

An effective short duration postoperative catheterization after vaginal hysterectomy and pelvic floor repair.

P. R. Pant

Dept of Gynaecology and Obstetrics, Tribhuvan University Teaching Hospital, IOM, Kathmandu, Nepal

Correspondence to: Dr. Padam Raj Pant, Dept of Gynaecology and Obstetrics, Tribhuvan University Teaching Hospital, IOM, Kathmandu, Nepal

Background: The most common postoperative problem in the female bladder is atony caused by overdistention and reluctance of the patient to initiate the voluntary phase of voiding. After anterior colporrhaphy, spasm, edema and tenderness of the pubo-coccygeal muscles may obstruct the process of voiding. For spontaneous voiding to occur, the para sympathetic function of the bladder detrusor must be coordinated with the voluntary motor function of the abdominal wall and elevator muscles. In the past it was customary to insert an indwelling urethral catheter for 5 or more days after vaginal hysterectomy and pelvic floor repair, but infact, in uncomplicated cases 12- 24 hours post operative bladder catheterization is sufficient.

Objective: to study the urinary symptoms, like retention of urine and frequency of micturition, in patients with short duration postoperative catheterization after vaginal hysterectomy and pelvic floor repair.

Study design: This is prospective descriptive study, comprised of 257 women, who underwent vaginal hysterectomy and pelvic floor repair under spinal anaesthesia in different districts of Nepal. They were catheterized for 12 to 24 hours and after removal of catheter urinary problems were studied.

Results: Despite of different age, different degree of prolepses, different degree of cystocele and different duration of prolepses out of 257 patients only 8 patients developed urinary symptoms including retention of urine in 5 patients and frequency and burning maturation in 3 patients. They were catheterized for 12 to 24 hours. One of the patients who had retention required 5 days catheterization, while other 4 were re catheterized for 24 more hours. In all the cases, there was urinary tract infection.

Conclusion: Long duration postoperative catheterization 48 to 72 hours is not necessary in patients after uncomplicated vaginal hysterectomy and pelvic floor repair as practiced in many gynecological centers. Age of the patients, degree of uterine prolapse, cystocele, and duration of prolapse do not play major role in development of post catheter removal urinary symptoms. Preexisting or postoperative urinary tract infections have main role in the development of these symptoms.

Introduction

One of the challenges for the person performing vaginal procedures involving the bladder retraction is adequate bladder drainage and prompt return to the normal voiding. Different gynecological centers have different protocols for post vaginal hysterectomy bladder catheterization; some recommends 48 -72 hours catheterization, some 3-5 days. A route of bladder catheterization is also recommended differently, some recommends transurethral and some suprapubic catheterization.

Postoperative tissue swelling, bladder atony, pain, infection, haematoma formation and the inflated balloon of the standard Foley's catheter all contributes to delayed return of

normal micturition². Short duration postvaginal hysterectomy catheterization is equally effective and has fewer incidences of urinary infection and bladder function returns earlier.

Retention of urine is common postoperative problem associated with risk of over distension and permanent detrusor damage. The incidence is dependent of type of anaesthesia, age of the patient, and pre operative existence of urinary infection².

Material and Method

This is a prospective, descriptive study done in vaginal hysterectomy camps in different districts of Nepal. 257

patients underwent vaginal hysterectomy with pelvic floor repair under spinal anaesthesia. The patients were 31 – 78 years of age; with parity of 2-11 and the degree of utero-vaginal prolapse was from first degree to complete procidentia with different degree cystocele, rectocele and enterocele. The duration of prolapse ranged from 2- 35 years. These all the patients were operated by the same surgeon by modified technique, (without peritonization of pelvic peritoneum, without tying the Cardinal ligaments with each other for vault suspension and bladder buttressing was done with purse-string suture). After operation all the patients were catheterized for 12-24 hours i.e. the patient who was operated in the morning was catheterized till next morning and the patient who was operated in the evening was also catheterized till next morning. Next morning after removal of the catheter urinary symptoms were observed and these symptoms were correlated with age, parity of the patient and degree of prolapse, cystocele, and duration of prolapse.

Results

After removal of the catheter out of 257 operated patients, eight (3.11%) developed urinary symptoms, out of these eight, five (62.5%) patients were unable to pass urine and required recatheterization, all of these five had UTI with WBC more than 8 / hpf, other two had frequency of micturition, one had burning micturition, one of the patients with frequency of micturition had also UTI. But one with frequency of micturition and one patient with burning micturition became asymptomatic after taking plenty of fluid orally, while the patients with UTI required additional antibiotics. The maximum number of patients was in age group 41-50 years and three out of eight patients with urinary symptoms belonged to this group as shown in (Table 1).

