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Original Article

Sexual Dysfunction in BPH Patients

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Abstract

Introduction: *Sexual dysfunction affects couple's relationship and the quality of life of the patients and partner irrespective of the age. Lower urinary tract symptoms suggestive of BPH are highly prevalent among elderly. Sexual dysfunction is much more prevalent in patients with LUTS/BPH than in men without them, even after controlling for confounding variables such as age and co morbid illness.*

Aim: *To evaluate the prevalence of sexual dysfunction in LUTS patients due to BPH. To assess the effect of LUTS due to BPH on sexual dysfunction. To assess the treatment effects on sexual function.*

Materials and Methods: *All patients admitted in our urology department with LUTS due to BPH in the period between April 2015 to October 2016 were included for evaluation. After obtaining informed consent the linguistic version of International prostate symptom score (IPPS) and Male sexual function scale questionnaire (MSFQ) were given to all the patients. All patients with LUTS due to BPH were evaluated with History and physical examination, Digital rectal examination and focused neurological examination, Baseline blood parameters, USG Abdomen and Pelvis, uroflow, Post void residual urine volume measurement. All the information were recorded.*

Results: *120 patients included in this study. 23 patients (19.1%) were 50-59 years, 73 patients (60.8%) were 60-69 years, 23 patients (19.1%) were 70-79 years, 1 patient (8%) was 80-89 years age group.78% of (50-59 years) had mild or moderate symptoms. 94.5% of (60-69years) had bothersome moderate to severe symptoms. Severe degree of symptoms were present in most of the patients in the 70-79 years age group. Among the120 patients 28 (23.3%) were very much bothered about sexual dysfunction. 20% patients (16.6%) were moderately bothered about their sexual dysfunction. 30% patients not at all bothered about their sexual dysfunction.*

Conclusion: *The prevalence of sexual dysfunction in patients with LUTS is 70%. The severity of sexual dysfunction correlate with severity of LUTS. Ejaculatory function deteriorates after treatment of LUTS due to BPH.*

Introduction

Sexual dysfunction affects couple's relationship and the quality of life of the patients and partner irrespective of the age. Lower urinary tract symptoms suggestive of BPH are highly prevalent among elderly. So too are the symptoms of sexual dysfunction in old age. But previously the symptoms of sexual dysfunction were not

concentrated more, both by the patients and the patients in our country.But this perspective is changing. Sexual dysfunction mainly as erectile dysfunction (ED), ejaculatory disorders, or decreased libido/hyposensitive sexual desire (HSD). Men with moderate to severe LUTS are at increased for sexual dysfunction[1]. Though reduced rigidity and reduced ejaculate volume are highly prevalent in ageing men, reduced rigidity and pain on ejaculation are considered to be most bothersome, affecting the quality of life.

Sexual dysfunction is much more prevalent in patients with LUTS/BPH than in men without them, even after controlling for confounding variables such as age and co morbid illness. Hence LUTS/BPH is considered to be independent risk factor for sexual dysfunction[2]. The reason for the association being a common underlying pathology or the psychological effect of LUTS/BPH on sexual function needs to be confirmed. Despite a decline in the frequency of sexual intercourse, as well as in overall sexual functioning, most elderly men report regular sexual activity and consider their sexual life as important dimension of their quality of life (QoL). However, most patients with LUTS/BPH experience negative effects of LUTS on their sexual life. Hence treatment of LUTS/BPH should also aim to at least maintain or, if possible, improve the sexual function[3].

Aim and Objectives:

- To evaluate the prevalence of sexual dysfunction in LUTS patients due to BPH
- To assess the effect of LUTS due to BPH on sexual dysfunction
- To assess the treatment effects on sexual function.

Materials and Methods

All patients admitted in our urology department with LUTS due to BPH in the period between April 2015 to October 2016 were included for evaluation. After obtaining informed consent the linguistic version of International prostate symptom score (IPPS) and Male sexual function scale questionnaire (MSFQ) were given to all the patients. Patients who were literate were asked to fill up the questionnaire. Patients who were not able to fill up (for various reasons like illiterate, poor eye sight, not able to understand the contents) were interviewed personally. To avoid interviewer bias, all the patients were interviewed by the same interviewer. All details regarding the patients demographics, scoring, results were noted. Post treatment effect evaluation was done at the end of 3 months following treatment.

All patients with LUTS due to BPH were evaluated with History and physical examination, Digital rectal examination and focused neurological examination, Baseline blood parameters, USG Abdomen and Pelvis, uroflow, Post void residual urine volume measurement.

