Case Report

GIANT RETROPERITONEAL DEDIFFERENTIATED LIPOSARCOMA: A CASE REPORT

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Summary

Retroperitoneal soft tissue sarcomas comprise a relatively rare entity with incidence rates of less than 1% of all malignancies. The surgical treatment of these tumors is challenging. We present a case of a 70-year-old patient who underwent radical surgery at the Department of Surgical Oncology at the University Hospital in Pleven for giant dedifferentiated liposarcoma. The patient presented with cachexia, anemia, dull abdominal pain, and a huge abdominal mass. After ultrasound and CT, the tumor was assessed as resectable. The removed tumor mass weighed 5.7 kg. Nowadays, complete resection of such tumors remains the most important predictive factor for local recurrence and overall survival.

Keywords: giant retroperitoneal liposarcoma, dedifferentiated

Introduction

Retroperitoneal sarcomas are a rare entity and represent 0.3-0.4 new cases in 100000 people [1]. Liposarcomas are usually diagnosed at different locations, such as the upper and lower extremities, body, head and neck, retroperitoneum, and mediastinum. Peak rate is seen in the age group between 50 and 70 years. Dedifferentiated liposarcoma is a rarer histological subtype, with an incidence rate of up to 18% [2]. We present a clinical case of a giant dedifferentiated liposarcoma.

Case report

A 70-year-old patient was presented at the Department of Surgical Oncology at the University Hospital in Pleven with dull abdominal pain for the past several months. A huge abdominal mass could be palpated through the abdominal wall, which had increased in size along with the progression of pain, weight reduction of 10 kg for the last one year, and general weakness. The patient reported a quick enlargement of his abdomen. There was no history of trauma, or drug and alcohol abuse. On physical examination, a large abdominal mass was palpated in the right side of the abdomen. On admission, laboratory investigations revealed anemia

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-73 g/l Hg, slight hypoproteinemia – 65.8 g/l, hypoalbuminemia – 28.6 g/l, and CRP – 192 mg/l. The patient's weight was 50 kg. Ultrasound showed a huge heteroechogenic tumor mass, with the retroperitoneum as a most probable site of origin. Computed tomography (CT) visualised a huge retroperitoneal mass, sized over 50 cm in length, composed of a hypodense zone with dimensions of 35x26 cm and a hyperdense zone measuring 18x11 cm in the right side of the abdomen, arising from the diaphragm to the pelvis and suspected infiltration into the right kidney and the right side of the colon (Fig.1).

A hematologist diagnosed normocytic, normochromic anemia. The patient had comorbidities, and the consulting cardiologist confirmed a right bundle branch block and left anterior hemiblock. Preoperative preparation included treatment for the anemia and hypoproteinemia. The patient underwent MDT and, based on the CT findings, was referred for surgical resection because of the compression and potential malignancy. Informed consent was obtained before surgery. A xiphopubic approach was used for dissection in the abdominal cavity and achieve a retroperitoneal aspect of the tumor mass. The tumor consisted of a sizeable yellowish lipid tissue mass and non-lipid firm mass, finely delineated and separated by a capsule. The lobular part was yellow and with a homogeneous structure. The tumor mass was successfully resected along with the right-sided colon and the right kidney. An R0 resection was achieved (Fig.2 and Fig.3).

