



活體肝臟移植合併腹壁重建手術治療肝惡性腫瘤合併切片管道移轉 Living Donor Liver Transplantation combined with Abdominal Wall Reconstruction for Hepatocellular Carcinoma with Needle Track Seeding

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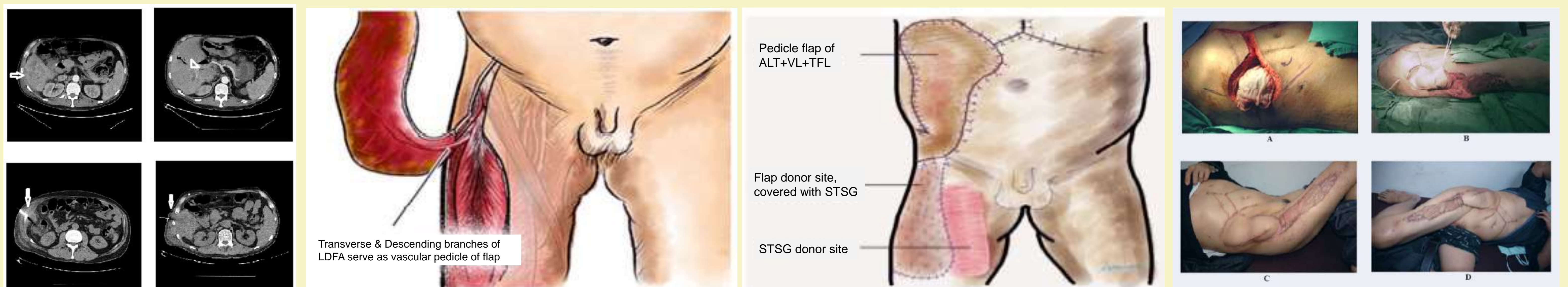
Introduction

Malignant cell seeding in subcutaneous tissues along the needle track and/or percutaneous biliary drainage catheters is a rare complication, but poses various technical issues in planning surgical treatment of such patients. If underlying primary hepatic malignancy can be treated, an aggressive resection of subcutaneous tissue bearing cancer cells with subsequent abdominal wall reconstruction has been sporadically reported. However, when hepatic resection is not possible due to underlying advanced cirrhosis, liver transplantation along with abdominal wall resection & subsequent reconstruction remains the only feasible option. Herein, we describe our successful experience of living donor liver transplantation for hepatocellular carcinoma with full-thickness abdominal wall resection bearing the tumor seeding followed by reconstruction in a single-stage surgery.

Case

A 47 years old chronic hepatitis B carrier patient presented with jaundice and fever in emergency department for which he underwent initial evaluation. On CT scan images intrahepatic inflammatory mass in S5 with right intrahepatic duct stones & biliary obstruction were noted. PTBD was performed and CT guided needle biopsy of inflammatory mass was done. Liver biopsy was inconclusive and showed acute & chronic inflammatory cells with micro abscesses.

One month following PTBD, bloody discharge in the biliary drain was noted with subsequent fistula formation at the drain site. CT scan was repeated and showed persistence of the mass in segment 5 of right liver extending to segment 6. HCC was suspected and the biopsy revealed cancer seeding in the fistula tract. Systemic evaluation revealed no other extra-hepatic metastasis. Resection of the liver tumor was deemed infeasible due to advanced liver cirrhosis and poor liver function. Patient underwent living donor liver transplantation with enbloc resection of the involved abdominal wall and concurrent reconstruction with a combined pedicle flap of anterolateral thigh (ALT), vastus lateralis (VL) & Tensor Fascia Latae (TFL).



Patient recovered well postoperatively without any undue complications. Patient did not receive any postoperative adjuvant radiotherapy. The abdominal reconstruction site was inspected periodically and showed satisfactory healing. Patient was discharged 4th week after the LDLT. After 18 months of follow up, patient is doing well without signs of recurrence.

Discussion

This is so far the first reported case of successful living donor liver transplantation with abdominal wall resection followed by reconstruction in recipient with HCC and subcutaneous tumor seeding. Expanded criteria for liver transplantation for HCC have largely mentioned about the tumor numbers and diameter, but extra-hepatic metastasis is traditionally considered as contraindication for LT. However, tumor seeding along the PTBD catheter is an iatrogenic extra-hepatic spread of HCC and in absence of any other systemic involvement. Fine needle biopsy of HCC is also one of the causes for tumor seeding. Hence, tumor cell implantation secondary to therapeutic procedures and/or diagnostic procedures is not due to systemic dissemination of cancer cells, but simply a technical complication. The subcutaneous disease can be resected and reconstructed. Thus, full thickness excision of abdominal wall bearing the tumor seeding along with resection of primary tumor with tumor-negative margins may allow long-term survival in such patients.

Conclusion

Rarity of the condition and doubt about disease free survival, both, limits the experience of transplant surgeon in this context. With 18 months of disease free survival achieved in this recipient, we put forward the possibility of the more aggressive treatment option in such rare presentation of HCC with subcutaneous seeding. Early detection of the subcutaneous seeding and wide resection with an adequate surgical margin may increase the chance of survival if primary malignancy can be treated in such patients. Although this surgery is technically demanding and complex, we conclude that LDLT along with abdominal wall reconstruction is a feasible option in patients with subcutaneous tumor seeding with unresectable liver primary; however, further studies are warranted to conclude the safety of this procedure.