Effect of bundle-based gynecological interventional nursing on bladder function and urinary retention after total hysterectomy

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Abstract

Objective To implement gynecological interventional nursing based on the concept of care bundles for patients after total hysterectomy, and to summarize and analyze its impact on bladder function recovery and urinary retention. Methods A total of 120 patients who underwent total hysterectomy in our hospital from February 2022 to July 2024 were selected as research subjects and randomly divided into two groups, with 60 cases in each group, receiving two different nursing approaches. The observation group received gynecological interventional nursing incorporating the concept of care bundles, while the control group received routine nursing. The two groups were compared with respect to time to first postoperative catheter removal, duration of indwelling catheterization, incidence of urinary retention, bladder function, and quality of life at 1 month after surgery. Results After the nursing intervention, the observation group had significantly shorter time to first postoperative catheter removal and duration of indwelling catheterization, and a lower incidence of urinary retention than the control group. Bladder function indicators were all significantly better in the observation group than in the control group. The differences in the above indicators were statistically significant ($P < 0.05$). Conclusion Gynecological interventional nursing based on the concept of care bundles can promote postoperative bladder function recovery after total hysterectomy and reduce the incidence of urinary retention, and thus has clinical promotion value.

Full Text

Impact of Bundle-Based Gynecological Intervention Nursing on Bladder Function and Urinary Retention After Total Hysterectomy

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Abstract

Objective: To evaluate the impact of bundle-based gynecological intervention nursing on bladder function recovery and urinary retention in patients following total hysterectomy. **Methods:** A total of 120 patients who underwent total hysterectomy at our hospital between February 2022 and July 2024 were enrolled and randomly assigned to either an observation group (n=60) or a control group (n=60). The observation group received bundle-based gynecological intervention nursing, while the control group received conventional nursing care. Outcome measures included time to first catheter removal, duration of indwelling catheterization, urinary retention incidence, bladder function recovery, and quality of life assessment at one month postoperatively. **Results:** The observation group demonstrated significantly shorter time to first catheter removal, shorter catheterization duration, and lower urinary retention rates compared to the control group (all $P<0.05$). Bladder function indicators were also significantly superior in the observation group. **Conclusion:** Bundle-based gynecological intervention nursing effectively promotes bladder function recovery and reduces urinary retention following total hysterectomy, warranting clinical implementation.

Keywords: bundle concept; total hysterectomy; urinary retention; bladder function

Introduction

Total hysterectomy is characterized by extensive surgical resection and numerous postoperative complications. Among these, bladder dysfunction represents a common complication, manifesting primarily as urinary retention, difficulty urinating, frequent urination, and loss of urinary sensation. Clinical studies have reported that the incidence of postoperative urinary retention following total hysterectomy can be as high as 44.9% [1]. Prolonged urinary retention leads to bladder overdistension, which can readily cause upper urinary tract complications such as hydronephrosis, renal function impairment, and even renal failure, severely affecting both surgical outcomes and postoperative quality of life.

Methods

1.1 General Data This study enrolled 120 patients who underwent total hysterectomy at a municipal people' s hospital between February 2022 and July 2024. The indications for surgery included cervical cancer, multiple uterine fibroids, adenomyosis, and refractory dysfunctional uterine bleeding.

1.2 Inclusion and Exclusion Criteria Inclusion criteria were: (1) patients undergoing radical total hysterectomy; (2) patients with normal upper urinary tract function and no other medical or surgical comorbidities; (3) age between 18 and 60 years; (4) informed consent and willingness to participate in the study. Exclusion criteria included: (1) postoperative wound infection or urinary fistula;

(2) contraindications to intermittent catheterization; (3) presence of vital organ dysfunction (liver, kidney, heart, lung, etc.); (4) inability to cooperate with routine treatment and nursing observation; and (5) incomplete treatment or voluntary withdrawal from the study.

1.3 Nursing Methods

1.3.1 Conventional Nursing The control group received conventional nursing care following standard protocols. This included: (1) preoperative counseling covering disease-related medical knowledge and surgical procedures, inquiry about history of voiding dysfunction, bowel preparation guidance, assistance with preoperative examinations, and assessment of bladder function and risk of postoperative urinary retention based on test results. Clear communication was maintained with patients regarding surgical plans, postoperative precautions, potential complications, and their causes. (2) Intraoperative nursing support during total hysterectomy, including painless catheterization performed 30 minutes before surgery with topical lidocaine application, and fluid replacement management based on blood loss. (3) Postoperative vital signs monitoring according to nursing standards. To facilitate bladder function training, the urinary catheter was clamped 2 hours before removal, allowing for timely extraction when the

Note: Figure translations are in progress. See original paper for figures.