Retroperitoneal Liposarcoma

K L Yerzingatsian
Associate Professor

K Katebe
Registrar

J I M Mulundika
Registrar

J Mulenga
Senior House Officer

J S Kachimba
Senior House Officer

Department of Surgery, University of Zambia, Lusaka

Key words: liposarcoma, retroperitoneum

Liposarcoma is a rare tumor of fatty tissue. The retroperitoneal site accounts for 0.01-0.1% of all malignancies. The location makes early detection difficult and by the time the patient comes to surgery the large size deters surgeons from attempting resection. This is a report of a patient from whom a 10 kilogram retroperitoneal liposarcoma was successfully removed and one year later a recurrent tumour weighing 13.8 kilogram was excised. Size should not be a deterrent to operability if vital organs are not involved.

Introduction

Intra-abdominal liposarcomas are rare tumours. Because of their location these tumours remain silent and late diagnosis is common. Surgical resectability is size and site dependent. We report of an unusually large, recurrent retroperitoneal liposarcoma which was successfully removed - one of the largest reported at the site in the literature.

Case report

A 48-year-old man was referred to the University Teaching Hospital Surgical Department from the Department of Internal Medicine complaining of gradual abdominal distension noticed over 11 months. This was associated with constipation and a feeling of abdominal fullness. The patient also had an episode of transient reduction in urine output which was attended to at a local clinic. The man was a widower of six years with no significant past medical or social history.

Address for correspondence: Prof K Yerzingatsian FRCSI, Department of Surgery, University Teaching Hospital, Pvt Bag RW1X, Lusaka, Zambia.

On clinical examination, the patient had marked abdominal distension with a questionable hepatomegaly, a large mass and tenderness in the left lumbar region. There were no other significant findings.

INVESTIGATIONS

Liver function tests, urea and electrolytes and full blood count were normal. Abdominal ultrasound showed two large well encapsulated solid masses occupying the whole upper abdomen separate from the liver, spleen and kidneys. Appearances were suggestive of a retroperitoneal mass.

SURGERY

Under general anaesthesia, through a midline incision, a semi solid tumour mass with gelatinous myxoid areas was found. It occupied the whole abdominal cavity posterior to the mesentery, the descending and sigmoid colons to the right of the midline. The spleen was not enlarged but was embedded in a pocket of peritoneum against the diaphragm. The liver was normal in appearance. The clinical impression of hepatomegaly was due to the lobulation of the tumour mass. Total excision of the lobulated mass was performed, including a splenectomy. The ureter, which was displaced to the right of the aorta, was identified and reflected off the tumour. Vasculature to the colon was retained and the colon was replaced in the paracolic gutter. The mesocolon was repaired and reperitonealisation achieved. An extraperitoneal drain was placed in the paracolic gutter.

The patient recovered well and was discharged nine days later on weekly chloroquine and daily penicillin for two weeks. The patient attended the tumour clinic on two occasions but was lost to follow up subsequently. He was readmitted a year later and a recurrent tumour excised.

THE TUMOUR

The mass removed at the first operation had a circumference of 110 x 80cm and weighed 10kg (Fig 1). The tumour removed a year later weighed 13.8kg and had a circumference of 92 x 68cm (Fig 2).

FIG 1 *The tumour removed at the first operation (10kg)*

HISTOPATHOLOGY

Histopathology from three sections of the tumour was reported as adipose cells with lipoblasts with one or more lipid droplets in the cytoplasm. There were irregularly shaped cells with hyperchromatic nuclei and lipocytes that showed a slightly greater variation is size and shape than those of normal fat.

There were also areas of fibrous tissue with cells presenting hyperchromatic nuclei and slight variation in size, scarce multinucleated cells, areas with myxomatous features and a chronic inflammatory infiltrate of lymphocytes and plasma cells. There was also a maze of branching narrow thin-walled vessels and uniform size and calibre. A diagnosis of a well-differentiated liposarcoma was made (Figs 3 and 4).

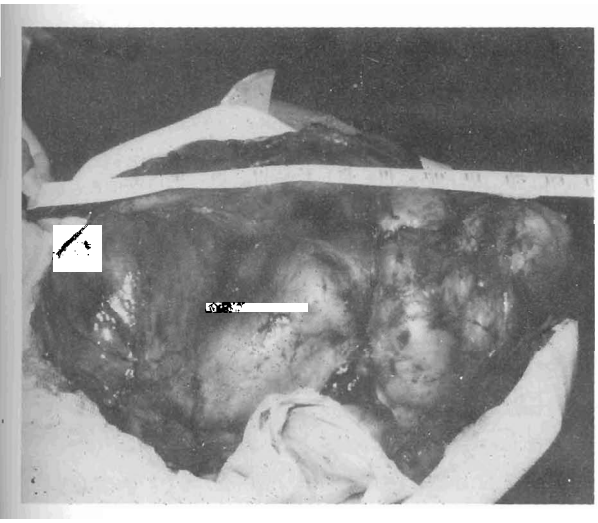

FIG 2 *The tumour removed one year later (13.8kg)*

Discussion

Soft tissue retroperitoneal sarcomas are reported to account for 0.01-0,1% of all malignancies and liposarcomas are the most common[1,2]. No aetiological factors are known in the pathogenesis of liposarcomas. Benign lipomatous disorders such as lipomas and lipomatosis generally do not give rise to liposarcoma. The commonest clinical finding according to one series was a palpable abdominal mass[3]. In the same series of sixteen patients treated between 1988 and 1990, it was concluded that complete excision is the most effective treatment for patients with retroperitoneal sarcoma[3].

