OP 8-2

# Randomized Controlled Study Comparing The Analgesic Effects Of Intravenous Patient-controlled Analgesia And Patient-controlled Epidural Analgesia After Open Major Surgery For Pancreatobiliary Cancer

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**Background** : Postoperative pain relief is one of the most important components of Enhanced Recovery After Surgery (ERAS) programs. There is still some debate regarding whether patient-controlled epidural analgesia (PCEA), as specified in several ERAS guidelines, is more effective for pain control than intravenous patient-controlled analgesia (IV-PCA). This study was performed to compare outcomes, including pain control, between IV-PCA and PCEA in patients undergoing open surgical resection of major pancreatobiliary malignancies.

**Methods** : A total of 110 patients scheduled for open resection of pancreatobiliary cancers between January 2018 and February 2020 were enrolled in this randomized controlled trial, and were randomly assigned to the PCEA or IV-PCA group (each consisting of 55 patients). The primary endpoint was the numeric rating scale (NRS) pain score (minimum, 0; maximum, 10) during ambulation on postoperative day (PD) 2. The secondary endpoints were the NRS pain scores at rest (at 06:00, 12:00, and 18:00) from PD 1 to 7, the serum level of troponin I on PD 1, and the incidence of postoperative complications.

**Results** : Fifty-two patients in the IV-PCA group and fifty in the PCEA group were finally included in the analysis. There were no significant differences in NRS pain scores between the two groups during ambulation on PD 2, or at rest up to PD 7. There were no group differences in the serum troponin I level on PD 1, or in the rates of postoperative complications. The incidences of nausea and sleeping tendency were higher in the IV-PCA group and the rate of dysuria was higher in the PCEA group.

**Conclusions** : PCEA showed no superiority over IV-PCA in terms of postoperative pain relief or morbidity after major open surgery for pancreatobiliary malignancies. The method of analgesia should be considered based the characteristics of the patient, surgeon, anesthesiologist, and institute.

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