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Bridge over Posthepatectomy Liver Failure

E06

Comparison of pure laparoscopic and open living donor right hepatectomy after a learning curve

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Objective

To compare the early outcomes of pure laparoscopic living donor right hepatectomy (PLDRH) to those of open living donor right hepatectomy (ODRH).

Comparison of the early outcomes of these two procedures is important as the extension of laparoscopic techniques to PLDRH is just emerging. However, PLDRH is a technically challenging procedure and, therefore, it is essential that its outcome be considered in light of known outcomes of ODRH.

Methods

Our analysis was based on 78 consecutive cases of living liver donor, who underwent right hepatectomy, of which 43 underwent ODRH and 35 PLDRH. The learning curve for each group was analyzed and compared to the surgeon's level of experience.

Results

Donor characteristics and liver anatomy were comparable between the two groups, with the exception of the size of the right portal vein (PLDRH 13.4±6.3 mm *versus* ODRH 10.8±3.2 mm; *P*=0.03). Two donors, with a large graft size, in the PLDRH required conversion to an open procedure due to bleeding. The following outcomes were comparable between the two groups: operative time (*P* =0.64); estimated blood loss (EBL; *P*=0.86); intra-operative transfusion (*P* =0.57); hospital stay (*P*=0.41), and postoperative complications (*P* =0.51). After the learning curve, the EBL was lower for PLDRH than ODRH (*P*=0.04).

Conclusion

PLDRH can be performed as safely as ODRH and with a lower volume of intra-operative blood loss once the surgeon has attained an appropriate level of learning.