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Risk Factors For Postoperative Urinary Retention After Laparoscopic Cholecystectomy : A Retrospective Observational Study

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Background : Postoperative urinary retention (POUR) leads to longer length of stay and increased cost. However, studies of the incidence and risk factor for POUR after laparoscopic cholecystectomy are relatively rare. The purpose of this study was to report the incidence of POUR and determine the risk factors for POUR after laparoscopic cholecystectomy.

Methods : This was a retrospective study. Data on 950 patients who underwent laparoscopic simple cholecystectomy between January 2017 and December 2019, were retrieved from a database. POUR is defined as the inability to void after surgery with post void residual urine volume of more than 400ml or inability to urinate requiring urinary catheterization in the postoperative period. We retrospectively evaluated the incidence of POUR and their risk factors in laparoscopic cholecystectomy.

Results : In 950 patients who underwent laparoscopic cholecystectomy, the incidence of POUR was 8.6% (n=82). POUR was significantly associated with benign prostatic hyperplasia (BPH) history, age above 65 years, intraoperative urinary catheter insertion, duration of surgery, infused fluid during surgery and postoperative narcotic use. Multivariate logistic regression analysis revealed that the risk factors for POUR were BPH history (HR: 2.707, 95% CI: 1.581-4.635; P<0.001), and postoperative narcotic use (HR: 2.726, 95% CI: 1.657-4.487; P<0.001). The length of postoperative hospital stay (9.9 ± 13.1 days vs. 2.7 ± 1.9 days, P<0.001) was significantly longer in the patients with POUR.

Conclusions : Patients with BPH history and postoperative narcotic medications were more likely to develop POUR after laparoscopic cholecystectomy. Our data proved useful information to prevent of POUR and reduce the length of hospital stays in patients underwent laparoscopic cholecystectomy.

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