

ORIGINAL ARTICLE

FREQUENCY OF EJACULATORY DISORDERS ASSOCIATED WITH TAMSULOSIN THERAPY IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA

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ABSTRACT

Introduction: Benign prostatic hyperplasia (BPH) is very common condition in elderly male. BPH, overactive bladder, urinary tract infection, tumors, stones, or functional problems of the lower urinary tract are some of the conditions that can cause LUTS. α 1-Adrenoceptor antagonists are routinely used to treat BPH, and urologists are familiar with their safety profiles. It has been noticed that many patients having LUTS due to BPH also experience ED, causing problems in their sexual life but this aspect has been ignored many times by urologists, which adds to the patient burden. Despite the good tolerability of this drug, it still has got high chance of ED. So this study was designed to determine the frequency of ejaculatory dysfunction in our population.

Material & Methods: It was a descriptive cross-sectional study where all adult male patients presented to Urology OPD with Lower Urinary Tract Symptoms were included in the study. After a detail history, examination including digital rectal examination (DRE) and investigations like Urine routine examination, urine culture, serum PSA, renal function tests and Ultrasound Kidney, Ureter, Bladder, Prostate and Pre and Post void residual urine the patients were advised alpha adrenergic receptors blocking agents like Tamsulosin 0.4 mg OD at night. Erectile dysfunction was assessed of all patients before starting therapy and after two 2 months. Retrograde ejaculation was assessed by taking the history from the patient and examining first voided urine after ejaculation for spermatozoa.

Results: Total of 111 patients were included in the study. Mean age was 52 years with a standard deviation \pm 7.28. Ejaculatory disorders were observed in 72(65%) patients while 21(19%) patients had erectile dysfunction.

Conclusion: The frequency of ejaculatory disorders associated with tamsulosin therapy for BPH was 65%, and erectile dysfunction was observed in 19% of the patients.

Key Words: Benign Prostatic Hyperplasia, Ejaculatory Disorders, Tamsulosin Therapy

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INTRODUCTION

Benign prostatic hyperplasia (BPH) is very common condition in elderly male.¹ BPH, overactive bladder, urinary tract infection, tumors, stones, or functional problems of the

lower urinary tract are some of the conditions that can cause LUTS.² α 1-Adrenoceptor antagonist are routinely used to treat BPH, and urologists are familiar with their safety

profiles.³ Tamsulosin is thought to have an inhibitory effect during the emission phase of ejaculation. These α 1-adrenoceptors are broadly distributed in the emission pathway (epididymis, vas deferens, seminal vesicle, prostate gland, prostatic urethra, and bladder neck).⁴ Tamsulosin also has a high affinity for D₂-like and 5HT_{1A} receptors, both of which are involved in the central control of ejaculation, and are thus thought to have a central effect on ejaculation.⁴ All alpha-adrenergic blockers have similar efficacy, but their side effects and safety profiles differ considerably between selective and highly-selective alpha-adrenergic blockers. Abnormal ejaculatory function with selective alpha-adrenergic effects can occur in the form of reduced ejaculatory volume and dry ejaculation.^{5,6} In a study conducted in Pakistan, normal erectile function was seen before therapy. However, after two months of follow-ups of tamsulosin therapy, 17% of patients had (severe dysfunction) and 83% had mild to moderate dysfunction. Near 37% patients suffered from retrograde ejaculation.⁷ Recently, Changes have been noticed in the sexual behavior of patients with benign prostatic hyperplasia and have gained attention. Studies have shown that the inhibitory effect on the emission phase has decreased ejaculatory volumes, but some improvement has been noticed in patients with premature ejaculation due to delayed ejaculation.^{15,17} It has been noticed that many patients having LUTS due to BPH also experience ED, causing problems in their sexual life but this aspect has been ignored many times by urologists, which adds to the patient burden. Despite the good tolerability of this drug, it still has got high chance of ED.^{16,18,19} Several adjustments to the prescribed tamsulosin dose or method of administration have been offered by various medical institutes in an attempt to regain ejaculation associated with tamsulosin medication.^{8,9} In 20 to 35% of patients, tamsulosin produces retrograde ejaculation.¹⁰ Another study found that when tamsulosin was used, 35.4% of patients had no ejaculation at all (anejaculation).¹¹ Tamsulosin is an alpha_{1A}-adrenergic receptor antagonist. By blocking these adrenoceptors, smooth muscle in the prostate is relaxed, and urinary flow is improved but has some inhibitory effects on ejaculation, including retrograde ejaculation.

So this study is designed to determine the frequency of ejaculatory dysfunction in our population.

MATERIAL AND METHODS

It's a cross sectional study , conducted in the department of Urology Lady Reading Hospital Peshawar from 1st January 2022 to 31 December 2022. All adult male patients presented to Urology OPD with LUTS were included in the study. After a detail history, examination including digital rectal examination (DRE) and investigations like Urine routine examination, urine culture, serum PSA, renal function tests and Ultrasound Kidney, Ureter, Bladder, Prostate and Pre and Post void residual urine the patients were advised alpha adrenergic blocking agents like Tamsulosin 0.4 mg OD at night. Erectile dysfunction was assessed of all patients before starting therapy and after two 2 months. Retrograde ejaculation was assessed by taking the history from the patient and examining first voided urine after ejaculation for sperm. The data was collected in a pre-designed proforma. All statistical analyzes were performed using SPSS software version 20. Data from the study was analyzed and compared using 73 descriptive statistics (frequency, percentage, mean \pm SD). Mean and standard deviations were calculated for quantitative variables like age, BP, BMI, PSA level, voided urine volume, and residual urine volume. Frequency and percentages were calculated for erectile dysfunction, ejaculatory dysfunction, and complications of ejaculation. Ejaculatory dysfunction was stratified against age, blood pressure, BMI, PSA level, voided urine volume, residual urine volume, erectile dysfunction, ejaculatory dysfunction, and complications of ejaculation.

