

## The Development And Clinical Efficacy Of Simulation Training Of Open Duct-to-mucosa Pancreaticojejunostomy Using Pancreas And Intestine Silicone Models

Jae Seung KANG<sup>1</sup>, Hee Ju SOHN<sup>2</sup>, Yoo Jin CHOI<sup>3</sup>, Yoonhyeong BYUN<sup>4</sup>, Jung Min LEE<sup>5</sup>, Mirang LEE<sup>2</sup>, Youngmin HAN<sup>2</sup>, Hongbeom KIM<sup>2</sup>, Wooil KWON<sup>2</sup>, Jin-Young JANG\*<sup>2</sup>

<sup>1</sup>Surgery, Korea University Guro Hospital, REPUBLIC OF KOREA

<sup>2</sup>Surgery, Seoul National University Hospital, REPUBLIC OF KOREA

<sup>3</sup>Surgery, Korea University Anam Hospital, REPUBLIC OF KOREA

<sup>4</sup>Surgery, Eulgi Medical University Uijeongbu Hospital, REPUBLIC OF KOREA

<sup>5</sup>Surgery, Yonsei Medical University Gangnam Severance Hospital, REPUBLIC OF KOREA

**Background :** As pancreaticojejunostomy (PJ) is a challenging anastomosis, an education program is needed to train young surgeons to perform PJ. This study evaluated the effects of simulation-based training of open PJ using pancreas and intestine silicone models.

**Methods :** Five pancreatobiliary clinical fellows who did not perform PJ participated in this study. After watching the master video created by a senior pancreatobiliary surgeon, each trainee performed the PJ using silicone models and recorded them 10 times using a video camera. Of these videos, five were randomly duplicated due to the validation of the scoring system. The scoring system developed consisted of 20 scores. Three pancreatobiliary professors scored their performance by watching videos.

**Results :** The mean procedure time of the five trainees was 25.4 min (range, 23.5–27.3) in the first video and 15.8 min (range, 13.8–19.1) in the 10th video. The mean score was 12.6 (range, 5–19) and 18.3 (range, 15–20) in the first and 10th videos, respectively. The scores were similar among the duplicated videos for each supervisor.

**Conclusions :** This education system would help pancreatobiliary trainees to overcome learning curves efficiently without ethical issues related to animal models or direct practice to human patients.

Corresponding Author : Jin-Young JANG (jangjy4@snu.ac.kr)