Inclusion criteria: All patients with history suggestive of LUTS due to BPH with more than 50 years, Patients who gave informed consent for the study were included in the study.

Exclusion criteria: Patients who have been already treated for BPH earlier, Patients with comorbid illness like Diabetes and Hypertension, Patients with neurological disorders, Patients who were not willing to self-administer the questionnaire or to be interviewed were excluded from the study.

Symptom severity & Sexual function assessment

All the patients were given with the linguistic version of the International Prostate Symptom Score (IPPS).

Sexual function assessment was done using linguistic version of the Male Sexual Function Scale. The Male Sexual Function Scale consists a total of 8 questions of which two questions on erectile function domain and its bother, and three are on the ejaculatory function domain and its bother; one question each on sexual desire and satisfaction .The final question assessed the overall bother or distraction of life due to the sexual dysfunction.

The linguistic conversion was done by the investigator with the help of a psychologist who

had experience in interviewing such type of patients. At most care was taken in phrasing the words so that it should not be embarrassing to the patients. Before put into clinical study, the questionnaire was circulated among the patients waiting for urological ultrasound examination. They were asked to comment on the content whether it is understandable or not, and their suggestions were taken.

The investigator interviewed patients who are illiterate. To avoid bias the same investigator interviewed all such patients.

Management

Management consists of medical therapy in the form Alpha blockers and 5 AR Inhibitors. Surgical therapy mainly Trans Urethral Resection of Prostate (TURP).

Post treatment evaluation

Evaluation following treatment was done after 3 months. All the patients were given with IPPS and Male Sexual Function Scale questionnaires. Uroflow with Post void residual urine volume measurement to ascertain the effects of therapy.

Correlation between LUTS and Sexual dysfunction

Correlation between LUTS and sexual function severity was assessed using Microsoft Excel correlation coefficient.

Results & Observation

Total number of patients enrolled in this study was 232. After exclusion total number of patients included in this study was 120. 23patients (19.1%) were 50-59 years, 73 patients (60.8%) were 60-69 years, 23 patients (19.1%) were 70-79 years, 1 patient (.8%) was 80-89 years age group.

LUTS severity stratification

Age group	LUTS severity			
Years	**Mild**	**Moderate**	**Severe**	**Total**
50- 59	9	9	5	23
60-69	4	27	42	73
70-79	3	4	16	23
80-89	0	0	1	1
Total	**16**	**40**	**64**	**120**

78% of (50-59 years) had mild or moderate symptoms. 94.5% of (60-69years) had bothersome moderate to severe symptoms. Severe degree of symptoms were present in most of the patients in the 70-79 years age group.

Prevalence of sexual dysfunction

Erectile dysfunction

29 patients (24%) had no erectile dysfunction. 60 patients (50%) had moderate bothersome erectile dysfunction. 31 patients (26%) had severe erectile dysfunction.

Age group	Erectile dysfunction severity			
	Mild	**Moderate**	**Severe**	**Total**
50-59	14	7	2	23
60-69	9	40	24	73
70-79	5	13	5	23
80-89	1	0	0	1
Total	**29**	**60**	**31**	**120**

64 out of 73 patients in the age group of 60-69 had moderate to severe erectile dysfunction, whereas only 9 out of 14 patients had significant dysfunction in the age group of 50-59 years. The correlation coefficient for age and LUTS is 0.33, a significant positive correlation. As the age increases the incidence of LUTS also increases.

Ejaculatory dysfunction

80 patients (67%) had no or mild ejaculatory dysfunction.39 patients (32%) patients had moderate ejaculatory dysfunction. Only 1 patients had severe ejaculatory dysfunction.

Age group	Ejaculatory dysfunction severity			
	Mild	**Moderate**	**Severe**	**Total**
50-59	22	1	0	23
60-69	46	26	1	73
70-79	11	12	0	23
80-89	1	0	0	1
Total	**80**	**39**	**1**	**120**

1 patient in the age group 50-59 had significant ejaculatory dysfunction, whereas 38 out of 96patients had significant ejaculatory dysfunction.

Sexual desire disorder

72 patients (60%) were not at all bothered by their desire disorder. 7 patients (6%) were severely desired by their sexual desire disorder.

Sexual satisfaction

Among the 120 patients 50 patients (41%) were fully satisfied with their sexual activities. 30% patients were either moderately or totally dissatisfied.

