Case Report

A PARTICULAR PRESENTATION OF A DIFFUSE PEDUNCULATED LIPOMA OF THE SACRAL REGION

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Abstract

Background: Subcutaneous lipomas are one of the most common benign soft tissue tumors seen in clinical practice. They may occur at any age, affecting men more often than women. In therapeutically neglected cases, these lesions may have unusual clinical features. Our case highlights one such form that may be found amongst subcutaneous lipomas.

Case report: A 37-year-old man came to the Surgical Clinic for treatment of an ulcerated, pedunculated tumor, measuring 14.5/8/7 cm, located in the sacral region. Clinically, liposarcoma was considered as the diagnosis. Although preoperative fine needle aspiration cytology (FNAC) of the tumor showed mature adipose tissue fragments on all cytological smears, surgical excision was performed, with intraoperative extemporaneous histological examination of the tumor. Histopathological results showed a lipoma with unusual associated features: ulceration of the overlying skin and fatty tissue necrosis, with formation of abscess areas.

Conclusion: Therapeutically neglected subcutaneous lipomas may have unusual clinical features, leading to difficulties for both diagnosis and therapeutic approach. This case complements the existing data, from the point of view of the clinical presentation, as well as the histopathological characteristics that a subcutaneous lipoma may have.

Keywords: subcutaneous lipoma, pedunculated skin tumor, diffuse and pedunculated lipoma, ulcerated subcutaneous lipoma, well-differentiated liposarcoma.

Introduction

Superficial subcutaneous lipomas are benign soft-tissue tumors, which may be found on any part of the body. Typically, lipomas present clinically as soft, relatively well-delimited tumor masses, without involvement of the overlying skin or deeper anatomical structures. They may be single or multiple, and rarely pedunculated or diffuse (1). When all these different clinical features are found in one particular case, with skin ulceration and fatty tissue necrosis, it is an unusual clinical and pathological form. Here, we highlight a new form that may be found in the case of subcutaneous lipomas.

Case Report

A 37-year-old man, with known arterial hypertension, hepatic steatosis and obesity, presented with a

progressively growing sacral skin tumor which he had had for more than 10 years. At admission, he was subfebrile (37.4 °C), with blood pressure of 155/80 mmHg and pulse rate of 80 beats/min. Clinical examination revealed a painless skin tumor, in the sacral region, about 14.5/8/7 cm in size, which was lobulated, with the appearance of a new scrotum on his back, retaining the gluteal cleft, and connected at the level of the tegument by a thick peduncle. The overlying skin was a reddish-brown color, with three ulcerated areas: two of them situated on the lower poles, covered by blood clots, and the other located on the left side, covered by thick crusts. The tumor presented with a firm rather than elastic consistency, having relative mobility at the peduncle level, with a tendency to infiltrate the deeper layers (Figure 1A). Laboratory tests showed inflammatory syndrome (WBCs, 13060/ml with 76.2% neutrophils; ESR, 25

mm/h) associated with elevated levels of aspartate aminotransferase (AST), 178.8 U/L; alanine aminotransferase (ALT), 148.8 U/L, and reactive hepatitis C antibodies. Dermatological evaluation recommended core needle biopsy of the tumor, and surgical treatment.

Fine needle aspiration cytology (FNAC) of the tumor was performed and showed mature adipose tissue fragments on all cytological smears. Although FNAC led to the cytological diagnosis of lipoma, the clinical appearance more resembled a malignant lesion, such as a liposarcoma, rather than a benign one, such as a lipoma. Thus, the decision was made for surgical removal of the tumor. A transverse elliptical cutaneous incision was performed, which circumscribed the base of the peduncle, and a 14.5/8/7 cm lobulated, pedunculated fatty mass was resected from the subcutaneous plane. Also, fifteen subcutaneous tumor formations, measuring between 1.3/1/1 cm and 5/3.5/2 cm, were excised from the nearby insertion base of the peduncle. Intraoperative extemporaneous histopathological examination of tissue specimens led to diagnosis of lipoma. Its intraoperative appearance resembled a nest, with multiple lipomas, with the tendency towards centrifugal dissemination from the peduncle level, and the formation of multiple abscess areas. For this reason, we drained the subcutaneous space (Figure 1B), and the patient received systemic therapy with cefoperazone sulbactam (Sulcef) (2x2g /day) and metronidazole (2x500mg /day) as antibiotics, in association with analgesic and anti-inflammatory drugs, for 5 days.

