

Treatment of Recurrent Liposarcoma in a 66 Year Old Woman: Case Report.

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SUMMARY

Background: Liposarcoma is one of the least frequent soft tissue sarcomas that occur in middle age. It belongs to a heterogeneous group of mesenchymal malignant neoplasm, often subtle in presentation but has a wide variation in malignant behaviour.

Objective: The objective of this case report is to show that wide excision with adjuvant radiotherapy and chemotherapy is adequate in the management of locally advanced liposarcoma.

Case report: A case of recurrent liposarcoma of the right thigh in a 66year old woman is reported. The problem started as itching on the lower aspect of the right thigh and progressed to a nodule, which gradually increased in size. She had an earlier excisional biopsy with a histological diagnosis of liposarcoma. Amputation was offered then but patient refused. The mass recurred after six months. A thorough evaluation including magnetic resonance imaging was carried out and a wide excision was done at our centre. The popliteal vessels were transected and repaired during excision. Surgery was followed up with adjuvant radiotherapy and chemotherapy. Over a year later patient is without any evidence of recurrence.

Conclusion: This case shows that wide surgical excision with adjuvant chemotherapy and radiotherapy is adequate in the management of liposarcoma. It also illustrates that accidental transection of vessels during tumour surgeries can be successfully repaired primarily.

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KEYWORDS: Liposarcoma, Soft tissue sarcoma, Lipogenic tumour, Connective tissue tumour

INTRODUCTION

Liposarcoma is one of the least frequent soft tissue sarcomas that occur in middle age¹. It belongs to a heterogeneous group of mesenchymal malignant neoplasm, often subtle in presentation but has a wide variation in malignant behaviour². Nearly 50% arise in the lower limbs, 15% from the upper limbs and 17% from the retroperitoneum³. The incidence is 2 in 100,000. Macroscopically the tumour may consist of firm homogenous fat tissue or mucoid tissue. There is usually a well-defined capsule, which contains malignant cells that spread

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along tissue planes^{2,3}. Histological diagnosis of liposarcoma is difficult and could be made only on generous amount of tissue obtained by excising the primary lesion^{3,4}.

Before treating a fatty neoplasm, its degree of malignancy must be determined, as in general the better differentiated the tumour, the lower the rate of local recurrence and the longer the survival^{5,6}. Total excision of the primary mass at the first operation is the best course. When the diagnosis is confirmed, distant metastases must be excluded by a thorough screening programme, including haematological investigations, chest radiographs and liver and bone scan⁶.

Surgical removal of tumour may be by wide local excision or by amputation. Radiotherapy has a place in primary treatment. Radiosensitivity is greater in poorly differentiated tumours, and irradiation after surgery may be useful in such tumours if the original excision is found to be incomplete. Spittle et al. (1990) had a local recurrence rate of 20% in treated patients compared with 73% when radiotherapy was withheld⁷.

CASE REPORT

A 66year old female presented in the out patient clinic with a 4year history of recurrent swelling in the right thigh. The problem started with itching on the lower aspect of the right thigh and gradually progressed to a nodule, which was initially the size of the tip of the patient's ring finger but increased in size almost to double the size of her fist.

The swelling was earlier excised at another Teaching Hospital in Nigeria where a histopathological examination revealed it was malignant, and patient was offered amputation, which she refused. There was neither radiotherapy nor chemotherapy. Six months after the initial excision she noticed multiple swellings at the same site, which progressively increased in size. She was then referred to Lagos University Teaching Hospital (LUTH).

Examination showed, an elderly woman who was well preserved, with a longitudinal scar overlying an irregular firm mass, measuring 24x16cm on the medial aspect of lower right thigh and extending to the proximal leg. The Swelling was attached to the overlying skin and underlying muscle. There was no associated popliteal or inguinal lymphadenopathy. Posterior tibial and dorsalis pedis pulses were palpable on that side. Radiographs showed a soft tissue mass with no bone involvement, no evidence of metastasis was found on chest X- Ray and liver scan. Magnetic resonance imaging (MRI), showed an extracapsular soft tissue mass with infiltration of adjacent soft tissue and the popliteal vessels encased within the mass as shown in figures 1 and 2. Review of old histopathology from previous teaching hospital revealed a poorly differentiated

liposarcoma.

