

Clinical Adverse Effect Of Intraoperative Infused Volume In Minimally Invasive Pancreatoduodenectomy?

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Background : Pancreatoduodenectomy(PD) is one of the complicate and hard surgery with high morbidity. Intraoperative fluid (IOF) control is known to reduce anastomotic leakage and complications in gut surgery. Clinical impact of IOF is still debate in pancreas surgery, especially minimally invasive surgery. the aim of this study in to determine whether fluid restriction reduces morbidity in minimally invasive PD(MI-PD).

Methods : From May 2013 to December 2020, total 253 patients were underwent MI-PD at single institution. The patients were grouped IOF infusion rate less than 7ml/kg/hr as the restriction group(RG), and the other group was the standard group(SG). perioperative outcome including Clavian-Dindo Classification(CDC) grade 3 or higher of surgical complication and presence of postoperative pancreatic fistula(POPF) were compared between two groups. Independent factors affecting the presence of CDC grade 3 or higher complications and POPF were also analyzed to determine whether IOF was in influencing factor.

Results : There was no difference according to the occurrence of severe complications of CDC 3 or higher between the two group(14.1% vs 11.3%, p=0.526). Also, there was no difference of POPF grade 2 or higher between two group(13.5% vs 9.3%, p=0.317). In contrast, in the case of open surgery for the same time(n=556), complications of CDC 3 or higher were significantly higher in the SG(1.2% vs 4%, p=0.031). In multivariable analysis, Presence of hypertension(3.783(1.178-12.147) p=0.025) was confirmed the independent factors for the occurrence of complications of CDC 3 or higher, but IOF was not confirmed the independent factor. A multivariable analysis of the independent factor for POPF 2 or higher was not confirmed.

Conclusions : IOF control on MI-PD is not independent factor on clinical POPF or CDC grade 3 or higher complication

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