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Resolution of Lower Urinary Tract Symptoms due to Benign Prostatic Hyperplasia after Transurethral Resection of Prostate in Northern Zone of Tanzania

By Mbarouk Mohammed, Sophia Kagoye, Aggrey William, Emmanuel Itambu, Rajabu Mramba, Kurenje Mbura, Samuel Kibona, Vitus Kajerero, Tyeni Ndemula & Onuigbo Cornelius

Kilimanjaro Christian Medical University

Abstract- *Background:* The gold standard for surgical treatment of LUTS brought on by BPH is transurethral resection of the prostate (TURP). The purpose of this treatment is to reduce LUTS brought on by BPH and enhance the patient's quality of life. When assessing this therapy objective and developing post-TURP care for individuals who still experience symptoms, evaluation of post-TURP symptomatic alleviation is essential.

Aim: To evaluate the patients' quality of life and the IPSS score for voiding and storage symptoms in relation to the remission of LUTS caused by BPH after TURP.

Methods: In the Institute of Urology of KCMC Moshi, Tanzania, patients who underwent TURP for symptomatic BPH participated in this 6-month hospital prospective observational study. We'll figure out the IPSS and QoLS before and after surgery.

Keywords: *lower urinary tract symptoms, benign prostate hyperplasia.*

GJMR-I Classification: *LCC: RC889*



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Resolution of Lower Urinary Tract Symptoms due to Benign Prostatic Hyperplasia after Transurethral Resection of Prostate in Northern Zone of Tanzania

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Methods: In the Institute of Urology of KCMC Moshi, Tanzania, patients who underwent TURP for symptomatic BPH participated in this 6-month hospital prospective observational study. We'll figure out the IPSS and QoLS before and after surgery. The difference between these patients' preoperative and postoperative IPSS and QoLS will serve as the major outcome measure. The comparison of the degree to which storage and voiding symptoms have resolved will serve as the secondary end measure.

Results: The study consisted of 156 patients in total. With median IPPS of 28(21,31), QoLS of 6(5,6), Storage of 12(11,13), and voiding of 16(14,18), respectively, the majority of our patients experienced severe bothersome LUTS. Following a three-month follow-up, the overall IPSS score, QoLS, and both of its subscores (storage and voiding domain), all experienced significant declines. There was less decline in the voiding sub score when comparing the median changes in storage and voiding. This result demonstrates that the storage sub score changes more after TURP than the voiding sub score and may return to normal.

Conclusion: Reduction in IPSS, QoLS, and its subscore after TURP. Greater than voiding symptoms is the newer storage score. As a result, TURP continues to be the gold standard of care for patients with LUTS caused by BPE. However, greater health promotion efforts are needed to encourage patients to arrive at the urology clinic on time.

Keywords: lower urinary tract symptoms, benign prostate hyperplasia.

Corresponding Author α: Department of Urology, Kilimanjaro Christian Medical University college, Moshi, Tanzania.
e-mail: mbaroukmohd281@gmail.com
Author σ: Department of Epidemiology and Biostatistics, catholic University of Health and Allied Sciences, Mwanza, Tanzania.
e-mail: sophyadam90@gmail.com
Author ρ: Department of Urology, Benjamin Mkapa Hospital, Dodoma, Tanzania. e-mail: aggreywilliam@gmail.com
Author ω: Department of Urology, Mbeya Zonal, Referral, Hospital, Tanzania. e-mail: itambu67@gmail.com
Author ¥: Department of Urology, Muhimbili National Hospital, Dar es Salaam, Tanzania. e-mail: makamedr@gmail.com
Author §: Department of Urology, Oshakati Intermediate Hospital, Namibia. e-mail: krmbura@gmail.com
Author χ: Department of Urology, Mzinga Military Hospital, Morogoro, Tanzania. e-mail: ksamd85@gmail.com
Author ν: Department of Urology, Nnamdi Azikiwe University Teaching hospital, Nnewi, Nigeria. e-mails: vituskajerero@gmail.com, tyenij@yahoo.co.uk, oga171@gmail.com

I. Background

Many urologists in underdeveloped nations in Africa have the choice of surgical treatment or an indwelling urinary catheter because the majority of adult males with LUTS caused by BPH present late and have related comorbidities.[1] Storage symptoms, formerly known as irritative symptoms (frequency, urgency, and nocturia), and voiding symptoms, formerly known as obstructive symptoms (hesitancy, weak urine stream, intermittency, straining, and terminal dribbling) are the two categories for lower urinary tract symptoms caused by BPH. and post-micturition sensations (such as dribbling and a sense of incomplete emptying).[2]

