



ABST-0588

A Systematic Review And Meta-analysis Of Blood Transfusion Rates During Liver Resection By Country

Sun Ju KIM², Sumi LEE¹, Kyeong Sik KIM¹, Kyeong Geun LEE¹, Dongho CHOI¹, Boyoung PARK², **Yun Kyung Jung JUNG***¹

¹Department Of Surgery, College Of Medicine, Hanyang University, REPUBLIC OF KOREA

²Department Of Preventive Medicine, College Of Medicine, Hanyang University, REPUBLIC OF KOREA

Background : Although blood transfusion is very common in liver resection surgery, the concept of patient blood management was introduced relatively late compared to other surgeries worldwide. The aim of this study is to confirm the blood transfusion rate during liver resection by country in order to prepare the basis for patient blood management policy.

Methods : Relevant articles were identified through PubMed search (up to January 2023). Meta-analyses were performed by using the fixed or random effect models. Study heterogeneity was assessed by Q-test and I² test. Publication bias was evaluated by funnel plots, Egger's and Begg's test.

Results : A total of 54,690 participants from 83 studies ultimately met the inclusion criteria. According to the meta-analysis, the average transfusion rate of all studies was 19.26% (\pm SD: 15.55, Range: 0.00-73.86), and among them, Korea had a higher transfusion rate than Eastern and Western countries (22.26%, 19.63%, and 17.59%, respectively). Open surgery has a higher odds ratio(OR) for transfusion than laparoscopic surgery. In particular, the OR of transfusion for open surgery in Asians were higher than other ethnicities with OR of 3.00 (P<0.001, 95% CI, 2.15-4.18). In the main diagnosis, liver resection due to intrahepatic cholangiocarcinoma was the highest at 34.67% (\pm SD: 21.57, Range: 7.37-57.14). In particular, Korea showed a higher transfusion rate than other ethnic groups: 22.26% (\pm SD: 15.00, Range: 0.00-50.00) in hepatocellular carcinoma and 20.11% (\pm SD: 16.91, Range: 0.00-50.00) in laparoscopic surgery.

Conclusions : Through this study, we were able to analyze the world transfusion rate during liver resection. In addition to patient's diagnosis and surgical methods, differences in culture and medical environment according to race and geographic location also affected blood transfusion rates during liver resection.

Corresponding Author : **Yun Kyung Jung JUNG** (jyk1986@hotmail.com)