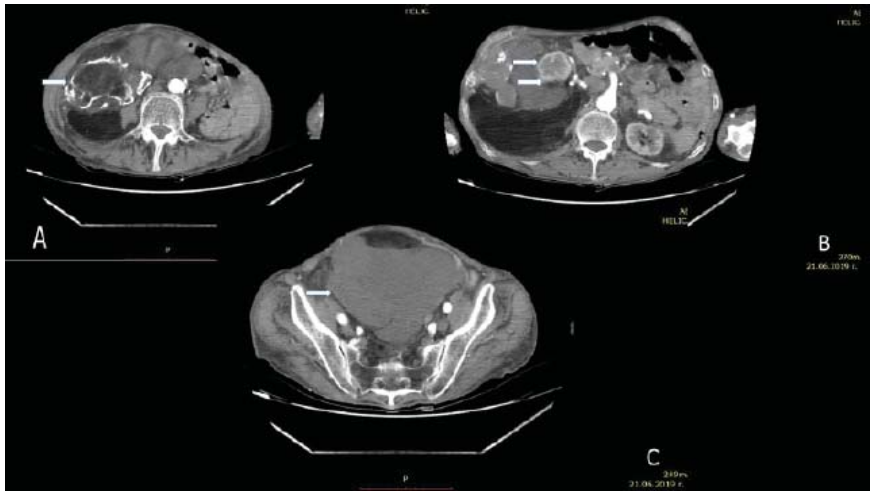

Figure 1. CT image of the patient with a retroperitoneal tumor mass. A – Hyperdense zone of the tumor located on the right side of the abdominal cavity. B – Part of the tumor showing evidence for possible infiltration of the right kidney. C – Hypodense zone of the tumor mass located in the pelvis without infiltration to adjacent organs.

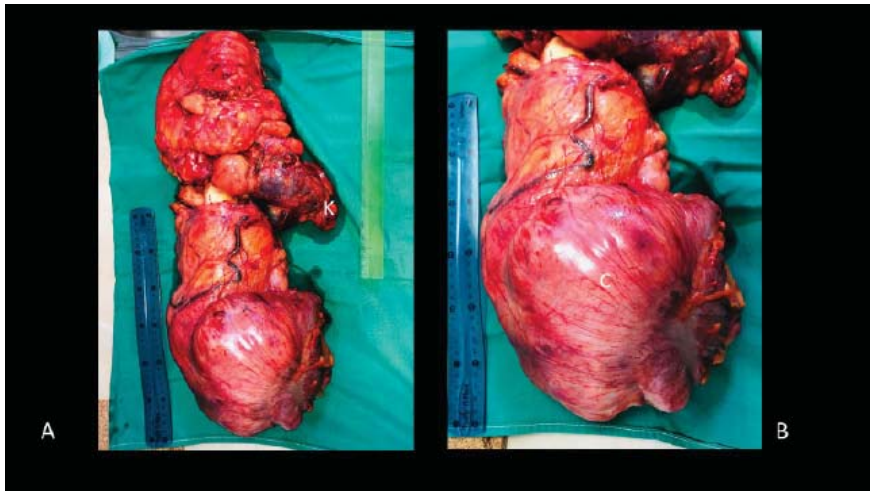

Figure 2. Specimen after surgery showing lipid, lobular and capsulated mass with dimensions 56 x 26 cm and weight 5.7 kg. A – Right kidney removed en bloc with the tumor (K) B – Terminal ileum, caecum and ascending colon removed en bloc with the mass (C).

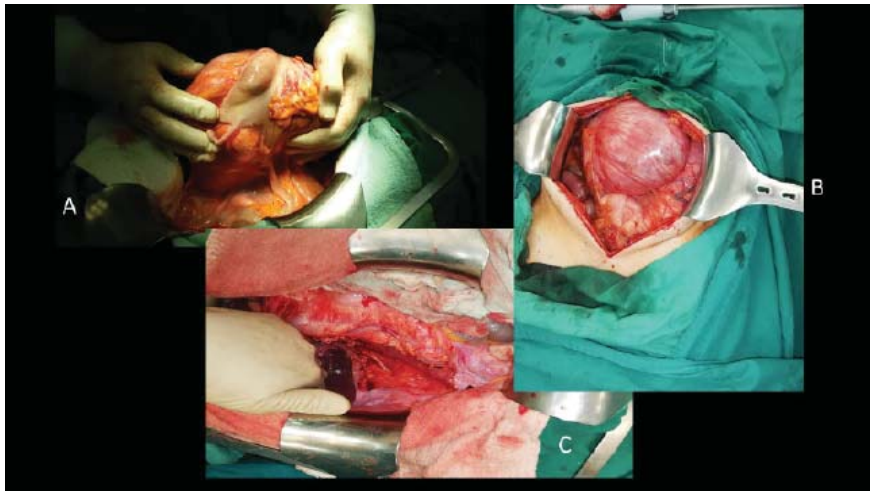

Figure 3. Intraoperative images. A – Laterally and dorsally mobilized tumor with the right colon. B – Tumor mass at laparotomy. C – Abdominal cavity after removal of the tumor mass.