When these patients first arrive, their main concern is to have their LUTS and BPH-related discomfort addressed. For this to be done successfully, accurate assessments of these patients and their classification using a validated scoring system are required. The most often used measurement for this is the International Prostate Symptom Score (IPSS).[3]

The symptoms are compiled and divided into three categories: mild (0–7), moderate (8–19), and severe (20–35). The following situations would benefit from the usage of a trustworthy IPSS: the classification of patients into various treatment modes, the exchange of information between patients and physicians, the recording of treatment outcomes, and the comparison of various treatment modalities.[3][4]

In carefully chosen patients, transurethral resection of the prostate (TURP) is the gold standard for treating symptomatic BPH. The medication helps to improve the quality of life score and resolve LUTS brought on by BPH.[5][6]

The purpose of this study was to evaluate the remission of LUTS caused by BPH following TURP in

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patients at our center using the IPSS, its voiding and storage symptoms sub score, and QoLS.

II. Methods

a) Study Design

In the Institute of Urology of KCMC Moshi, Tanzania, patients who underwent TURP for symptomatic BPH participated in this 6-month hospital prospective observational study.

b) Study Population and Data Sources

All symptomatic BPH patients who underwent TURP between June 2021 and January 2022. To rule out any possible differential diagnoses for BOO, the chosen patients underwent appropriate diagnostics, a history review, and physical examination. Trucut prostate biopsies are performed and sent for histological evaluation in patients with serum PSA levels greater than 4ng/ml and/or suspect DRE. To maintain uniformity, the translated IPSS was administered by a specific author who was fluent in the subject's original tongue (by a physician). Prostate transurethral resection was carried out while sedated. The same author who gave the preoperative IPSS reviewed them with IPSS in the clinic one month after the TURP. This was reiterated over the phone three months after the TURP.

The KCMUCo Research and Ethical council and the Institute of Urology at KCMC, respectively, provided their approval and consent for the conduct of this study from a retrospective evaluation. Information about the patients was kept completely private: In this investigation, no specific patient identifiers were employed.

c) Outcomes and Explanatory Variables

Irritable and obstructive symptoms (LUTS) were the primary study outcome, and IPSS, QoLS, Storage, and Voiding were used as the study's explanatory variables.

d) Statistical Analysis

The IPSS, QoLS, storage, and voiding sub scores were compared before and after 3 months after TURP using the paired t-test.

III. Results

The final data analysis included 156 patients who had had TURP in total. Table 1 displays the demographics of the patients. The majority of the patients had mean ages of 66, 6.7, 54.7, 13.1, and 24.2, 7.5, respectively, for prostate volume and weight of tissue removed. Baseline IPSS values for QoLS, storage, and voyaging were 28(21,31), 6(5,6), 12(11,13), and 16(14,18), respectively. Following a three-month follow-up, the overall IPSS score, QoLS, and both of its subscores (storage and voiding domain), all experienced significant declines.

There was less decline in the voiding sub score when comparing the median change in storage and voiding sub scores. This research demonstrates that the storage sub score changes more frequently after TURP than it does after voiding and may return to normal.

Table 1: Background characteristics of study participants (N= 156)

Characteristic	Frequency	Percentage
Age		
60 and below	29	18.6
Above 60	127	81.4
Mean±SD		
66±6.7		
Education level		
No/Primary education	47	30.1
Secondary education & above	109	69.9
Prostate volume (mls)		
40 and below	29	18.6
Bove 40	127	81.4
Mean±SD		
Weight of resected tissue (gm)		
25 and below	93	59.6
Above 25	63	40.4
Mean±SD		
24.2±7.5		