Figure 1: A. The macroscopic presentation of the ulcerated, pedunculated lipoma from the sacral region; B. Image with postoperative scar.

Furthermore, a section cut from the pedunculated mass showed a heterogeneous greyish fatty appearance, with necrosis and abscess formation, with elastic consistency. The other smaller tumors were uniformly greyish and fatty in appearance, and were also of elastic consistency. Sections from all surgically removed specimens were processed and stained with hematoxylin and eosin. The histopathological examination of the pedunculated tumor showed a diffuse lobulated subcutaneous lesion, containing typically mature adipocytes, skin ulceration, necrosis of the fatty tissue, and areas of both abscess and fibrosis (Figure 2 A, B, C, D). Fibrosis areas were also present in the smaller lipomas, but without other tissue changes.

Figure 2: Histopathological features of the sacral lipoma (white arrows). A. ulceration of the overlying skin (HEX10); B. fatty tissue necrosis (HEX20); C. abscess areas (HEX20); D. fibrosis areas (HEX10).

Three months later, the patient presented in good general condition, with the postoperative scar completely healed, and without local recurrence of the disease.

Discussion

Subcutaneous lipomas are found relatively frequently in clinical practice, but are rarely presented in scientific reports. Due to their clinical appearance, these common lesions do not normally cause any clinical diagnosis problems. Typically, we encounter encapsulated, single or multiple lipomas, and rarely disseminated ones. Diagnostic difficulties arise when subcutaneous lipomas take on a particular clinical appearance, and become evident in an unusual form. The pedunculated form has been discussed in some reports as an unusual case of subcutaneous lipoma, such as when it develops in the popliteal fossa (2). We also had a similar case of a pediculate lipoma which developed in the scrotal wall (3), but, in our opinion subcutaneous pedunculated lipomas should have a form similar to those published by Hadley MN, in 1933, or by Jain G et al., in 2017 (4,5). All subcutaneous lipomas have a more or less thick pedicle, but they should not be considered the same as pedunculated subcutaneous lipomas. Compared to previously reported cases (4,5), the tumor presented with a thick stalk, which gave the impression that it had infiltrated the deeper anatomical structures. In addition, apart from the skin ulcerations that were presented in previous reports, in our case we encountered a diffuse, lobulated lipoma, with skin ulceration and abscess formation inside it.

In such cases, the clinical appearance could lead to the diagnosis of malignancy. Although FNAC and MRI (Magnetic Resonance Imaging) should guide the preoperative diagnosis, and the intraoperative extemporaneous histopathological examination of tissue specimens is able to evaluate the limits of the resection, but only histopathological examination can give a definitive diagnosis.

Our case presents a new clinical and histopathological form that a subcutaneous lipoma may take, which complements the current literature. These rare presentations of a common disorder sometimes lead to diagnostic difficulties that require further exploration for accurate diagnosis.

Conclusion

Therapeutically neglected subcutaneous lipomas may have unusual clinical features, leading to difficulties for both diagnosis and the therapeutic approach. These clinical forms of an otherwise common

condition, may pose problems for surgeons, regarding the choice of the most appropriate therapeutic approach. From this point of view, intraoperative extemporaneous histopathological examination, together with paraffin histopathological examination, make a correct diagnosis possible, especially in cases where the clinical form is highly suggestive of a well-differentiated liposarcoma.

What is already known on this topic: Subcutaneous lipomas are a common disorder, and may be single or multiple, but rarely diffuse or pedunculated. In rare cases, they may be accompanied by skin ulceration.

What this study adds: This study adds new information regarding this common skin condition. Our case highlights an unusual clinical appearance encountered in a subcutaneous lipoma, in a diffuse and thickly pedunculated form. Moreover, histopathological analysis revealed a less common association in a lipoma: ulceration of the overlying skin and fatty tissue necrosis, with areas of abscess formation. In such cases, the diagnosis of a well-differentiated liposarcoma may only be excluded through histopathological analysis of a resected specimen.

Authors' contributions:

Conception and design: Mihaela B and NIB; Acquisition, analysis and interpretation of data: Mihai B, FAG, GL, DAC and NIB; Drafting the article: Mihaela B and NIB; Revising it critically for important intellectual content: DAC, FAG, Mihaela B, Mihai B and NIB; Approved final version of the manuscript: FAG, Mihaela B, Mihai B, NIB, GL and DAC.

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