Four different postoperative analgesic approaches in patients converted from laparoscopic to open gynecologic tumor surgery--trends and progress

Hyundeok Joo, MD, University of California San Francisco

Topic: Quality & Healthcare systems

Objectives
This is a cohort study to explore the optimal analgesic regimen for managing patients undergoing laparoscopic gynecologic tumor surgeries converted to laparotomy.

Methods
We assessed electronic medical records of all adult patients ≥18 years of age who underwent converted laparoscopic gynecologic tumor surgery at a single medical center between December 2014 and August 2021. Patients’ baseline demographics, operative characteristics, and postoperative outcomes were described as the median and interquartile range for continuous variables and as the number and percentages for categorical variables across four types of analgesic regimens: Infiltration of liposomal bupivacaine (LB), epidural infusion of fentanyl-ropivacaine (EI), transversus abdominis plane block using non-opioid analgesics and local anesthetics (TAP), and usual care (UC), defined as oral/IV pain medications including patient-controlled analgesia (PCA).

Results
A total of 63 conversion surgeries including 10 mini-laparotomies were performed. 63.5% (40/63) of the cases were for malignant tumors. There were no significant differences in age, BMI, race/ethnicity, ASA, and smoking across the groups. Perioperative metrics such as the cancer diagnosis (vs. benign mass) and type of procedure did not show substantial differences, but preoperative hemoglobin (Hgb), postoperative Hgb, and use of PCA differed in their patterns across the groups with EI cases having the lowest value for each. There was a difference in postoperative length of stay (LOS) in days across the groups. The LB group had the shortest LOS (3.5, IQR 0.8-4.8) compared to the TAP (3.8, IQR 3.0-5.0), UC group (4.00, IQR 2.8-7.8), and EI (8.9, IQR 5.9-14.5) groups. Total opioid requirement at postoperative day (POD) 0-3 also differed, and it was the highest in the EI group (1640.9, IQR 757.7-2546.9 OME), compared to the lowest in the LB group (85.6, IQR 0.0-137.0 OME).

Conclusions
We identified differences in LOS and opioid requirement at POD 0-3 across the four analgesic groups for conversion cases of laparoscopic gynecologic tumor surgeries. While the selection of analgesic strategy may be confounded by bias, LB and TAP are both strategies that may decrease LOS and opioid requirement. Further study with increased sample size and pairwise comparison adjusting for potential confounding should be pursued.

Abstract Table or Graph
MKMEANZC-1239090-1-ANY.pdf