

Original Research Article

Acute retention of urine - The surgical prospect

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Abstract

Background: Acute urinary retention is the most frequent symptom due to which patient presents in emergency department and is admitted for further evaluation and management. Aim was to study symptomatology of acute urinary retention, to study etiology and mechanism of acute urinary retention, to lay down the approach to a patient of acute urinary retention, to review the various of therapeutic modalities in acute urinary retention.

Materials and methods: Patients with acute retention of urine were included in this study. After taking clinical history and routine examinations, specific laboratory and radiological investigations were done to find out the cause. In emergency, per urethral catheterization or suprapubic cystostomy/puncture were done. According to cause, conservative or surgical management was done. All the data were recorded and compared.

Results: Maximum patient were from age group 51-70 years (40%). Out of 100 cases of acute urinary retention all of them have sensation of fullness of bladder, 95 patient have pain in suprapubic region 85 patients have distension of lower abdomen or (suprapubic bulge), 10 patient are post operative. 7 patients had history of trauma to urethra. 37 out of 40 patient operated by Freyer's prostatectomy. 3 patients were operated by transurethral resection of prostate (TURP). 27 patients had urethral stricture out of 100 patients. 1 patient had undergone stricturotomy plus Urethral repair. 19 out of 27 patients has undergone, urethral dilatation and advised to follow up for repeated dilatation. 7 patients were treated by cystoscopy with visual internal urethrotomy (Stricturotomy).

Conclusion: Acute retention of urine is more common in elderly male in which benign prostatic hypertrophy a leading cause and TURP was the most effective treatment.

Key words

Acute retention, Benign prostatic hypertrophy, Urethral stricture, Transurethral resection of prostate, TURP.

Introduction

Acute urinary retention is the most frequent symptom due to which patient presents in emergency department and is admitted for further evaluation and management. In depth knowledge as well as understanding of local anatomy helps the surgeon in management of patient. In this modern era of medicine various diagnostic tool such as cystoscopy [1], ultrasonography [2] etc. have helped us in prompt diagnosis and evaluation of a case of an acute urinary retention. In cases of acute urinary retention, various therapeutic modalities are available which have decrease morbidity and mortality to great extent. Our study was containing 100 consecutive cases of acute retention of urine from year 2000 and we have discussed each and every aspect of disease symptom in a concise manner.

Aim and objectives

- To study symptomatology of acute urinary retention.
- To study etiology and mechanism of acute urinary retention.
- To lay down the approach to a patient of acute urinary retention.
- To review the various therapeutic modalities in acute urinary retention.

Materials and methods

Patients with acute retention of urine were included in this study. After taking clinical history and routine examinations, specific laboratory and radiological investigations were done to find out the cause. In emergency, per urethral catheterization or suprapubic cystostomy/ puncture were done. According to cause, conservative or surgical management was done. All the data were recorded and compared.

Results

Maximum patient were from age group 51-70 years (40%) as per **Table - 1**. Out of 100 cases of acute urinary retention, all of them had sensation of fullness of bladder, 95 patient had pain in suprapubic region 85 patients had distension of lower abdomen or (suprapubic bulge), 10 patient were post operative. 7 patients had history of trauma to urethra as per **Table - 2**. 40 patients out of 100 patients had benign enlargement of prostate. Eldest one was of 95 years and youngest one 42 years. 37 out of 40 patients were operated by Freyer's prostatectomy. 3 patients were operated by transurethral resection of prostate. 27 patients had urethral stricture out of 100 patients. 1 patient had undergone stricturotomy plus urethral repair. 19 out of 27 patients had undergone, urethral dilatation and advised to follow up for repeated dilatation. 7 patients were treated by cystoscopy with visual internal urethrotomy (Stricturotomy). 2 post operative patients had latent enlarge prostate. All patients of trauma required supra pubic cystostomy and then treated according to urethral injury after 3 weeks. 1 patient was treated by cystoscopy, pushing back stone in bladder then lithotripsy. 1 patient was treated by passing back stone in bladder then cystolithotomy. 1 patient was treated external urethrotomy with stone removal. All patients required per urethral resection of bladder neck as per **Table - 3**.

Table – 1: Age distribution.

Age in years	No. of cases
0-5	2
5-20	6
20-30	13
31-50	18
51-70	40
71-90	20
>90	1

Discussion

In the age group 51-70 years and 70-90 years commonest cause was benign enlargement of prostate, then stricture [3]. In the age group (31-50 years) commonest cause was stricture then benign enlargement of prostate. A recent study of aging in men found 51%, clinical incidence of BEP in 61-69 years age group.

Table – 2: Symptoms.

Symptoms	Case (%)
Present symptom	
Retention of urine	100
Pain (Suprapubic)	95
Sensation of fullness of bladder	100
Distension of lower abdomen	85
Trauma	7
Bleeding per urethra	6
Operation done	10
Past symptom	
Retention of Urine	10
Hesitancy in doing micturition	65
Frequency increased micturition	58
Nocturia	30
Urgency	28
Urge incontinence	60
Poor flow / narrow stream	45
Post micturition dribbling	21
Intermittent stream	10
Sensation of poor bladder emptying	30
Hematuria	6
Pyuria	6
Burning micturition	50

Acute urinary retention was very common in male and is rare in female [4]. Males were more affected because of long urethra with curved at two places. Prostate gland is present in male. In female urethra is very short so retention is uncommon. Dysuria commonly occurs in female [5]. Acute retention may be present in female. Acute retention may be present in female during third trimester of pregnancy. On asking past symptoms particularly urinary complain most of them have some form of urinary problem like

hesitancy, increase frequency, nocturia, poor flow of urine or narrow stream of urine, intermittent stream, dribbling, hematuria and pyuria. Out of 100, 10 patients had history of previous urethral operative procedure urethral catheterization for other reason. 10 patients had diabetes; this is due to Increase urinary tract infection [6]. Out of 100 cases, 40 patients had benign enlargement of prostate. This is the most common cause of urinary retention. Out of 40 patients of BEP, 36 patients were more than 50 years of age so as age increase chance of BEP increase. BEP is the commonest cause of urinary retention in Elderly male patient [7]. 27 patient have urethral stricture is the 2nd most common cause of urinary retention. 18 patients are below age of 50 years. Stricture urethra is commonest cause of urinary retention in young age group [8]. Other causes were post operative urinary retention, retention after circumcision who needed catheterization, urethral trauma, stone migrated to prostatic urethra etc. Benign prostatic enlargement was treated by TURP or open prostatectomy, TURP had an excellent result [9]. Urethral stricture was treated by visual internal urethrotomy [10]. There were post operative complications like bleeding, infection, urinary incontinence, recurrence etc. In some cases conservative treatment in the form of privacy, sitting along the side of bed, warm water bag application, analgesic were given.

Conclusion

Acute retention of urine is more common in elderly male in which benign prostatic hypertrophy a leading cause and TURP was the most effective treatment.

References

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Table – 3: Etiology and age in cases of acute Urinary retention.

Cause / Age (Years)	0 - 5	6 - 20	21 - 30	31 - 50	51 - 70	71 -90	>90	Total
BEP				4	24	11	1	40
Stricture		2	6	10	8	1		27
Post-operative	1	1	3		3	1	1	10
Trauma		2	2	1	1	1		7
Ca prostate				1	2	3		6
Bladder Neck Stenosis				1	1	1		3
Urethral Stone	1		1		1			3
Ca. Bladder						1		1
Blood Clot				1				1
Posterior Urethral Valve		1						1
Meatal Stones				1				1
Total	2	6	13	18	40	19	2	100