Is systemic heparinization necessary during living donor hepatectomy: short-term and long-term outcomes

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PURPOSE
Systemic heparinization has traditionally been performed during living donor hepatectomy (LDH) at most transplant centers because of the possibility of graft vascular thrombosis. However, no consensus on the use of systemic heparinization during LDH has yet emerged. The aims of the present study were to compare donor and recipient outcomes with reference to systemic heparinization and to determine whether or not systemic heparin needs to be administered to living donors.

METHODS
LDLT from January 2011 to December 2014: 175 adult LDLT patients and 175 living donors
Divide 2 groups according to whether systemic heparinization during living donor hepatectomy

Group I (n = 79)
- 5,000 IU unfractionated heparin intravenously 5 min before division of hepatic artery
- 50 mg protamine sulfate intravenously to reverse the anticoagulation effect after the hepatic vasculature was divided.

Group II (n = 96)
- direct graft flushing with 2-L amounts of cold heparinized HTK on the bench
- 1,000 IU heparin per liter of HTK solution
- protamine reversal was not performed.

RESULTS

Table 1. Recipient and Donor Demographics

Table 2. Intraoperative and Postoperative Outcomes in the Donors

Table 3. Intraoperative and Postoperative Outcomes in the Recipients

Table 4. Postoperative Complications According to Systemic Heparinization

CONCLUSION
Omission of systemic heparinization during LDH is associated with reduction in bleeding complications.
The lack of systemic heparin does not increase the incidence of graft vascular thrombosis.
Liver function test values during early post-transplant period and overall survival did not significantly differ between the two groups.
The omission of systemic donor heparinization during donor hepatectomy does not adversely affect the outcomes of donors or long-term outcomes of recipients.