FIG 3 *Histological appearance of original tumour from area showing mainly fat cells and lipoblasts*

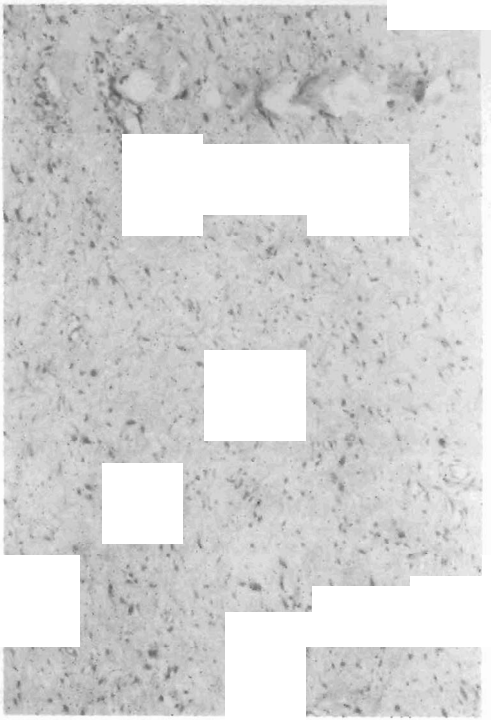

FIG 4 *Cellular area of original tumour (see text)*

The main factors determining resectability were the extent and fixation of the tumour to vital structures[2,3]. The original and the recurrent retroperitoneal tumour removed in our patient is one of the largest reported in the literature (Fig 5). Size should not be a contraindication to surgery. However large the tumour, the need for radical surgery to remove the entire mass is stressed and the patient must be carefully monitored since retroperitoneal recurrence is frequent and must be treated wherever possible surgically[2]. This was the conclusion in another case report of a large retroperitoneal liposarcoma (diameter 60 x 28 x 32cm; weight 11.2kg)[4].

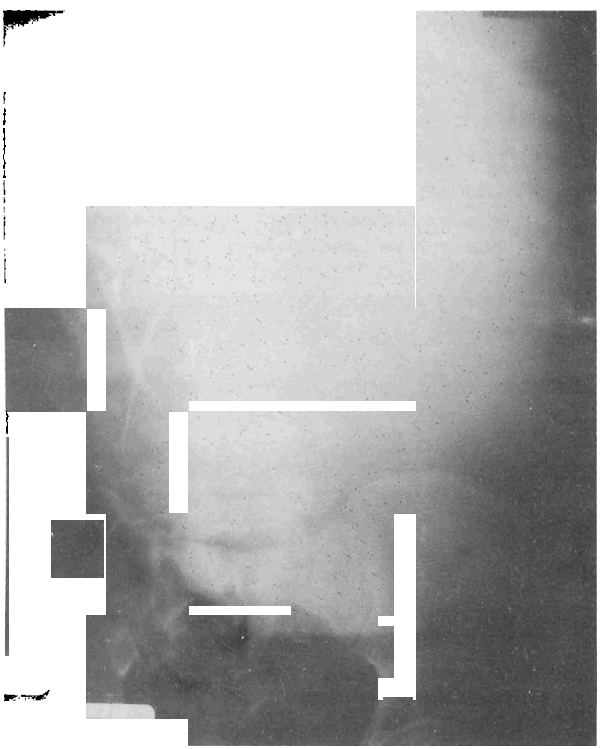

FIG 5 *Intravenous urogram showing the left kidney superimposed on the right kidney.*

In a series of sixteen patients with retroperitoneal liposarcomas[3] the histopathology of the tumour was the determining factor in outcome. Of the four types of liposarcoma[1]; well differentiated, myxoid, round celled and pleomorphic, the well differentiated, which was the type reported in our patient, had the best outcome after a mean follow up of 25 months. The three-year overall survival rate after complete resection in the liposarcoma group was 50%[3].

References

1 P de Jaco, M Giorgio, B Zantedeschi, G Mazzoleni, A Marabini. A case of retroperitoneal liposarcoma in pregnancy *Acta Obstetr Gynaecol Scand* 1993; 72:122-124.

2 R C van Doorn, M P W Gallee, A A M Hart, E Gortzak et al. Resectable soft tissue sarcomas: the effect of extent of resection and postoperative radiation therapy on local tumour control *Cancer* 1994; 73 (3):637-642.

3 H C Ho, H C Wu, C R Yang, C L Chang et al. Primary retroperitoneal sarcoma - a report of 16 cases *Kao Hsiung I Hsueh Ko Hsueh Tsa Chih* 1991; 7 (8):443-447.

4 F Porpliglia, C Scoffone, R Tarabuzzi, D Fontana. Giant liposarcoma of the retroperitoneum: description of a case *Minerva Urol Nephrol* 1991; 43 (2):93-96