

Effectiveness Of Flush Clipping/Ligation Vs High Clipping/Ligation Of Cystic Duct In Laproscopic Cholecystectomy

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Abstract

Background: Laparoscopic cholecystectomy (LC) has become the gold standard for treating symptomatic gallstones. The optimal site for cystic duct ligation is critical to prevent postoperative complications like bile leaks or “remnant cystic duct” syndrome. High ligation leaves a longer cystic duct stump >0.5 cm, while flush ligation aims for a minimal remnant. Flush clipping of the cystic duct in laparoscopic cholecystectomy (LC) refers to the precise application of surgical clips close to the junction of the cystic duct and the common bile duct (CBD) with cystic duct stump <0.5cm.

Aim: To evaluate the effectiveness of Flush clipping/ ligation of cystic duct versus High clipping/ligation in terms of outcome

Methods: This hospital-based prospective study was based on 30 cases of Laproscopic cholecystectomy done for various causes conducted over a period of 2 years from 2024 to 2026. A total of 30 patients undergoing LC were randomized into two groups Group A (flush clipping/ligation) and Group B (High clipping/ligation). The outcomes are measured for intraoperative and postoperative complications like infection, bleeding, post cholecystectomy syndrome, bile duct injury, bile leak, residual CBD stones/sludge, clip migration, retained gall bladder, chronic inflammation, cystic duct carcinoma and mortality. out of the 30 cases, flush clipping is done in 23 cases and High clipping is done in 7 cases with severe inflammation, not able to achieve critical view of safety. 2 cases of bleeding is encountered in flush clipping group, 3 cases of bleeding, 1 case of clip migration, 3 cases of post cholecystectomy syndrome, 2 cases of residual stone/sludge, 1 case of retained gall bladder, 1 case of chronic inflammation in high clipping group. There is no case of bile duct injury, cystic duct carcinoma and mortality in both groups.

Results: In this comparative study there is no statistical difference between the two groups in terms of bile leak, bile duct injury, retained gall bladder, clip migration, chronic inflammation, cystic duct carcinoma. There is significant association between post cholecystectomy syndrome, residual bile stones/sludge and High clipping group, suggesting more incidence in high clipping group compared to flush clipping group.

Conclusion: This study suggests that flush clipping of cystic duct in laproscopic cholecystectomy is more effective than high clipping in prevention of complications like post cholecystectomy syndrome, residual stones/sludge in CBD. Hence flush clipping/ligation should be performed whenever possible and able to achieve the critical view of safety.

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