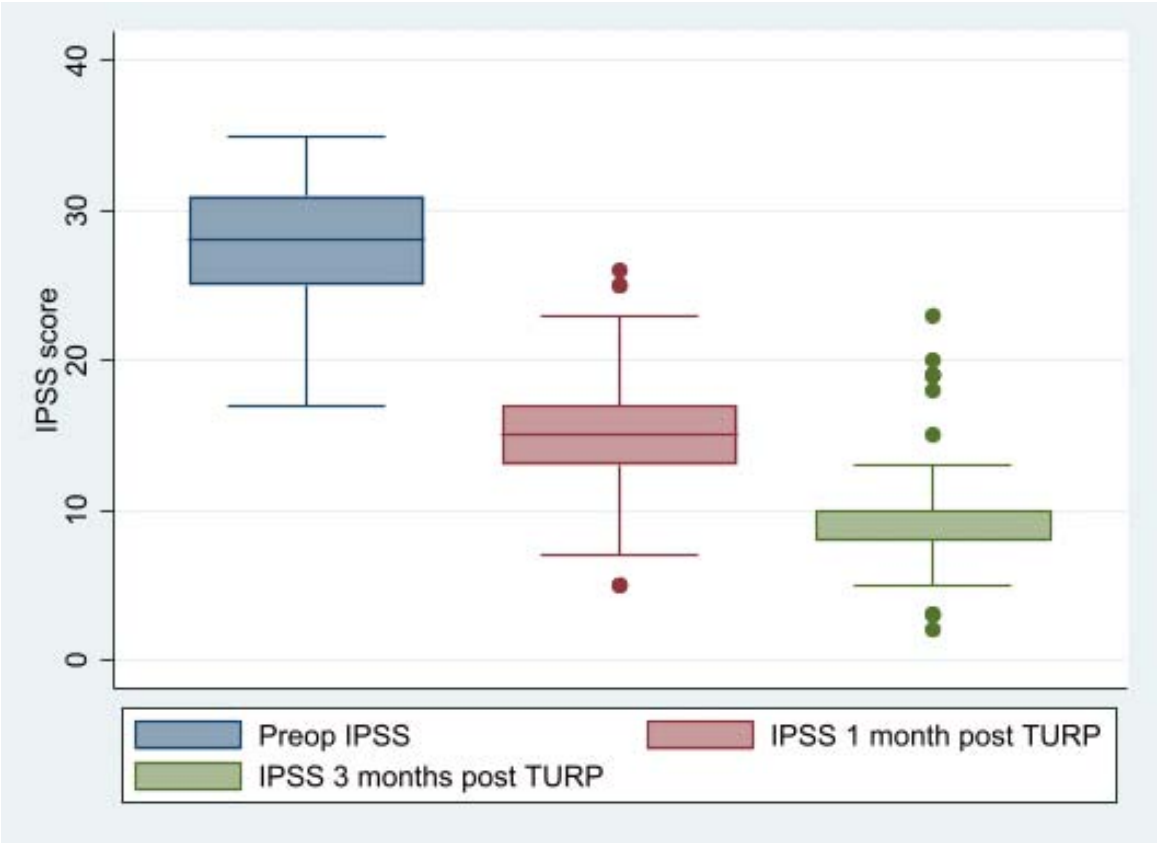
Table 2: Comparison of outcomes before and after (Median used) (N=156)

Characteristic	PreOP	1 month post TURP	*3 months post TURP*
IPSS	28 (25,31)	15 (13, 17)	8 (8,10)
QOLS	6 (5, 6)	2 (1, 2)	0 (0, 1)
Storage	12 (11, 13)	6 (5, 7)	4 (3, 4)
Voiding	16 (14, 18)	8 (7, 10)	5 (4, 6)

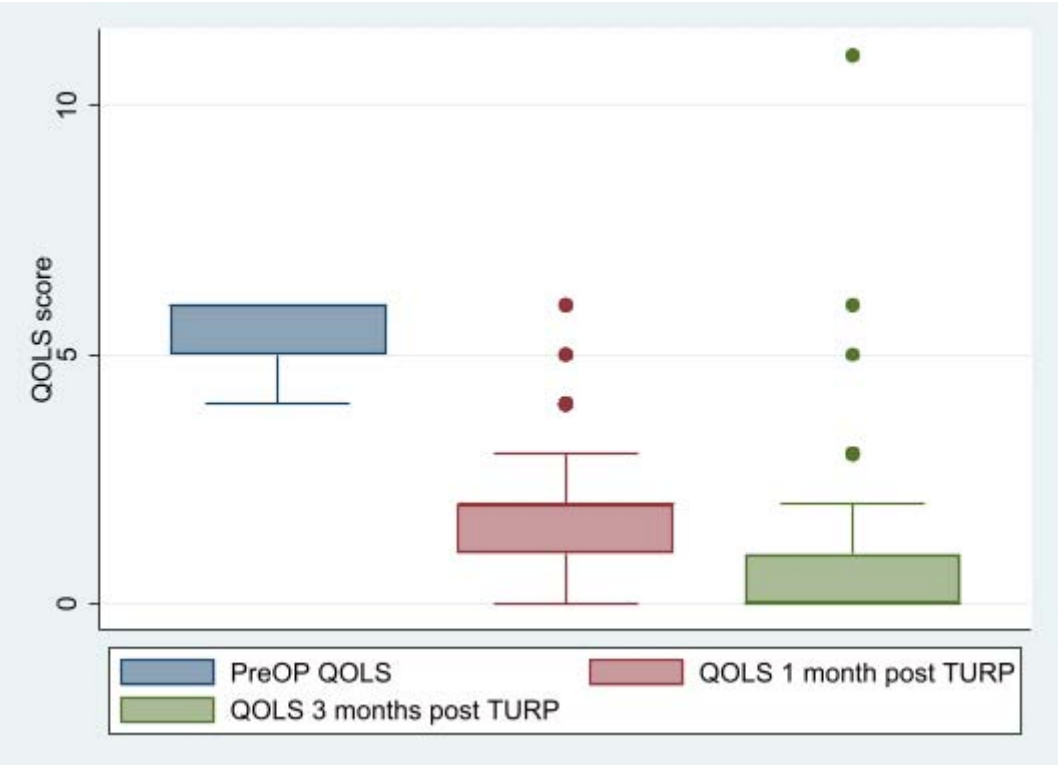
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Comparison of outcomes (graphical presentation)