RESULTS

Mean age of patients was 52 years with a standard deviation \pm 7.28. Mean systolic blood pressure was 124.83 with SD \pm .91, mean diastolic blood pressure was 80 with SD \pm .23, mean BMI was 28 Kg/m² with SD \pm 3.91, Mean prostate-specific antigen was 1.97 ng/dl with SD \pm 3.18, Mean voided urine volume was 292.75 ml with SD \pm 150.69, Mean residual volume was 32.28 ml with SD \pm 31.28 as shown in Table-1. The frequency of ejaculatory disorders and erectile dysfunction among 111 patients was analyzed as 72(65%) patients had ejaculatory disorders while

21(19%) patients had erectile dysfunction. (Table No. 2) Stratification of ejaculatory disorders and erectile dysfunction concerning age, blood pressure, BMI, PSA level, voided urine volume, residual urine volume, erectile dysfunction, and complications of ejaculation is given 9-14.

DISCUSSION

In the elderly male population, benign prostatic hyperplasia (BPH) is very common condition.¹ BPH, overactive bladder, urinary tract infection, tumors, stones, or functional problems of the lower urinary tract are some of the conditions that can cause LUTS.² α 1-Adrenoceptor antagonists are routinely used to treat BPH, and urologists are familiar with their safety profiles.³ Tamsulosin is thought to have an inhibitory effect during the ejaculatory emission phase since α 1-adrenoceptors are widely distributed in the sperm conducting pathway (epididymis, vas deferens, seminal vesicle, prostate gland, prostatic urethra, and bladder neck).⁴ Tamsulosin also has a high affinity for D2-like and 5HT1A receptors, both of which are involved in the central control of ejaculation, and is thus thought to have a central effect on ejaculation.⁴ Our study shows that among 111 patients mean age was 52 years with a standard deviation \pm 7.28. Ejaculatory disorder was observed in 72(65%) patients while 21(19%) patients had erectile dysfunction. In another study carried out by Khattak et al had reported that normal erectile function was seen before tamsulosin therapy. However after two months of follow-up of tamsulosin therapy, 17% of patients had severe erectile dysfunction and 83% mild to moderate dysfunction.¹² a total of 37 patients (37%) suffered from retrograde ejaculation. In another study carried out by Kaplan et al reported that 20 to 35% of patients developed retrograde ejaculation after tamsulosin treatment. Hellstrom et al reported that when tamsulosin was used 35.4% of patients had no ejaculation at all.¹³ According to Song et al, there was no significant difference in the mean scores for any of the categories including satisfaction, sexual activity, desire, erectile function, or ejaculatory function and no statistical difference between the baseline and follow-up periods. The total incidence of ejaculatory dysfunction (EjD) after 12 weeks of follow up was 13.4%. The incidence of seven distinct types of ejaculatory dysphoria

(EjD) were found in 2.4%, 3.1%, 3.9%, 3.9%, 6.3%, 7.1%, and 3.1% of cases, respectively. These types of EjD include decreased frequency, delay, increased dryness, decreased strength/force, reduced volume, less pleasure, and pain during ejaculation. IPSS respondents had higher baseline EjFD scores than non-responders (26.09 vs. 24.06, P=0.03). Among IPSS respondents, a decrease in EjFD score occurred more frequently. A smaller prostate, higher baseline MSHQ totals, higher EjFD scores, and milder lower urinary tract symptoms were associated with a greater incidence of EjD.¹⁴

CONCLUSION

The study concludes that the frequency of ejaculatory disorders associated with tamsulosin therapy for BPH was 65%, and erectile dysfunction was observed in 19% of the patients.

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TABLE 1: DEMOGRAPHICS AND BASELINE PARAMETERS (n=111)

Parameters	FREQUENCY	PERCENTAGE
Age		
41-60 years	107	96%
61 years and above	4	4%
Blood pressure		
≤ 120/80	53	48%
>120/80	58	52%
Body mass index		
≤25 Kg/m ²	52	47%
>25 Kg/m ²	59	53%
PROSTATE SPECIFIC ANTIGEN		
≤ 3 ng/dl	68	61%
>3 ng/dl	43	39%
VOIDED URINE VOLUME		
≤ 300 ml	70	63%
>300 ml	41	37%
RESIDUAL VOLUME		
≤ 30 ml	73	66%
>30 ml	38	34%

TABLE 2: EJACULATORY DISORDERS AND ERECTILE DYSFUNCTION (n=111)

EJACULATORY DISORDERS		FREQUENCY	PERCENTAGE
Ejaculatory Dysfunction	Yes	72	65%
	No	39	35%
Erectile Dysfunction	Yes	21	19%
	No	90	81%

TABLE 3. EJACULATORY COMPLICATIONS (n=72)

EJACULATORY COMPLICATIONS	FREQUENCY	PERCENTAGE
Decrease frequency	2	3%
Pain with ejaculation	1	2%
Delay in ejaculation	10	13%
Decrease ejaculation strength	25	35%
Decrease ejaculatory volume	34	47%