Multiple liposarcomas of the groin - a diagnostic dilemma

A Talwar[1], N Puri[2], M Singh[3]

Sri Lanka Journal of Dermatology, 2010, **14**, 31-32

Abstract

Liposarcoma is a rare tumour of the groin which is difficult to differentiate from a lipoma. We report a case of a 45-year old male who reported to the department of surgery with multiple swellings of the groin. The histopathological examination revealed a tumour mass composed of well-differentiated adipocytes interspersed by areas with spindle cell proliferation.

Introduction

Lipoma is the most common benign tumour of the inguinal region. The lipoma is seen as a hyperechoic mass on sonography, which may be difficult to differentiate from a liposarcoma[1,2]. Most malignant tumours in the inguinal region are sarcomas. The most common sarcoma in the inguinal areas is a liposarcoma, which commonly occurs in adults. A liposarcoma is a bulky yellow tumour similar to a lipoma but generally more complex and contains areas of prominent sclerosis[4]. The sonographic findings of a liposarcoma are variable and non-specific. Early diagnosis and complete resection plays key role in the treatment of liposarcoma. Liposarcoma usually occurs in the deep soft tissues of extremities and in the retroperitoneum. It is the most common type of soft tissue sarcoma accounting for 30% of all mesenchymal tumours. There are no metastases and the overall prognosis is good.

Case report

A 45-year old male presented with multiple swellings of the groin of 2 years duration. There was no history of pain in the groin. He denied any recent trauma to that area. Initially the swellings were small, but gradually increased in size over a period of one year and thereafter the size remained constant. On local examination, four swellings were seen in the groin area. The scrotum and penis were also swollen and distorted. The swellings had a soft consistency and were freely mobile without any fixation to the underlying structures. The physical examination revealed no discernable loss of motor or sensory lower extremity function. There were no specific abnormalities in the laboratory data, and the tumour markers were within normal limits. They were diagnosed as multiple lipomas and a biopsy a tumour mass composed of well-differentiated adipocytes interspersed by areas with spindle cell proliferation. In between lipoblasts were seen. The spindle cell area was mild to moderately cellular. The cells were separated by abundant collagen deposition and showed plump nuclei without any mitotic figures.

The spindle cells were seen infiltrating the adipose tissue, muscle fibers in the periphery, and reaching almost up to the skin entrapping the skin adnexa. No areas of haemorrhage or necrosis were seen. The ultrasonography of the groin swellings was done and it showed well defined hypoechoic masses with a minimal internal flow. Excision of the groin masses was done. At operation the tumour was observed to roll up the isolateral spermatic cord and testicular vessels, which led to the differential diagnosis of liposarcoma. The tumour was then widely resected along with the left testis, spermatic cord, and testicular vessels. Histopathologic study confirmed the diagnosis of well-differentiated liposarcoma, but no malignant cells were found in any of the surgical margins. The postoperative course of the patient was uneventful. A periodical follow up showed no evidence of recurrence or metastasis in the 6 months since his operation. The case is reported because of its rarity.

Discussion

Liposarcoma is a rare mixed histologic subtype defined by the association of well-differentiated liposarcoma and a nonlipogenic sarcoma of variable histological grade usually with histologically abrupt transition[5]. According to WHO, low-grade dedifferentiated liposarcoma is defined as bland spindle cells with a fascicular pattern with cellularity intermediate between well differentiated sclerosing liposarcoma and usual high grade areas. The behaviour of dedifferentiated liposarcoma as a whole is that of a high grade sarcoma[6]. Good prognosis in *de novo* dedifferentiated liposarcomas seems unrelated to the extent, grade, or morphologic pattern of dedifferentiation. However, high mitotic activity in the dedifferentiated component was associated with more aggressive clinical course[7].

[1]*Assistant Professor, Surgery,* [2]*Registrar,* [3]*Professor and Head, Surgery, Department of Anaesthesia and General Surgery, Govt. Medical College, Faridkot, India.*

Conclusion

Liposarcoma can develop into either low grade or high grade dedifferented liposarcoma over a variable period of time. Prognosis is unrelated to the grade or extent but is related with mitotic activity of the dedifferentiated area. The case is rare and hence reported.

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