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

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**Background :** Because pancreaticojejunostomy (PJ) is one of the challenging anastomoses in the real surgical fields, the training system before surgery is needed to train the young surgeons to perform the PJ. This study evaluated the effect of simulation-based training of open PJ using the pancreas and intestine silicone models with the scoring system developed by our department.

**Methods :** Five pancreatobiliary clinical fellows (2 juniors, 3 sophomores) who did never perform PJ in the real surgery were participated. The master video was created by a senior surgeon who has performed over 1,000 pancreatoduodenectomies. Each trainee was well acquainted with this video and recorded the procedures with video camera for ten times. Of ten videos, five videos were randomly duplicated due to the validation of scoring system. The scoring system consisted of twelve checklists of total 20 score. Three pancreatobiliary professors scored the surgical skills by watching the videos. The scores and procedure times were analyzed.

**Results :** The mean procedure time of five trainees was 25.4 min (range, 23.5 – 27.3) at the first video, and 15.8 min (range, 13.8 – 19.1) at the tenth video. The mean score was 12.6 (range, 5-19) at the first video, and 18.3 (range, 15-20) at the tenth video. Time showed a decreasing trend, and the score showed an increasing trend. The scores were similar among duplicated videos in each supervisor.

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

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