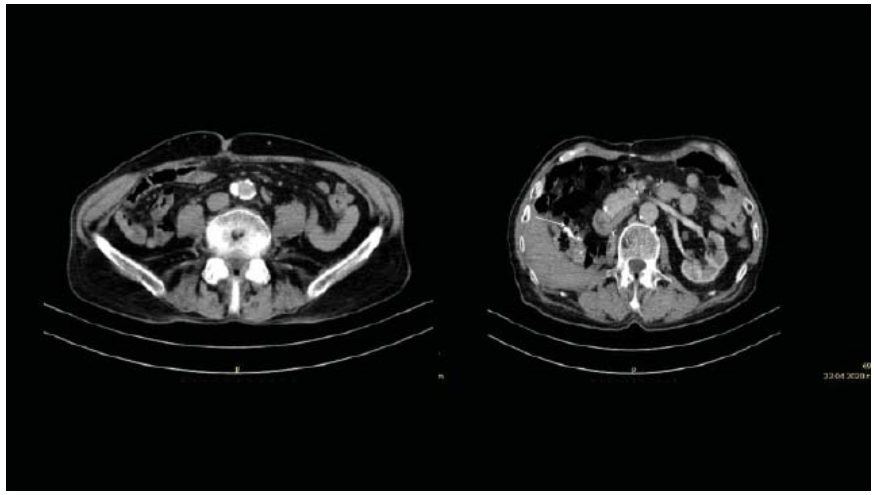

Figure 4. Control CT is showing no evidence of local recurrence. The arrow shows L-L ileotransverse anastomosis done with a linear stapler.

An L-L ileotransverse anastomosis was performed with a linear stapler. After complete hemostasis was achieved, and a thorough examination for any organ lesions was performed, an easy-flow drain was introduced through the right side of the abdominal wall. Anti-adhesion gel was applied. Intraoperative blood loss was less than 150 ml, and the operative time was 180 min. The patient recovered and was discharged on day six after the operation with no complications. Pathologic evaluation showed dedifferentiated liposarcoma. Infiltration towards the kidney and right colon was not confirmed histologically. There was no adjuvant chemotherapy. Follow-up showed considerable improvement in the condition of the patient. Ten months after the operation, a control CT scan showed no sign of recurrence or progression of the disease (Fig. 4).

The weight of the patient was 62 kg, and the blood test results were within normal ranges.

Discussion

Liposarcomas are the most common type of retroperitoneal sarcomas, representing 41% of these tumors [1]. Liposarcomas are divided into four well-defined subtypes, based on morphology and cytogenetic abnormalities: well-differentiated, dedifferentiated, myxoid, and pleomorphic [3]. Twenty percent of the tumors are reported to be >10cm at presentation. It is widely known that this type of mesodermal tumors can reach significant dimensions, and weigh more than 100 kg, despite their poor vascularization [4]. In the literature, there

are many reports on radically removed giant retroperitoneal liposarcomas, weighing between 5 and 42 kg [1, 4-7].

The presented case was a challenge for treatment because of two reasons. First, the patient's general health was poor, with anemia, cachexia, and other comorbidities. Secondly, there was the size of the tumor mass and the need for multivisceral resection. According to the literature, removing other organs is needed in 75% of the cases of giant liposarcomas [7]. A clinical case proves that precise imaging is needed to assess the tumor's resectability in each case. Surgery is the only option for radical treatment in cases of giant retroperitoneal liposarcomas. Factors associated with poor prognosis of survival after radical surgery, include the subtype, grading (2-3), stage (II-III), size >20cm, as well as a positive resection margin. Distant metastases are more commonly encountered in dedifferentiated tumors, II-III stage, and of deep retroperitoneal location [6]. Local recurrence after radical surgery is common enough, in 50% of well-differentiated and 80% of dedifferentiated tumors, showing a recurrence five years after surgery [8]. In the case presented, ten months after the operation, there was no evidence of recurrence or progression of the disease.

Conclusion

Surgical treatment of giant retroperitoneal liposarcomas is still a big challenge. Nowadays, complete resection of these tumors remains the most important predictive factor for local recurrence to occur and overall survival.

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