Table 1. Table showing pattern of urinary symptoms with age distribution.

Age group	no of patients'	patients with with Symptoms after removal Of catheter
31-40	36	1
41-50	94	3
51-60	86	2
61-70	38	2
71-80	03	-

Most of the patients were with second-degree uterine prolapse and the patients with urinary symptoms belonged to this group as shown in (Table 2).

Table 2. Table showing pattern of urinary symptoms in relation to degree of uterine prolapse

Degree of prolapse	No of Patient	Patients with urinary symptoms after removal of catheter
1 st	13	2
2 nd	138	3
3 rd	67	2
Complete procidentia	39	1

Most of the patients were with moderate cystocele, but comparatively patients with urinary symptoms were in-group with mild cystocele as shown (Table 3).

Table 3. Table showing pattern of urinary symptoms in relation to degree of cystocele.

Severity of cystocele	No of patients	Patients with urinary symptoms after removal of catheter.
Mild cystocele	27	2
Moderate cystocele	162	3
Huge cystocele	68	3

Most of the patients with urinary symptoms after removal of catheter were in a group of women with prolapse for 16-20 years. Surprisingly the patients who had prolapse for 31-35 years had no urinary symptoms after removal of the catheter as shown in (Table 4).

Table 4. Table showing pattern of urinary symptoms in relation to duration of prolapse.

Duration of uterine prolapse in years	No of patients	Patients with urinary symptoms after removal of catheter.
1-5	76	1
6-10	68	1
11-15	64	1
16-20	24	3
26-30	15	1
31-35	4	-

Short duration postoperative catheterization

Discussion

In-dwelling catheter use after major uncomplicated gynaecologic surgery has been the slandered method of practice for bladder treatment after operation. However, there is limited support for the use of in-dwelling catheter for the first 24 hours routine hysterectomy. Furthermore, in-dwelling catheter has been associated with increased bacterial counts and higher rates of positive urine culture¹.

Postoperative tissue swelling, bladder atony, pain infection haematoma formation and the balloon of the Foley's catheter all contribute to delay the return of normal bladder function. Longer a drainage system is in place, the greater the incidence of bacteriuria and morbidity².

Retention of urine is a common postoperative problem associated with risk of over distention of bladder and permanent detrusor damage. The incidence varies with type of surgery, gender, age, preoperative history of urinary tract dysfunction. The incidence is independent of type of anaesthesia, administration of excessive perioperative intravenous opioids as well as anticholinergic and adrenergic medications, increases the incidence and severity of urinary retention³.

Colposuspension and vaginal repair operations can cause postoperative edema and inflammation of the bladder outlet and urethra. To ensure free urine drainage an indwelling transurethral catheter is usually kept in place for 3-5 days postoperatively. However the use of an indwelling transurethral catheter is associated with a high frequency of urinary infection⁴.

In this study three older patients belonging to 71- 80 years of age, did not have urinary symptoms after removal of catheter. There is no big difference in the incidence of urinary problems after removal of the catheter and degree of uterine prolapse. Similarly no significant difference was found between these symptoms and degree of cystocele and as already mentioned above all the 4 women who had uterine prolapse since 31-35 years were found asymptomatic of urinary problems after removal of the catheter.

The commonest cause of urinary retention was urinary tract infection, but not the age of the patient, degree of prolapse, duration of prolapse and short duration of bladder Catheterization.

Conclusion

One of most common urinary symptoms after removal of catheter in patients with vaginal hysterectomy and pelvic floor repair is retention of urine. Forty eight to seventy two

hours postoperative transurethral catheterization in uncomplicated vaginal hysterectomy pelvic floor repair patients is not necessary as practiced in many gynaecological centers. Age of the patient, degree of uterine prolapse, cystocele and duration of prolapse do not play major role in the development of urinary symptoms after removal of the catheter. Preexisting or postoperative urinary tract infection is mainly responsible for postoperative retention of urine after removal of transurethral catheter.

References

1. Terry S Dunn, Judith Shlay, And Dave Forshner. Are indwelling catheter necessary for 24 hours after hysterectomy? *Am. J. Obstetrics Gynaecol* 2001; 435-37
2. Charles Broberg. Catheter drainage after gynaecologic surgery: A comparison of methods. *Am J. Obstet. Gynaecol* 1904;18-23
3. L.A. Rosseland, A. Stubhaug, H. Breivik. Detecting postoperative urinary retention with an ultrasound scanner. *Acta anesthesiologist scanda* 2002; 279-282
4. J.T. Andersen. I. Heisterberg. S hebjoen et al. Suprapubic versus transurethral bladder drainage after colposuspension/ vaginal repair. *Acta Obstet Gynecol Scand* 64:139-143