TREATMENT

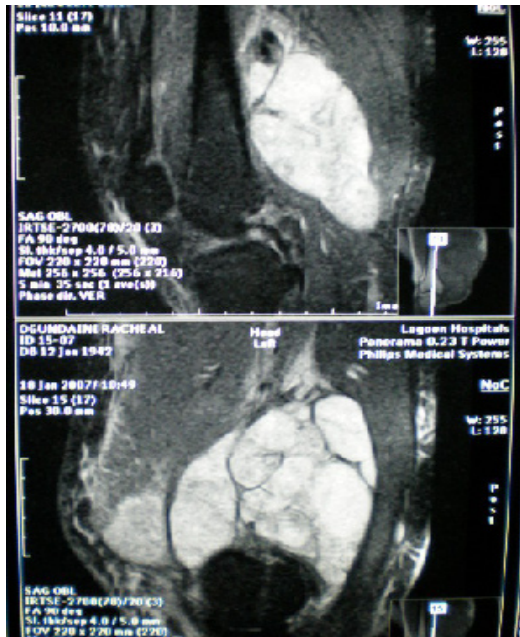


Figure 1: MRI picture showing the tumour encasing the popliteal vessels.

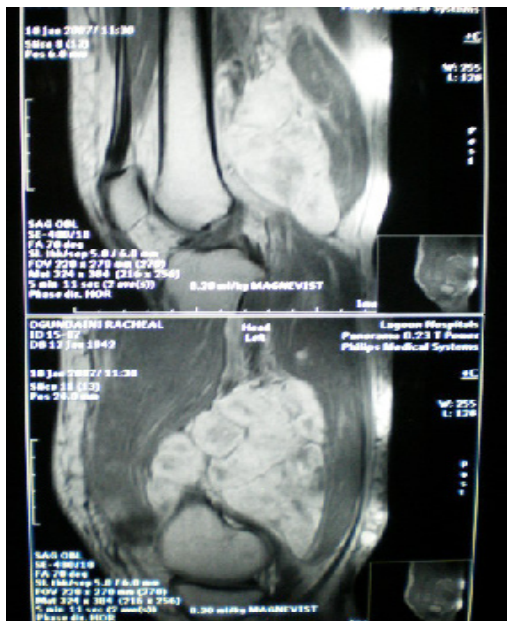


Figure 2: Another MRI film showing the tumour.

Patient was admitted into the ward and prepared for surgery. Six pints of blood was grouped and cross-matched. Surgery was under spinal anaesthesia, and perioperative broad-spectrum antibiotic cover. Though the mass was on the distal thigh a tourniquet could not be used because of the extensive incision and exposure needed for a complete excision of the tumour. A long longitudinal medial right thigh incision, with excision of the scar from the previous excision, was made. The entire course of the femoral artery in the thigh was exposed as

shown in figure 3. A wide excision of the mass was done. The popliteal vessels were transected (figure 4) in the course of dissections and a primary repair was done successfully. Surgery lasted for 2 hours 25minutes. The procedure was well tolerated by patient.

Anticoagulant therapy was commenced 48 hours after surgery. Radiotherapy (40cGy in 30 fractions) and chemotherapy (Vincristine 1.4mg/m² i.v, Adriamycin 1g and Cyclophosphamide 40mg/kg) were given weekly for six weeks.

Patient is being followed up and over 1year later there is no obvious evidence of recurrence.

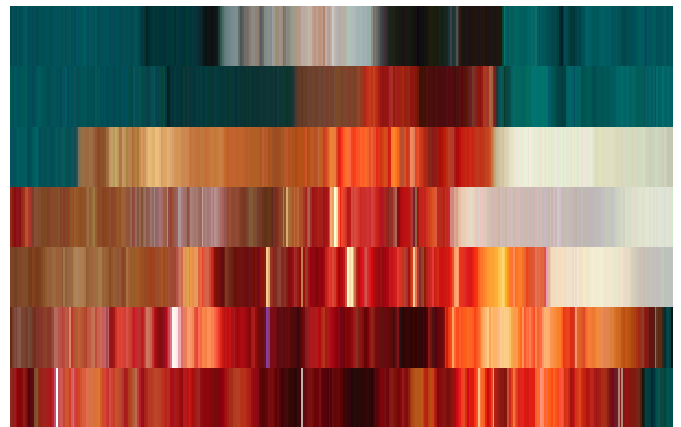


Figure 3: Showing the exposure of the canal of hunter with femoral vessels.

