

Radio-Opaque Filaments Guided Bile Duct Division During Living Donor Liver Transplantation, a Simple Solution to an Ongoing Dilemma

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ABSTRACT

Background: We describe our experience with two techniques of bile duct division in donors of right lobe living donor liver transplantation (RL-LDLT).

Methods: 49 RL-LDLT done in Al-Rajhi Liver Hospital, Assiut University, Egypt were divided into 2 eras; from November 2014 till September 2018, the site of biliary division in 29 donors was marked by metal clips (Clips group) and from October 2018 till September 2019, 20 donors were marked by radio-opaque filaments (ROF group).

Results: There were no differences between groups in donors' and recipients' baseline characteristics. In ROF group there were less number of bile ducts stumps (2, range 1-3 versus 2 range 1-4 in Clips group, $p=0.044$), less number of "imprecise-transection" (1 (5%) versus 11 (37.9%) in Clips group, $p=0.009$) and fewer number intraoperative cholangiographies performed (1, range 1-2 versus 2 range 1-3 in Clips group, $p=0.001$). There were no differences between groups in the number of biliary anastomoses or incidence of biliary complications in donors or recipients. Median follow up is 33 months (range 8-66).

Conclusions: Marking biliary division by ROF is a simple and minor modification but can decrease the difficulty of surgery and reduce exposure of donor and operating team to radiation.

Key words: liver transplantation, living donor, bile duct division, biliary stricture, bile leak