Abstract No. : **O-0070**

Topic : **Biliary & Pancreas**

PURE SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY USING AN ARTICULATING INSTRUMENT: EWHA METHOD

Yeongsoo JO [1], Seog Ki MIN [1]

[1] *General Surgery, Ewha Womans University Medical Center, Republic of Korea*

Background : Conventional laparoscopic cholecystectomy(CLC) has become the gold standard for the surgical treatment of benign gallbladder disease. To minimize invasiveness, single-incision laparoscopic cholecystectomy(SILC) was introduced. Although SILC offers better cosmetic outcomes, its adoption has been limited by certain drawbacks. The study aims to introduce and evaluate the advantages of a novel SILC technique, 'Ewha Method,' which utilizes articulating instruments to improve visualization and ergonomics, ultimately to establish SILC as a standard procedure.

Methods : This is a retrospective study of 530 SILC cases, comparing outcomes between senior(338) and junior(192) surgeons. With description of surgical technique, patient demographics, surgical outcomes, and learning curves were assessed. We defined difficult surgeries(DS) where cases involved conversion to CLC or took longer than 60 minutes, while the remainder were classified as non-difficult surgeries(NDS). We analyzed to identify risk factors for DS.

Results : The junior group had more patients with old age($\geq$ 65, 42.2 vs. 12.7%) , male sex(53.6 vs. 29.9%), comorbidities, higher rate of preoperative PTGBD(30.7 vs. 0.0%), gangrenous cholecystitis(7.3 vs. 0.3%). In surgical outcomes, the junior group showed a higher conversion rate(10.4 vs. 0.3%), but no difference in a severe complication rate(0.5 vs. 0.0%). The junior surgeon needed only three cases to overcome the learning curve. In a multivariable analysis for DS, diabetes mellitus(HR 4.045), preoperative PTGBD(HR 5.780), preoperative leukocytosis(HR 7.457), impacted cholecystolithiasis(HR 7.913), and gangrenous cholecystitis(HR 38.736) were independent predictors($P < 0.001$).

Conclusions : The Ewha Method ensures safe and efficient SILC, offering a standardized approach and short learning curve. To build appropriate criteria, further studies are needed.

Corresponding Author : **Seog Ki MIN** (mp9666@ewha.ac.kr)