Overall bothersome/ Distraction due to sexual dysfunction

Among the120 patients 28 (23.3%) were very much bothered about sexual dysfunction. 20% patients (16.6%) were moderately bothered about their sexual dysfunction. 30% patients not at all bothered about their sexual dysfunction.

Age group	Severity grading					
	1	**2**	**3**	**4**	**5**	**Total**
50-59	2	2	5		14	23
60-69	23	17	18	4	11	73
70-79	3	1	6	3	10	23
80-89					1	1
Total	**28**	**20**	**29**	**7**	**36**	**120**

58 out 78 patients in the age group 60-69 had bothersome sexual dysfunction. 28 out of 47 patients felt no bothersome sexual dysfunction in the other age group.

Correlation between LUTS severity and sexual dysfunction bothersome

LUTS AND Erectile dysfunction & Ejaculation

LUTS	Erectile dysfunction			Ejaculatory dysfunction			Total
	No/Mild	**Moderate**	**Severe**	**No/Mild**	**Moderate**	**Severe**	
Mild	16	0	0	16	0	0	16
Moderate	12	27	1	35	5	0	40
Severe	1	33	30	29	34	1	64
Total	29	60	31	80	39	1	120

All patients with mild LUTS had no or mild erectile dysfunction, almost all of the severe LUTS patients had moderate or severe erectile dysfunction. The correlation coefficient is 0.71 showing positive correlation between LUTS and erectile dysfunction.

35 patients in severe and 5 patients in moderate LUTS groups had bothersome ejaculatory dysfunction. The correlation coefficient is 0.5.

LUTS and sexual bother

LUTS	None	Very Mild	Mild	Moderate	Severe	Total
Mild	16	0	0	0	0	16
Moderate	13	5	14	7	1	40
Severe	7	2	15	13	27	64
Total	36	7	29	20	28	120

None of the patients with mild LUTS symptoms were bothered by sexual dysfunction. About 30% of patients with moderate LUTS had mild sexual bothersome. About 45% of patients with severe LUTS had severe distress due to sexual dysfunction. The correlation coefficient is 0.65, significant positive correlation.

Treatment

Medical treatment

After medical evaluation among the 120 patients only 16 patients (13.3%) patients eligible or willing for medical therapy. 8 Patients who had prostate volume of less than 30 cc were started on alpha blockers, 8 patients who had prostate volume more than 30 cc were stated combination therapy (Alpha blockers & 5 Alpha reductase inhibitors). All 16 patients showed significant improvement in the uroflow rate and reduction in the IPPS Score. The erectile function was not altered after medical therapy. 6 Patients (38%) developed bothersome ejaculatory dysfunction after medical therapy, 4 Patients (50%) on combination therapy, and 2 patients (25%) on alpha blockers alone had ejaculatory dysfunction.

Surgical therapy

Surgical therapy was mainly in the form of TURP. 104 patients underwent TURP. All patients were asked to come for follow up at 3 months. Only 34 patients turned up for evaluation.

	Erectile dysfunction			Ejaculatory dysfunction		
	Mild	**Moderate**	**Severe**	**Mild**	**Moderate**	**Severe**
Pre op	11	16	7	28	6	0
P0st op	11	9	14	8	20	6

Post operatively, 7 among 16 patients who had moderate bothersome erectile dysfunction developed severe erectile dysfunction. 8 among 28 patients who had no ejaculatory dysfunction preoperatively developed moderate bothersome ejaculatory dysfunction postoperatively. All 6 patients who had moderate bothersome progressed to severe ejaculatory dysfunction postoperatively.

Discussion

Lower urinary tract symptoms suggestive of benign prostatic hyperplasia (LUTS/BPH), and sexual dysfunction are common, and highly bothersome condition in old age, and the prevalence of both disorders increase with age. Sexual dysfunction manifests mainly as erectile dysfunction (ED), ejaculatory disorders (ED), or decreased lipido /hypoactive sexual desire (HSD). Men with moderate to severe LUTS are increased risk for sexual dysfunction[4,5]. The successful management of patients with LUTS associated with BPH should include assessments of sexual function and monitoring of medication-related sexual side effects. For men with LUTS and sexual dysfunction, an appropriate integrated management approach, based on each patient's symptoms and outcome objectives, is warranted. MSAM-7 study showed that there is progressive

increase in LUTS and sexual dysfunction with age and independent increase in LUTS and sexual dysfunction with age.

