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Surgery

A STUDY TO EVALUATE THE EFFICACY OF ALFUZOSIN IN ACUTE URINARY RETENTION.

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ABSTRACT There has been an increasing trend towards the use of drugs in both the progression and treatment of AUR due to prostatic obstruction. The immediate management of AUR requires bladder decompression by catheterisation. Until recently, secondary management consisted exclusively of BPH surgery performed either within a few days after AUR (emergency surgery) or within 1 to 3 months after the event, with the patient returning home with a catheter in situ during the interval.

AIMS AND OBJECTIVE:

1. To study the efficacy of alfuzosin in acute urinary retention.
2. To observe its side effects.

MATERIALAMD METHODS:

Group I (Control): 50 patients were taken under consideration and advised analgesics/antibiotics as and when required during trial period.
Group II (Study): 50 patients were given Tab. Alfuzosin 10mg in morning and analgesic/antibiotics as and when required during trial period. These patients were catheterized and catheter was removed after 3 days.

KEYWORDS : Analgesic ,progression, Secondary .

INTRODUCTION:

There has been an increasing trend towards the use of drugs in both the progression and treatment of AUR due to prostatic obstruction. The immediate management of AUR requires bladder decompression by catheterisation. Until recently, secondary management consisted exclusively of BPH surgery performed either within a few days after AUR (emergency surgery) or within 1 to 3 months after the event, with the patient returning home with a catheter in situ during the interval. Evidence that the urgent surgery after AUR is associated with greater morbidity and mortality compared with delayed prostatectomy, in part owing to the increased risk of sepsis and bleeding associated with catheterisation has led to the increasing use of a trial without catheter (TWOC) in the past few years. Success rates of 23% to 30% have been reported for TWOC performed 1 to 3 days after an episode of AUR. Recent studies suggest that only a minority of men with successful TWOC have an AUR relapse within the following months. Therefore, it seems useful to have patients with AUR undergo TWOC which, if successful, may delay or avoid BPH surgery in an emergency setting and allow planned intervention in the absence of a urinary catheter.

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Failure was considered if:

1. The patient failed to void satisfactorily after catheter removal.
2. Uncontrolled pain and/or Uroseptic fever leading to hospitalization during trial period.

Follow-up of the case:

- 15 days or earlier if retention
- 1 month
- 3 months

At the end of the study data were collected as per proforma and analysed by using Independent t-test and Chi-square test.

OBSERVATIONS:

The present prospective, randomised control study comprised of 100 patients who attended the Out Patient Department of Surgery and Urology, Pt. B.D. Sharma PGIMS, Rohtak with the diagnosis of acute urinary retention. In all the cases, clinical history and examination was followed by relevant laboratory investigations like complete hemogram, blood urea, serum creatinine, urine complete examination and urine culture sensitivity.

In all cases USG prostate was done. All 100 symptomatic patients were chosen and divided randomly (prospective controlled randomisation) into two groups. Group I (Control) comprised of 50 patients who were given placebo and Group II (Study) comprised of 50 patients who were administered tablet alfuzosin 10 mg once daily.

Patients were followed up and findings were recorded as per proforma attached. At the end of the study, final evaluation was done and the results were evaluated. The results were conducted on the basis of

INDEPENDENT 'T'-TEST AND CHI-SQUARE TEST.

1. Age of youngest patient was 50 years while that of oldest was 90 years. Majority of patients were in the age group of 60-80 years (68%). The mean age was 67.99 years. The mean age was 68.3±10.49 years in group 1 and 67.68±9.30 years in group II. No statistically significant difference was observed in mean patient age as concluded from independent 't' test.

2. DISTRIBUTION ON THE BASIS OF PRESENTING COMPLAINTS:

Complaints	Group In(%)	Group II n(%)	Total n(%)
Supra-pubic discomfort	50	50(100)	100(100)
Burning micturition	32(64)	34(68)	66(66)
Pyuria	4(8)	7(14)	11(11)
Frequency	47(94)	47(94)	94(94)
Nocturia	48(96)	46(92)	94(94)
Straining	38(76)	45(90)	83(83)
Weak stream	38(76)	45(90)	83(83)
Intermittency	27(54)	32(64)	59(59)
Incomplete emptying	29(58)	23(46)	52(52)

3. DISTRIBUTION ON THE BASIS OF PROSTATE VOLUME:

Prostate volume	Group I n(%)	Group II n(%)	Total n(%)
20-20.9	15(30)	15(30)	30(30)
30-30.9	19(38)	16(32)	35(35)
40-40.9	8(16)	6(12)	14(14)
50-50.9	6(12)	4(8)	10(10)
60-60.9	0(0)	4(8)	4(4)
70-70.9	2(4)	3(6)	5(5)
>/=80	0(0)	2(4)	2(2)

4. DISTRIBUTION ON THE BASIS OF MEDIAN LOBE BULGE (MLB):

MLB	Group In(%)	Group II n(%)	Total n(%)
Number of patients (%)	13(26)	28(56)	41(41)

5.DISTRIBUTION WITH RESPECT TO SUCCESSFUL VOIDING AFTER 3 DAYS OF CATHETERISATION:

	Group I n(%)	Group II n(%)	p value
No. of patients voiding successfully(%)	13(26)	17(34)	p>0.05 not significant

DATA AND RESULTS OF RANDOMISATION FOR MEAN PATIENT AGE(YEARS) FORSUCCESSFULLY VOIDING AND CATHETERISATION CASES:

