Topic : Liver

COMPARISON OF LEARNING CURVE DIFFERENCE OF LAPAROSCOPIST ACCORDING TO CONTROLLER TYPE OF FLEXIBLE SCOPE DURING LAPAROSCOPIC LIVER RESECTION

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Background : In laparoscopic liver resection (LLR), skilled laparoscopists are crucial for optimal outcomes. This study examines the impact of expert versus novice scopists and the role of conventional versus joystick-controlled laparoscopes on surgical outcomes and learning curves.

Methods : The study was conducted on laparoscopic liver resections performed by a single surgeon from December 2021 to March 2023. Exclusion criteria included patients with prior hepatectomy, Child-Pugh class B or C, the need for concurrent extrahepatic abdominal surgery, and cases of laparoscopic donor hepatectomy. Expert laparoscopists were defined as two scopists with over seven years of experience, while novice laparoscopists were two scopists with less than six months of experience.

Results : Out of 161 cases, 82 involved expert scopists and 79 novices. Experts had shorter operation times (139.5 vs. 178.0 min, p < 0.001), fewer transfusions (0% vs. 8.9%, p=0.006), and lower open conversion rates (0% vs. 6.3%, p=0.012). Among 116 cases using conventional scopes, experts again showed shorter operation times (144.0 vs. 178.0 min, p=0.002) and fewer transfusions (0% vs. 11.9%, p=0.013). In 45 cases with joystick scopes, no significant differences were observed between experts and novices for operation time or transfusion rates. To predict the learning curve of the scopists, linear regression analysis was conducted and this revealed that joystick scopes improved operation times for both groups, particularly in major hepatectomies, while in minor hepatectomies, differences were negligible with joystick scopes.

Conclusions : This study demonstrated that expert laparoscopists achieve superior surgical outcomes, but joystick-controlled scopes help novices gain proficiency faster, especially in minor hepatectomies.

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