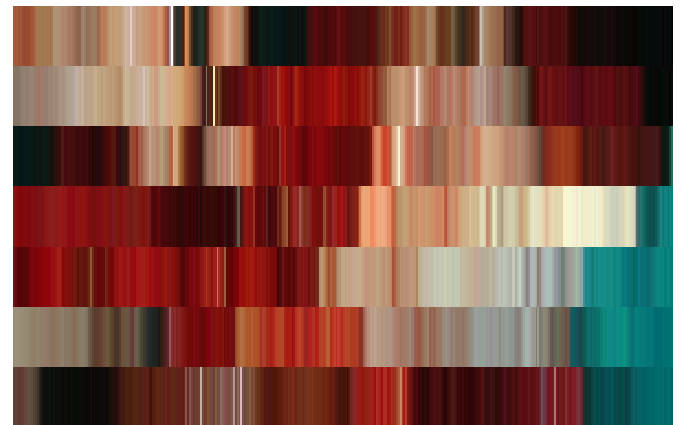


Figure 4: Showing the transected popliteal vessels.

DISCUSSION

Liposarcoma is one of the least frequent soft tissue sarcomas that occur in middle age¹. It belongs to a heterogeneous group of mesenchymal malignant neoplasm, often subtle in presentation but has a wide variation in malignant behaviour². The 3 major locations in which liposarcoma are found are the lower extremities, the retroperitoneal region and the shoulder area³.

The favoured sites of occurrence in the lower extremities include the popliteal fossa and medial thigh, as was the case in

our patient. Metastatic spread is variable but commonly occurs to the lungs in high-grade pleomorphic tumour^{1,2}. Computerized tomography (CT) and magnetic resonance imaging (MRI) are necessary diagnostic tools⁴. In our patient Ultrasound Scan and MRI gave all the required details about the tumour anatomy and ruled out metastasis.

Surgical options include amputation and wide surgical excision⁵. We offered our patient wide excision because the clinical and radiological evaluation showed we could salvage the limb and there was no evidence of metastasis.

Objectives of wide excision include: Obtaining a histological diagnosis, minimizing the chance of local recurrence, achieving the best possible functional and anatomic result and maximizing the probability of survival. These objectives were all clearly achieved in our patient.

CONCLUSION

This case shows that wide surgical excision with adjuvant Chemotherapy and Radiotherapy is adequate in the management of liposarcoma. It also highlights that successful

primary repair can be achieved for vessels transected during tumour resection.

REFERENCES

1. Carnesale P. G. Soft tissue tumours and non-neoplastic conditions simulating Bone Tumours. Campbell's Operative Orthopaedics. 9th Ed. Mosby. 1998; 747–8.
2. Pearlstone D. B., Pister P. W., Bold R. J. Patterns of Recurrence in Extremity Liposarcoma: Implication for Staging and Follow-up. *Cancer*. 1999; **85(1)**: 85–92.
3. Kilpatrick S. E., Doyon J., Choong P. F. The Clinico-pathologic Spectrum of Myxoid and Round cell Liposarcoma. A Study of 95 cases. *Cancer*. 1996; **77(8)**: 1450–8.
4. Robinson A. Treatment of Extremity Sarcoma with Surgery and Radiotherapy. *Radiotherapy Oncology*. 1990; **18**: 221–33.
5. Abbas J. S., Holyoke E. D., Moore R., Karakousis L. P. The Surgical Treatment and Outcome of Soft Tissue Sarcoma. *Arch Surg*. 1981; **116**: 765.
6. Enzinger F. M., Winslow D. J. Liposarcoma: A Study of 103 cases, Virchows *Arch. pathol. Anat.* 1962; **335**: 367.