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## The Comparative Study of Postoperative Outcomes Between Minimally Invasive Living Donor Hepatectomy and Open Living Donor Hepatectomy : The Korean Organ Transplantation Registry

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**Background:** This study aimed to accurately compare morbidity and complications between minimally invasive and conventional open procedures for living donor hepatectomy using the Korean Organ Transplantation Registry (KOTRY), which is a prospectively collected database of a nationally representative cohort of Korean patients. **Methods:** We reviewed the prospectively collected data of all 1694 living liver donors (1071 men, 623 women) who underwent donor hepatectomy between April 2014 and December 2017. Based on the type of procedure, we allocated the donors to the minimally invasive (MI, n = 304) or open procedure group (OP, n = 1390) and analyzed the relationships between clinical data and complications. **Results:** No donors died after the procedure. The overall complication rates after operation in the MI and OP groups were 6.2 and 3.5%, respectively. Biliary complications were the most frequent events in both groups (MI, 2.4%; OP, 1.6%). The majority of complications occurred within 7 days after surgery in both groups. The duration of hospitalization was shorter in the MI group than in the OP group ( $9.04 \pm 3.78$  days versus  $10.29 \pm 4.01$  days;  $p < .05$ ). **Conclusions:** Based on its similar outcomes in our study, minimally invasive donor hepatectomy cannot be an alternative option compared to open method. Our data shows that minimally invasive donor hepatectomy showed similar outcomes compared to open surgery in our data. It cannot be a suitable replacement in aspects of surgical safety. To overcome this, we need to ensure better outcomes, such as lower complication rates and shorter duration of hospitalization.