Out of a total of 232 patients who were enrolled into the study, 120 were finally included in the study after applying the inclusion and exclusion criteria. Though the sample size appears low, the patient group who are hospitalised and very much distressed with the symptoms is included in the study. Moreover the sample size is comparable with that of Namasivayam (et al)[6]. Patients with co-morbidities were excluded from the study. They formed around one third of the patients. It is important to note that 10% of patients refused to respond to sexual health questionnaires, which carries significance.

The mean age of the patients was 65.8. The predominant age group is 60-69yrs. This age characteristic is comparable to the studies in the literature. The elderly age may be significant, because age as such can have a bearing on sexual dysfunction as revealed in the cologne male[7] survey.

More than half of the patients had severe LUTS. This may be due to the patient sample selected. The LUTS symptoms also had age wise variation, with 78% of those in the 50-59 age group with mild symptoms, and most of them in the 70-79 age group with severe symptoms. This signifies increase in prevalence with age.

The sexual function too showed variation among different age groups. Both the factors, the erectile dysfunction and ejaculatory dysfunction were more common in the age group of 60-69, compared to other age groups. Only the patients in the age group 60-69 were significantly bothered by sexual dysfunction. This may be due to the association of sexual dysfunction with increasing age. Moreover patients after the age of 70 years may not consider their sexual dysfunction bothersome, though they have a high prevalence.

None of the patients in the mild LUTS group had ED whereas 98% in the severe group and 70% in the moderate LUTS group had significant ED. The increasing age is associated with both increase in LUTS and ED. This correlates well with that reports of the MSAM-7[8]. The correlation coefficient for LUTS with ED is 0.71, which is highly significant.

The ejaculatory function was not that frequently affected by LUTS compared with ED. 67% of patients had no effect on their ejaculatory function regardless of their LUTS status. Whereas, in those affected, more than 90% belonged to the severe LUTS group. This shows that though severe LUTS may not always associated with ejaculatory dysfunction, the presence of ejaculatory dysfunction signifies a higher LUTS status. These results correlate well with the study by Rosen RC etal[9,10,11] who propose a prevalence of 70-80% sexual dysfunction with LUTS. The correlation coefficient is 0.5, signifying effective positive correlation.

The degree to which the patients are bothered by their sexual dysfunction also varies well with LUTS. Almost all the patients (27/28) who had severe bother due to sexual dysfunction had associated severe LUTS. None of them had mild LUTS. 30% of the patients with LUTS had no bothersome sexual dysfunction. This includes patients in the higher age group strata who may have significant dysfunction, but may not be bothered by it. Around 89% of patients with severe LUTS had bothersome sexual dysfunction.

This bears evidence to the fact that sexual dysfunction increases with increasing LUTS. The MSAM-7 showed that the incidence of bothersome sexual dysfunction associated with LUTS. The correlation coefficient is 0.65, which shows that as LUTS increases, so too sexual dysfunction hand in hand requiring simultaneous effective management.

In the Government institutional set up, with predominantly poor patients, the standard medical management could not be given to the majority of the patients as they cannot afford it. So around 90% of the patients were taken up the TURP. Another problem with our patients is the poor compliance and lack of follow up. This is proved

by the fact that only 34 out of 104 patients came for follow up after TURP.

In the post treatment evaluation after medical therapy, the ejaculatory function decreased in around 36% of the patients. This can be expected because retrograde ejaculation is one of the commonest adverse effect as associated with alpha blockers[12]. There was no change is the erectile function after medical therapy.

Out of the 34 patients who came for follow up after TURP, 20% of patients in the moderate ED progressed to severe ED. This may be due to the thermal injury to cavernosal nerves caused by TURP. 70% of the patients developed ejaculatory dysfunction post operatively. This is also well explained in the literature.

To conclude, sexual dysfunction is highly prevalent in the patients with LUTS in the range of 70%. The age group should also be taken into consideration, because increasing age as such can lead to sexual dysfunction. As we do not have a control group we were unable to signify the influence of age. The severity of LUTS also correlated with severity of sexual dysfunction. The treatment outcome is not promising as the patients ejaculatory dysfunction increased with both surgery and medical management. Though the sample size is small and the follow up is limited, we can suggest that treatment of sexual function should be combined with managements of sexual dysfunction for better patient satisfaction.

Conclusion

The prevalence of sexual dysfunction in patients with LUTS is 70%. The severity of sexual dysfunction correlate with severity of LUTS. Ejaculatory function deteriorates after treatment of LUTS due to BPH.

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