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Drain Management Following Complicated Laparoscopic Cholecystectomy For Acute Cholecystitis

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Background : Routine drainage after uncomplicated laparoscopic cholecystectomy (LC) is not recommended. However, drain management following complicated LC for acute cholecystitis (AC) is still controversial.

Methods : This single-center, retrospective study reviewed 1877 patients with AC who underwent LC between January 2010 and December 2020. The inclusion criteria was complicated LC, which met any of followings: open conversion, subtotal cholecystectomy, adjacent organ injury, operation time ≥ 100 min, or estimated blood loss ≥ 100 mL.

Results : Of 222 patients (mean age, 66.0 years; 79 [35.6%] women), 137 (61.7%) patients received intraoperative drains, and early removal (≤ POD3) was performed in 90 (40.5%). The overall rates of surgical site infection (SSI) and bile leakage were 11.3% and 3.2%. Late removal demonstrated significant worse outcomes when compared to early removal and no drain placement for postoperative complication (9.4 vs 14.4 vs53.2%, p<0.001), postoperative hospital stay (3.56 vs 4.72 vs12.38 days, p<0.001), SSI (3.5 vs 10.0 vs 27.7%, p<0.001), and bile leakage (0.0 vs 1.1 vs 12.8%, p<0.001). On multivariate analysis, late removal (OR = 9.568, 95% CI = 2.432-37.649, p = 0.001) was the only significant risk factor for SSI when compared to no drain placement.

Conclusions : Drain placement is not routinely recommended even after complicated LC for AC. If drain was placed, early removal is associated with better outcomes, particularly the prevention of SSI.

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