Patients with permanent urethral catheterization for chronic urinary retention are frequently suffered from several complications such as bladder stone and/or urinary tract infection. In this study, we aim to apply vesicostomy technique to adult patients with urinary retention who developed complications during long-term indwelling catheterization.

MATERIALS & METHODS

- **Included patients**
  - Indwelling catheter
  - Age >20
  - Suffered from bladder stones or urinary infection caused by catheter obstruction.

- **Factors for evaluations**
  - Gender
  - Age
  - Background disease
  - Coexisting disease
  - Operating time
  - Bleeding
  - Concurrent operation
  - Complication
  - Post-void residual urine
  - Postoperative length of stay

**Study design**

-Post-void residual urine: measured with computed tomography seven days after the operation.
- Follow up: all patients are followed up over three months to identify postoperative complications.

**Patient characteristics**

- Number of patients: 9
- Male: 8
- Female: 1
- Age (range): 65 (23-92)
- Background disease: Cerebral palsy (3 cases), Neurogenic bladder (3), Cervical spinal cord injury (1), Myelomeningocele (1), Benign prostatic hyperplasia (1)
- Coexisting disease: Urinary tract stones (6), Cardiac disease (2), Renal abscess (1), Foreign body in the bladder (1)

**Operative characteristics**

- Operating time (range): 145 min (111-450)
- Bleeding (range): 50 ml (20-2800)
- Concurrent operation: Cystolithotomy (5), Urethrolithotomy (1), Cystostomy closure (1), Bladder foreign body removal (1), Nephrectomy (1)
- Complication: Delirium (2: Clavien-Dindo grade II), Stoma bleeding (1: grade I)

**Post operative characteristics**

- Post-void residual urine (range): 32 ml (5-51)
- Postoperative length of stay (range): 16 days (7-57)

**Operative technique**

- We modified the vesicostomy technique adding skin excision to loosen tension around it for preventing stoma stenosis.

**RESULTS**

- There were no patients who developed urinary tract infection or require catheterization for urine drainage postoperatively.

**DISCUSSION**

- Catheters placed cause urinary tract infection, eventually leading to stone formation causing catheter obstruction. Elimination of urethral catheter would be an important part of this surgery.
- Our new vesicostomy technique of skin excision for adult patients made the wound rhombus to loosen tension around it. This might contribute to prevent stoma stenosis for the adult patients in our study.

**CONCLUSIONS**

Our vesicostomy technique for the adult patients with urinary retention showed usefulness and safety. Our results suggested that vesicostomy could be one of the bladder drainage options for selected adult patients who are not feasible for permanent indwelling catheterization.