	Group I	Group II
	Mean age (in years)	Mean age (in years)
Successfully voiding cases	62.61	62.94
Recatheterisation	70.29	69.51

6. DISTRIBUTION ON THE BASIS OF PAIN AFTER TWOC:

	Group I n(%)	Group II n(%)	Total n(%)
Pain	5(10)	5(10)	10(10)

7. DITRIBUTION ON THE BASIS OF POST VOID RESIDUAL URINE VOLUME(PVR):

Residual volume(ml)	Group I n(%)	Group II n(%)	Total n(%)
50-59	7(14)	3(6)	10(10)
60-69	9(18)	9(18)	18(18)
70-79	14(28)	13(26)	27(27)
80-89	5(10)	9(18)	14(14)
90-99	8(16)	6(12)	14(14)
100-109	4(8)	4(8)	8(8)
110-119	3(6)	4(8)	7(7)
>/=120	0(0)	2(4)	2(2)

8. DISTRIBUTION ON THE BASIS OF RECATHETERISATION:

Recatheterisation	Group I n(%)	Group II n(%)	Total n(%)
After 3 days	25(50)	21(42)	46(46)
1st follow up	11(22)	8(16)	19(19)
2nd follow up	1(2)	4(8)	5(5)
3rd follow up	0	0	0
Total	37(74)	33(66)	70(70)

9. DISTRIBUTION ON THE BASIS OF DRUG SIDE EFFECTS:

Side effects	Dizziness	Asthenia	Somnolence	Ejaculatory disorders
n(%)	2(4)	0	0	0

DISCUSSION

The present study was conducted to evaluate the efficacy of Alfuzosin in acute urinary retention. The study included 100 patients with acute urinary retention who, attended the Out Patient Department of Surgery and Urology, Pt. B.D. Shanna PGIMS, Rohtak. In all the patients clinical history and examination was followed by relevant laboratory investigations including ultrasound prostate.

Patients were divided randomly into control (Group I) and study (Group II) groups with administration of alfuzosin in Group II patients only. Observations were noted. At the end of the study, relevant statistical tests were performed and results were analysed.

The etiology of AUR remains unknown in many cases, which are often described as spontaneous, but catheterisation remains standard management followed by a TWOC and bladder outlet surgery in those who do not void satisfactorily. Alpha-blockers (alpha-adrenoreceptor antagonists) effectively reduce the symptoms associated with BPH and improve the urodynamic parameters of obstruction, without the sexual adverse effects associated with the 5alpha reductase inhibitors.

Pathogenesis of AUR is complex and multifactorial; a-adrenergic overactivity, detrusor decompensation and neurotransmitter modulation. Furthermore, it has been postulated that, rather than being an end stage result of long standing BPH, AUR may represent an event unrelated to severity of BOO, perhaps caused in many cases by an acute prostatic infarction.

No evidence based agreed-on protocol is available for the management of BPH related AUR. The immediate treatment is catheterisation followed by a TWOC after a variable interval. Owing to the increased morbidity and mortality associated with emergency surgery, treatment measures that improve the success rate of a TWOC are beneficial. It would allow some patients to avoid surgery and in others would allow the surgery to be scheduled in the absence of a catheter, which has shown to be associated with less morbidity. Use of alpha blocker, with their ability to relax the sympathetic tone at the level of bladder neck and urethra is considered to be one such measure.

The mean patient age (in years) in the present study was 68.3±10.49 years (range 50-90) in Group I patients and 67.68±930 years (range 50-90) in Group II patients with a non significant p value of >0.05 as shown in table II. There was no statistically significant difference between Group I and II patients with respect to mean patient age. In previous similar studies conducted by McNeil et al and Shah et al, the mean patient age in Group I was 69.4 years and 67.7 years respectively while in Group II was 69.3 years and 69.5 years respectively. In the second phase of ALFAUR study mean patient age was 67.4 years in Group I and 66.2 years in Group II. In a study by McNeill et al. mean patient age was 72.7 years (Group I) and 67.7 years (Group II).

The results of the present study do support the routine use of alpha-blockers in patients with AUR. But stiII larger studies are needed to support this.

SUMMARY & CONCLUSION

- In the present study 100 cases of AUR were taken and divided randomly into Group I (Control) and Group II (Study) consisting of 50 patients each. Group I patients were given placebo while Group II patients were given tablet alfuzosin (alpha 1A-adrenergic receptor blocker).
- Age of the patients varied from 50-90 years. Age of youngest patient was 50 years while that of oldest was 90 years. Majority of patients were in the age group of 60-80 years (68%).
- Maximum presenting complaints were in the form of supra-pubic discomfort (100%), frequency (94%), nocturia (94%), straining (83%), weak stream (83%) and burning micturition (66%).
- Lowest prostate volume was 20.6 ml and highest was 81.7 ml. Majority of patients were having prostate volume in range of 20-40 ml (56%).
- Median lobe bulge was present in 41% of the patients (13% of Group I and 28% of Group II).
- Twenty six percent of Group I patients and 34% of Group II patients voided successfully after TWOC.
- Mean age of patients voiding successfully was 62.61 years in Group I and 62.94 years in Group II.
- Mean age of patients requiring recatheterisation was 70.29 years in Group I and 69.51 years in Group II.
- Number of patients requiring recatheterisation after failed TWOC were maximum on 3rd day of follow-up, as observed in 46% of patients.
- Lowest post void residual urine volume was 50ml and highest was 128ml.
- Dizziness / postural hypotension (in 4% of patients) was the only observed side effect of the drug.

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