



E-055

## Analysis Of The Learning Curve For Laparoscopic Pancreaticoduodenectomy Based On A Single Surgeon's Experience: A Retrospective Observational Study

**Chol Kyoon CHO\***<sup>1</sup>, Hee Joon KIM<sup>1</sup>

<sup>1</sup>Department Of Surgery, 화순전남대학교병원, REPUBLIC OF KOREA

**Background** : Laparoscopic pancreaticoduodenectomy (LPD) is a highly challenging procedure, which prevents its widespread adoption despite its advantages of being a minimally invasive procedure. This study analyzed the learning curve for LPD based on a single surgeon's experience.

**Methods** : We retrospectively analyzed the medical records of 111 consecutive patients who underwent LPD by a single surgeon between March 2014 and October 2022. The learning curve was assessed using cumulative summation (CUSUM) and risk-adjusted CUSUM (RA-CUSUM) methods. Surgical failure was defined as conversion to an open procedure or the occurrence of severe complications (Clavien-Dindo grade  $\geq$  III). Based on the learning curve analysis, we divided the learning curve into the early and late phases and compared the operative outcomes in each phase.

**Results** : Based on the CUSUM analysis, the operation time decreased after the first 33 cases. Based on the RA-CUSUM analysis, the LPD technique stabilized after the 44th case. In the late phase, operation time, length of stay, and incidence of delayed gastric emptying, severe complications, and surgical failure were significantly lower than in the early phase.

**Conclusions** : Our results indicate that 44 cases are required for stabilization of the LPD technique and improvement of operative outcomes.

Corresponding Author : **Chol Kyoon CHO** (ckcho@jnu.ac.kr)