

## MODIFIED BLUMGART ANASTOMOSIS: ITS EFFECT ON POSTOPERATIVE OUTCOMES AND OPERATIVE EFFICIENCY IN LAPAROSCOPIC PANCREATICODUODENECTOMY

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**Background** : This study aims to evaluate the effect of modified Blumgart anastomosis during pancreaticojejunostomy (PJ) on the incidence of clinically relevant postoperative pancreatic fistula (POPF) after laparoscopic pancreaticoduodenectomy (LPD).

**Methods** : A retrospective cohort study was conducted on patients who underwent LPD between 2018 and 2022. The primary endpoint was the incidence of grade B and C POPF, classified by the International Study Group on Pancreatic Fistula criteria, and PJ anastomosis time. Secondary endpoints included the incidence of postoperative complications (Clavien-Dindo classification grade  $\geq$  III).

**Results** : A total of 148 patients were analyzed, comprising 99 in the modified Blumgart group and 49 in the continuous suture group. General and intraoperative characteristics, including pancreas texture ( $P = 0.397$ ) and pancreatic duct diameter ( $P = 0.845$ ), showed no significant differences between groups ( $P > 0.05$ ). Grade B and C POPF occurred in 5 patients (5.1%) in the modified Blumgart group and 3 patients (6.1%) in the continuous suture group ( $P = 0.781$ ). Postoperative complications (Clavien-Dindo grade  $\geq$  III) were observed in 11 patients (11.1%) in the modified Blumgart group and 4 patients (8.2%) in the continuous suture group. Ninety-day mortality was 2% ( $n = 2$ ) in the modified Blumgart group and 0% in the continuous suture group. The PJ anastomosis time was significantly shorter in the modified Blumgart group ( $28.8 \pm 5.94$  min) compared to the continuous suture group ( $35 \pm 7.71$  min;  $P = 0.003$ ).

**Conclusions** : The modified Blumgart anastomosis technique during PJ resulted in a shorter anastomosis time while maintaining comparable outcomes to the continuous suture method in LPD.

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