Impact of Living Donor Liver Transplantation Experience on Liver Resection

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Abstract

Living donor liver transplantation is well developed in India; experience of living donor liver transplantation has made significant impact on the techniques and approach to liver resection for non-transplant GI surgeons. There are differences the way surgeons with or without liver transplantation experience approaches the patient for liver resection. Liver transplantation positively affects the management of patient requiring liver resection in terms of techniques and preoperative and postoperative management. Visiting a liver transplant centre by those not having liver transplantation experience may help them to improve and expand their field of liver surgery.

Keywords: Liver transplantation; Liver resection

The Difference in LTS and NLTS

The difference starts from the selection of patients for liver resection; NLTS tend to choose easily resectable and straightforward cases compare LTS. LTS are more likely to have good quality triphasic liver scan with various reconstruction and volumetry before resection. LTS would like to see the images on console and discuss it well; before going for surgery.

The biggest difference I found is in the way surgeons perform hilar dissection. LTS are more delicate in performing hilar dissection. They respect the vascular structures; peculiar example is, LTS holds the hepatic artery by vascular forceps using periadventitial tissue rather than directly holding on the arterial wall. LTS willfully and carefully preserves the pericholdochal vascular plexus. The concept of venous drainage is clearer for LTS and they look preoperatively at the venous drainage carefully and preserve the adequate venous drainage of the FLR. The reality of segment 4 artery is not clear to NLTS; many times NLTS buzz off the segment 4 artery inadvertently but due to cross blood supply it does not impact on outcome much and missed unnoticed, while LTS will search for the segment 4 artery and deal with it as per the type of resection.

There are even differences in approach to the management of various diseases. In case of hydatid cyst; the LTS would more like to prefer resection where it is feasible while NLTS would prefer cystopericytectomy. In patients with right colonic cancer with liver metastasis; LTS would give consideration of simultaneous resection while NLTS would favors staged resection. In case of bilobar metastasis NLTS would try to treat more conservatively for example using ablative techniques; while LTS would prefer resection as much possible and uses ablative treatment as adjunct. Extended resections are more commonly performed by LTS, resectability criteria are wider for LTS. There can be many more differences; but these are apparent ones.

Summary

LDLT experience has positively affected the liver resection techniques. Many previously unresectable lesions are now being
resected, the fear of dealing with liver has gone down. Many complex
resections are being performed with good outcomes. Not having
experience of LT might be a hindrance for surgeons for expanding
their field of liver resection; so brief visit to LDLT set up might help to
reduce the fear and may be an eye opener for many surgeons even if
he/she does not want to pursue LT.