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Atypical Lipomatous Tumour of the Thigh: Recognition and Management in Primary Care

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Abstract **Case Report**

Background: Atypical lipomatous tumors (ALTs), low-grade liposarcomas, present a diagnostic challenge in primary care. Their rarity and non-specific presentation can lead to a delayed diagnosis. ***Case Presentation:*** A man in his 50s with a history of a gunshot wound on his left thigh presented to the primary care with a seven-month history of a painful, enlarging mass. Initial ultrasonography revealed a large, deep-seated mass, prompting urgent referral. Subsequent Magnetic Resonance Imaging (MRI) and biopsy confirmed a 16.3 cm ALT. ***Outcomes:*** The patient underwent successful surgical resection. Postoperatively, he experienced mild temperature spikes, which were treated with antibiotics. At the final follow-up at approximately 18 months post-surgery, the patient remained disease-free and was discharged from specialist care. ***Relevance:*** This case highlights the importance of maintaining a high index of suspicion for sarcoma in patients with a growing soft-tissue mass, even with a history of trauma. This underscores the critical role of primary care in recognizing red-flag symptoms and adhering to urgent referral pathways.

Keywords: Atypical Lipomatous Tumour, Well-Differentiated Liposarcoma, Soft Tissue Sarcoma, Primary Care, Case Report.

BACKGROUND

Soft tissue sarcomas (STS) are a heterogeneous group of rare malignant tumors that account for less than 1% of all adult cancers [1]. Their rarity and often non-specific presentation can lead to diagnostic delays, particularly in the primary care setting, where they may be mistaken for more common benign conditions such as lipomas [2]. Atypical lipomatous tumors (ALTs), also known as well-differentiated liposarcomas, are the most common subtype of liposarcoma, representing a low-grade malignancy with a propensity for local recurrence but a low metastatic potential [3]. We report a case of a large ALT in the thigh of a man in his 50s who initially presented to his general practitioner. This case underscores the clinical features that should raise suspicion of sarcoma and reinforces the importance of the national urgent referral pathway for achieving timely and appropriate management.

Case Timeline

Date	Event
September 12, 2022	An Initial Ultrasound Scan (USS) revealed a large, deep-seated mass.
September 14, 2022	Primary care consultation and urgent Two-Week Wait (2WW) referral were made.
November 11, 2022	First consultation at the specialist sarcoma unit: MRI and biopsy were planned.
December 9, 2022	The preoperative planning letter confirmed the ALT diagnosis.
January 6, 2023	The patient underwent complete surgical resection.
January 19, 2023	Postoperative follow-up: surgical drain removal.
July 20, 2023	Follow-up letters confirm no signs of recurrent disease.
February 1, 2024	The follow-up letter noted that the patient was doing well.
July 1, 2024	The patient was given the option of discharge and acceptance.

CASE PRESENTATION

A man in his 50s presented to his general practitioner (GP) following a seven-month history of painful, enlarged swelling in the adductor region of his left thigh. Past medical history was notable for a gunshot wound in the same thigh several decades prior. He also had a history of extrapulmonary tuberculosis and varicose veins and was a non-smoker who did not take regular medications. Clinical examination revealed a large, firm, deep-seated palpable mass in the left proximal thigh.

INVESTIGATIONS

Urgent soft tissue ultrasound was performed, which revealed a massive hyperechoic mass deep in the muscle. Given these findings, an urgent 'Two Week Wait' (2WW) referral was made to a specialist sarcoma center for suspected soft tissue sarcoma. Consequently, the patient underwent further evaluation, including MRI of the thigh, which demonstrated a large well-circumscribed lipomatous tumor measuring 16.3x8.1x14.0 cm'. A core biopsy was subsequently performed, and histopathology combined with MDM2 gene amplification analysis confirmed the diagnosis of atypical lipomatous tumor/well-differentiated liposarcoma. The final pathology report noted that the macroscopic specimen measured 180x140x90mm. The patient underwent complete surgical resection of the tumor.

Post-operative management included close follow-ups. In the immediate post-operative period, the patient experienced mild temperature spikes, which were treated with a course of intravenous and oral antibiotics. Follow-up over the subsequent 18 months demonstrated no evidence of localized recurrence. Although he experienced post operative side effects, such as residual numbness and swelling in the leg, these were managed conservatively and subsided. The patient was discharged from a specialist follow-up.

DISCUSSION

This case highlights several key focus areas for primary care practitioners. The patient presented with a number of key 'red flag' features for a soft tissue sarcoma. These included a large (>5 cm) mass, which was deeply seated and progressively increased in size [4]. While the previous history of gunshot trauma may have been a confounding factor, the progressive nature of the swelling prompted further critical investigations.

The distinction between a benign lipoma and a well-differentiated liposarcoma can be challenging on the basis of clinical examination alone. Lipomas are typically soft, mobile, and superficial, while sarcomas are deep, firm, and fixed. Any large (>5 cm) or deep lipomatous lesion should be viewed with a high degree of suspicion and warrant further imaging [5]. Ultrasound is a useful initial imaging modality; however, MRI remains the investigation of choice for characterizing soft tissue masses and guiding further management.

The prompt use of the 2WW referral pathway in this case was instrumental in timely diagnosis and treatment of the patient. National guidelines in the UK recommend this pathway for any patient with a soft tissue mass that is increasing in size or has other suspicious features [6]. This ensures that patients are assessed in a specialist sarcoma center where necessary and that diagnostic and therapeutic expertise are concentrated.

Learning Points

- Maintain a high index of suspicion for soft tissue sarcomas in patients who present with a large (>5 cm), deep-seated, or progressively enlarging soft tissue mass, even in the presence of confounding factors, such as a history of trauma.
- Red flag features specific to sarcomas included size >5 cm, deep location, firm consistency, pain, and progressive growth.
- The use of the 2WW referral pathway is essential for the timely diagnosis and management of sarcoma in the United Kingdom.
- MRI is the investigation of choice for characterizing soft tissue masses, although USS may prove useful and more accessible in primary care.
- Primary care physicians play a crucial role in the early recognition and urgent referral of patients with suspected sarcoma.

Patient Consent

Written informed consent was obtained from this patient for the publication of this case report

REFERENCES

1. Sarcoma UK. What is sarcoma? [Internet]. [cited 2024 Nov 20]. Available from: https://sarcoma.org.uk/about-sarcoma/what-is-sarcoma
2. Grünhagen DJ, de Visser O, Verhoef C. Soft tissue sarcomas: The role of the general practitioner. Eur J Gen Pract. 2018;24(1):124–9.
3. Crago AM, Dickson MA. Liposarcoma: Multimodality Management and Future Targeted Therapies. Surg Oncol Clin N Am. 2016;25(4):761–73.
4. National Institute for Health and Care Excellence. Suspected cancer: recognition and referral (NICE Guideline NG12) [Internet]. 2015 [cited 2024 Nov 20]. Available from: https://www.nice.org.uk/guidance/ng12
5. Gerrand C, Athanasou N, Brennan B, Grimer R, Judson I, Morland B, et al. UK guidelines for the

management of soft tissue sarcomas. Clin Sarcoma Res. 2016;6:7.

6. NHS England. National Cancer Waiting Times Monitoring Dataset Guidance v11.0 [Internet]. [cited 2024 Nov 20]. Available from: https://www.england.nhs.uk/statistics/wp-content/uploads/sites/2/2021/03/National-Cancer-Waiting-Times-Monitoring-Dataset-Guidance-v11.0.pdf