

Use Of An Mini- Subcostal Incision For Living Donor Right Hepatectomy: A Series Of 189 Consecutive Cases

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Background : Living donor hepatectomy is now a well-established surgical procedure. However, a large abdominal incision is still required, which results in a large permanent scar, especially for a right liver graft. Minimally invasive surgery has been widely used for donor operations. This study aimed to determine the safety and feasibility of mini- subcostal incision for living donor right hepatectomy.

Methods : We reviewed 1456 patients who underwent living donor right hepatectomy (LDRH) between January 2015 and December 2019 at Asan Medical Center. We performed 1:1 propensity score matching of the LDRH with mini- subcostal incision and the LDRH with conventional incision (J-shape), with 144 patients subsequently included in each group.

Results : The total operation time ($P = 0.018$) were longer in the mini- subcostal incision group. None of the donors required intraoperative transfusion or experienced any irreversible disabilities or mortalities. The length of postoperative hospital stay was significantly shorter in the mini- subcostal incision group ($P = 0.043$). The rate of complications in donors was similar between the 2 groups. Graft steatosis were independent predictors of postoperative morbidity after LDRH with mini- subcostal incision on multivariable analysis. Vascular and biliary complication rates in recipients were similar between the 2 groups.

Conclusions : LDRH with mini- subcostal incision is feasible when performed at an experienced living donor liver transplantation center. Donor safety is paramount in living donor liver transplantation. In centers with difficulties in performing pure laparoscopic donor right hepatectomy, LDRH with mini-subcostal incision can be an alternative to pure laparoscopic donor right hepatectomy.

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