

**BP OP 1-1****Clinical meaning of the existence of microbiome in gallbladder after laparoscopic cholecystectomy: Incidence and related factors**

Dokyoon MOON<sup>1</sup>, Jae Seung KANG<sup>1</sup>, Yoonhyeong BYUN<sup>1</sup>, Yoo Jin CHOI<sup>1</sup>, Hae Won LEE<sup>2</sup>, Chang-Sup LIM<sup>\*3</sup>, Jinyoung JANG<sup>1</sup>

<sup>1</sup>Department of Surgery and Cancer Research Institute, Seoul National University College of Medicine, Seoul, Korea, Korea

<sup>2</sup>Department of Surgery, Seoul National University Bundang Hospital, Seoul, Korea, Korea

<sup>3</sup>Department of Surgery, Seoul Metropolitan Government Seoul National University Boramae Medical Center, Seoul, Korea, Korea

**Introduction :** In general, bile is sterile in normal status. However, there have been reports that bactibilia may exist at certain instances and its causal factors have not fully elucidated yet. To investigate the factors affecting bactibilia, we analyzed possible preoperative predictors and microflora in bile.

**Methods :** Bile samples were collected for culture during cholecystectomies from November 2018 to November. A total of 463 laparoscopic cholecystectomies were performed. Preoperative, intraoperative, and postoperative variables were compared between culture-positive and culture-negative groups.

**Results :** Of all patients, 157 (36.7%) of patients were culture-positive. Gram-negative bacteria (92, 58.6%) were more common, and Escherichia coli (43, 46.7%) and Klebsiella (20, 21.7%) were common species. The culture-positive group was older ( $53.9 \pm 16.2$  vs.  $68.4 \pm 12.3$ ,  $p < 0.001$ ), more symptomatic (66.8% vs. 79.6%,  $p < 0.001$ ), underwent more preoperative procedures including endoscopic retrograde cholangiopancreatography (18 vs. 54,  $p < 0.001$ ), percutaneous transhepatic gallbladder drainage (24 vs. 41,  $p < 0.001$ ), and had more cases of emergency hospitalization (32.8% vs. 63.1%,  $p < 0.001$ ) than culture-negative group. In multivariate analysis, age (HR 2.874, 95% CI 1.769-4.670,  $p < 0.001$ ), abdominal pain (HR 1.730, 95% CI 1.026 – 2.919,  $p = 0.002$ ), ERCP (HR: 9.00, 95% CI 4.833 – 16.75,  $p < 0.001$ ), and PTGBD (HR: 2.86, 95% CI 1.440 – 4.901,  $p = 0.002$ ) were independent factors related with bactibilia.

**Conclusions :** Among the patients who underwent laparoscopic cholecystectomy, the elderly, symptomatic, and preoperative drainage patients were more likely to have bacteria in the bile. In such cases, surgeon should be careful to prevent bile leakage during surgery, and consider administration of antibiotics that could cover gram-negative bacteria.

Corresponding Author. : **Chang-Sup LIM** ( limcs7@gmail.com )

Presenter : **Dokyoon MOON** ( ehrbsans@naver.com )