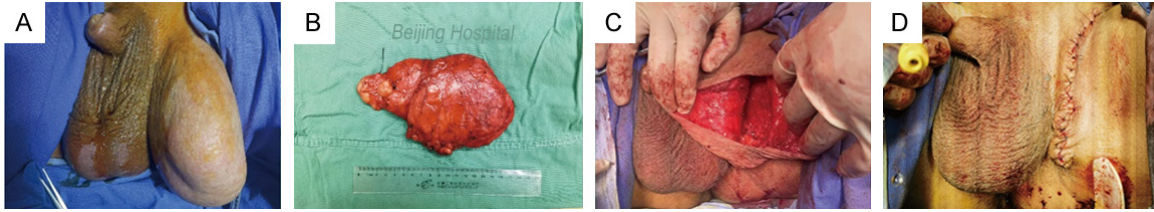


Figure 2. Intra-operative photographs. A. Giant lipoma occurring in the inguinal perineal area. B. The lipoma under direct vision during surgery. C. Inguinal perineal area after excision of the mass. D. Local plastic treatment.

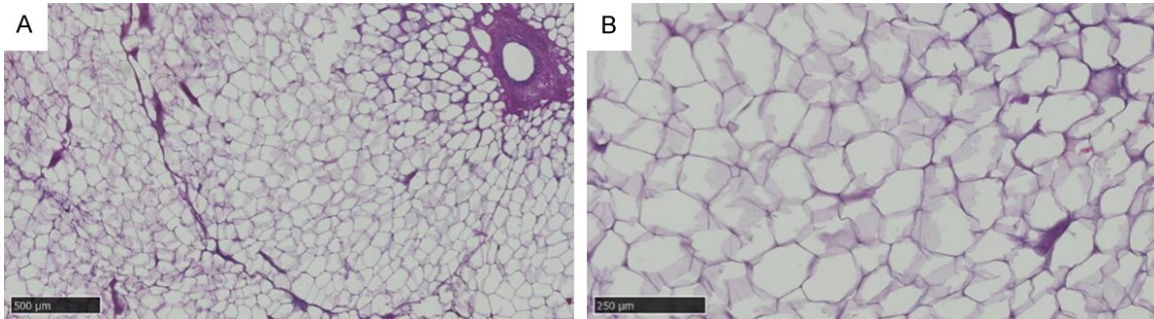


Figure 3. Histopathology of a lipoma. A. Hematoxylin and eosin stain (4X). B. Hematoxylin and eosin stain (10X).

inguinal area have similar clinical symptoms but their treatment strategies are different. Therefore, it is important to refine preoperative assessment to determine the nature of the patient's lesions.

In the present study, based on the patient's physical signs and clinical manifestations, the possibility of an inguinal hernia or an inguinal perineal lipoma was preliminarily considered. However, the ultrasonic image of an inguinal hernia with omental tissue is very similar to that of an inguinal lipoma; thus, it is difficult to distinguish the two [11]. Therefore, further CT or MRI examination is necessary. In this case, an MRI examination could not be performed due to the implanted cardiac pacemaker in the patient, making enhanced CT a crucial tool for diagnosis. Enhanced CT helped us rule out diseases such as inguinal hernia, great saphenous vein tumor, inguinal lymph node lesions, or cold abscess, suggesting a high possibility of lipoma or liposarcoma, which helped us determine the appropriate surgical strategy preoperatively [12]. The diagnosis of a giant lipoma of the inguinal perineal area was also confirmed intraoperatively.

Surgical resection is the main clinical treatment for giant lipomas [13]. Liposuction was

not performed preoperatively to reduce the tumor volume, considering that the patient had no biopsy results and the mass remained potentially malignant. We selected a longitudinal incision along the surface of the tumor for open surgery, and the treatment effect on the patient was also very good. Considering the size of the patient's tumor and its location in the perineum, attention needed to be paid to the local plastic treatment during the operation to ensure the good appearance of a patient's perineum after surgery and improve their post-operative quality of life. Recurrence of completely resected lipomas is rare, except for specific types such as infiltrative lipoma and spindle cell lipoma [14].

Conclusion

Giant lipomas occurring in the inguinal perineal area are extremely rare and are easily confused with other lesions in the groin area. Detailed preoperative adjunctive examination, especially CT, is recommended. Open surgical complete excision is the ideal treatment strategy.

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Giant lipoma in the inguinal-perineal area

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Disclosure of conflict of interest

None.

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