Giant Retroperitoneal Liposarcoma- Renal Salvage by Autotransplantation

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Abstract Liposarcomas are the most common retroperitoneal soft tissue tumors. We here in report a case of giant retroperitoneal sarcoma which weighed 24 kgs. Renal autotransplant of right kidney was done for organ preservation. The patient has done well after a follow up of 63 months. Complete surgical resection with organ preservation is the goal of treatment in patients with retroperitoneal liposarcomas.

Keywords Giant retroperitoneal liposarcoma · Renal preservation · Autotransplantation

Liposarcoma is the most common soft tissue sarcoma in adults and accounts for at least 10–20 % of all sarcomas. These tumours are usually late to be detected because of

absence of symptoms in retroperitoneum and reach a large size (>15 cm) by time of diagnosis [1]. Complete surgical resection is treatment of choice. There are many case reports in the literature of giant retroperitoneal liposarcomas, the largest reported so far weighed 42 kg [2]. We herein report a case of retroperitoneal liposarcoma which was 24 kg in weight and autotransplantation of one kidney was done.

Case Report

52 years male presented with complaints of progressive abdominal distension, early satiety, weight loss and dyspnoea. Abdomen was distended by a large mass occupying whole abdomen (Fig. 1). His haemoglobin was 8 g % and renal functions were normal. Chest x-ray was normal. Contrast enhanced computed tomography (CECT) showed a mass occupying the abdomen with no infiltration of kidneys or major vessels (Fig. 2).

At laparotomy, a giant 40×35×35 cm solid tumour was completely filling the abdomen (Fig. 3). 50 cm of ileum and right middle ureter were adherent to tumour. Bilateral kidneys and other intra-abdominal organs were free. Enbloc resection of the tumour along with adherent ileum and ureter was done. The bowel was reanastomosed and right kidney was autotransplanted in left iliac fossa. Tumour weighed 24 kg. Patient was discharged after 7 days. Histopathology revealed a mixed type of liposarcoma.

CECT abdomen after 6 months showed no recurrence and ^{99m}Tc Diethylene Triamine Penta-acetic acid (DTPA) scan showed good renal function in autotransplanted kidney. Patient presented again after 40 months, with a tumour recurrence in right iliac fossa. 10×15 cms tumour was found adjacent to right iliac vessels which was excised and he

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Fig. 1 Preoperative photograph of the patient

received adjuvant chemo-radiotherapy. At 63 months follow up he does not have any recurrence.

Discussion

To the best of our knowledge and extensive search of English language literature this case represents the third largest retroperitoneal liposarcoma reported so far. Yol et al. reported a 42 kg liposarcoma and Waldeyer et al. reported a 28.6 kg liposarcoma [2]. The other giant retroperitoneal liposarcomas reported in the literature are from Antinori (18 kg) [3], Karmali et al. (19.8 kg) [4] and Bradley et al. (11.7 kg) [1]. Because of the lack of distinct anatomic compartments in the retroperitoneum, these invasive tumours often grow to a large size and involve adjacent structures before diagnosis.

Fig. 2 Preoperative CECT scan showing the large tumour

Fig. 3 Intraoperative photograph showing the tumour

The ability to completely resect a retroperitoneal sarcoma remains the most important predictor of local recurrence and survival [5]. Long-term prognosis without complete resection is poor with average 5 and 10-year survival rates of 16.7 % and 8.0 % respectively [6]. Histological subtype, grade of the tumour and contiguous organ resection are most important predictors for recurrence.

Bradley et al. found that 50 % of the patients in whom complete excision could be achieved required excision of adjacent organs [1]. The structures most commonly resected are kidneys, ureter and large bowel.

In majority of the cases renal sparing resections are performed [6]. Russo et al. demonstrated that renal capsular invasion was present in only 15 % patients and renal parenchymal involvement in 9 % and renal vein involvement in 3 % with majority of 73 % patients having no direct renal invasion [7].

In our patient the right ureter was going through the capsule of the tumour and we decided to preserve the kidney and autotransplanted the kidney. It is a well-recognised treatment modality for patients with loss of ureteric length where other procedures are not feasible [8] and technical expertise is available for transplantation.

To conclude, retroperitoneal liposarcomas are aggressive tumours. Achieving a complete surgical cure is difficult especially in large tumours. Organ preservation should be attempted whenever feasible.

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