

PREDICTORS OF ACUTE POSTOPERATIVE URINARY RETENTION AFTER VAGINAL PROLAPSE SURGERY

Hypothesis / aims of study

Voiding dysfunction after various prolapse surgery with or without anti-incontinence procedures have ranged from 12% and 62%. However, owing to variations in defining and reporting of voiding problems, no valid conclusion regarding voiding dysfunction after prolapse surgery can be drawn from the data available. The true cut-off level for urinary retention has not been defined by ICS. And in terms of duration of postoperative urethral catheterization, there was not enough evidence to show that any policy was better than another. Early identification and treatment of postoperative urinary retention is important because prolonged bladder overdistension may have a negative influence on surgical outcomes and cause long-term voiding dysfunction. The purposes of this study were to investigate the incidence of acute postoperative urinary retention (POUR) after vaginal prolapse surgery and to evaluate risk factors of acute POUR in women undergoing vaginal prolapse surgery for symptomatic pelvic organ prolapse.

Study design, materials and methods

The retrospective cohort study of seventy-five women undergoing vaginal hysterectomy, uterosacral vaginal vault suspension, anterior colporrhaphy, levator muscle plication with / without anti-incontinence surgery by single operator was performed. Acute POUR was defined as taking CIC (continuous intermittent catheterization) on three days after removal of indwelling urethral catheter because of failure of 2 more consecutive post-void residual urine volume (PVRUV) ≥ 100 ml or more than one third of total bladder volume for 2 days after removal of urethral catheter. The Mann-Whitney U test, Pearson chi-square test, Wilcoxon's signed rank test were used for the analysis of categorical variables and continuous variables, respectively. To know the predictors of acute POUR, logistic regression analysis was performed.

Results

The incidence of acute POUR was 24%. The mean (range) day of postoperative indwelling urethral catheter removal and postoperative CIC stop was 4.6 (2-6) and 6.0 (3-12) days, respectively. The group of acute POUR was significantly having medication for hypertension, higher Ba point at pre-operative Pelvic Organ Prolapse Quantification (POPQ) examination, slower average flow rate and higher postvoid residual urine volume in pressure flow study. The proportion of bladder outlet obstruction (BOO) group defined by the criteria of Liverpool or Blavias-Groutz BOO nomogram was not different between acute POUR group and non-urinary retention group. In the logistic regression analysis, PVRUV of more than one third of total bladder volume on pressure flow study with reduction of prolapse revealed as significant predictors of acute POUR.

Interpretation of results

This analysis incorporated voiding parameters of urodynamic study and clinical factors as well to find out the predictors of acute POUR. The limitation is retrospective study of small cases did not evaluate the rate of urinary tract infection and long-term voiding function. In this study the predictor of acute POUR revealed as residual urine volume after pressure flow study with reduction of prolapse.

Concluding message

The women who have more than 30% of residual urine volume of bladder volume in the urodynamic study should be counselled about acute POUR before vaginal prolapse surgery. This finding can be applied to the clinical management of postoperative urethral catheterization after vaginal prolapse surgery. Further systemic approach for poor voider undergoing vaginal prolapse surgery is needed.

Disclosures

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