IPSS

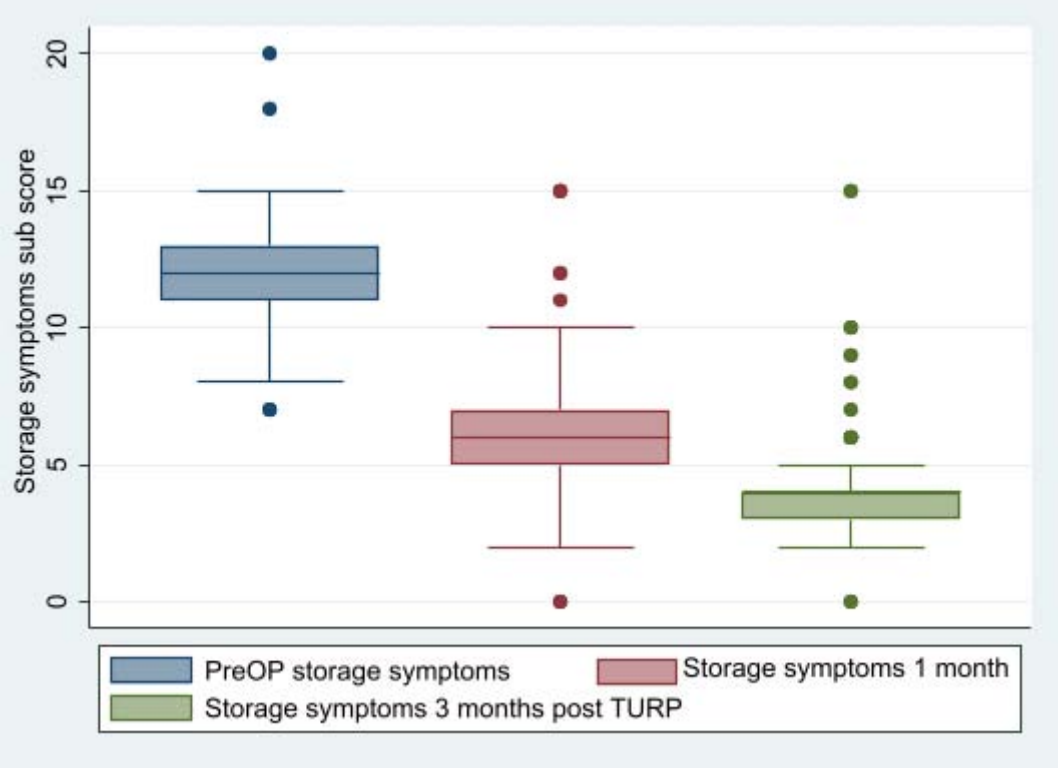


QOLS

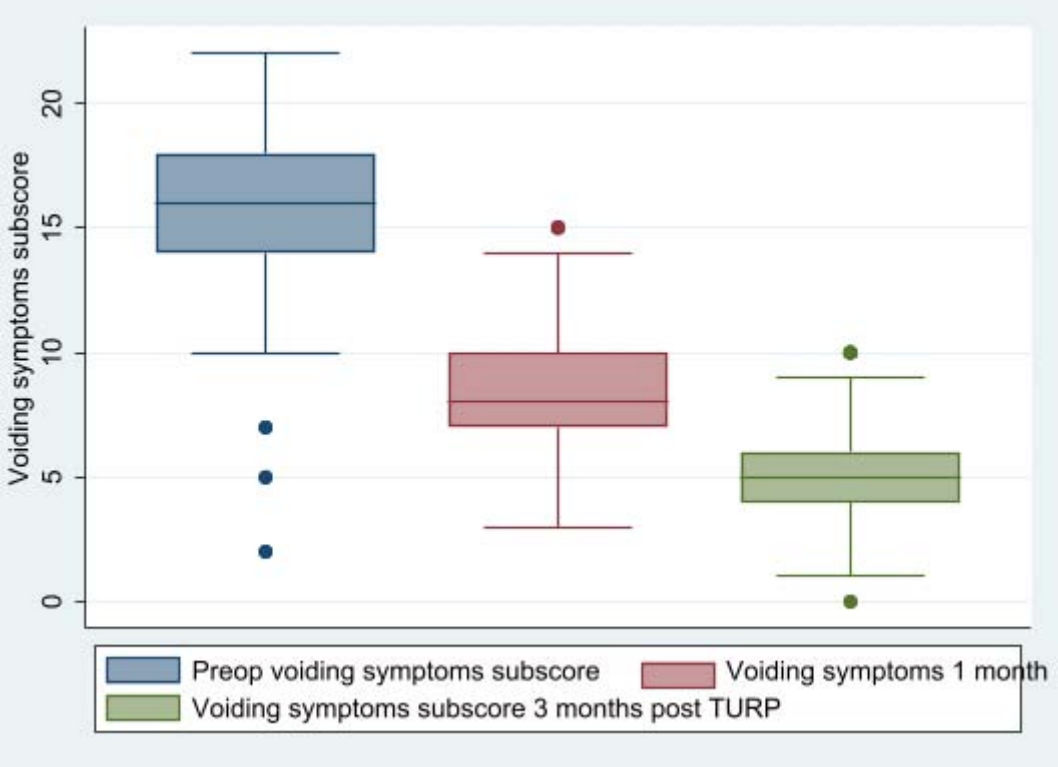


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Storage



Voiding



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IV. Discussion

This study is the first on LUTS resolution following TURP to be conducted at our center. Despite the obstruction being removed, some alterations that arise inside the bladder as a result of BPO might not return to normal. According to this study, the majority of TURP patients were in their sixth decade of life, had severe LUTS, and had a low quality of life as a result of unpleasant symptoms. Patients who had undergone TURP had an average prostate size of 54.7gm. In recent investigations, men who had undergone TURP had prostate volumes ranging from 46.1gm to 60gm.[7] The average age of the TURP patients was around 66 years old, which is similarly comparable to the data from Gacci et al., who found that the average age was 68 years old.[8] This findings confirm the validity of enlargement of prostate disease of the elderly male.

Before TURP, the study's overall IPPS was 28(21,31), and QOLS was 6(5,6). This result differs from the study conducted in Italy, where preoperative IPSS and QoLS were respectively 19.6 and 3.41, and the study conducted by Luite et al. in Nepal, where preoperative IPPS was 24.66 and QoLS was 5.10.9. This result demonstrates that our population's preoperative IPSS and QoLS are greater than those of patients in the European and Western globe. This may be due to our patients' delayed presentation, and some of our clients even believe that LUTS is a symptom of aging and refuse medical attention.[7]

In our study, the baseline score for storage symptoms was 12 (11, 13), which decreased to 4 (3, 4) 3 months after TURP, with a net change of - 8 (8, 9). But this decrease in storage symptoms happens far more frequently than voiding symptoms. The results of the study indicate that post-TURP changes in storage symptoms sub-score occur more frequently than changes in voiding symptoms, and those changes in voiding may return to normal, while other alterations that take place inside the bladder as a result of BPO may not, even after the obstruction is removed. In contrast to the study by Chalise et al., obstructive symptoms improve much more (82.4%) than irritative symptoms (46.3%) following TURP.(7) Kang YJ et al.'s study demonstrates that patients with diabetes who had improved storage symptoms.[5]

V. Conclusion

Reduction in IPSS, QoLS, and its subscore after TURP. Greater than voiding symptoms is the newer storage score. As a result, TURP continues to be the gold standard of care for patients with LUTS caused by BPE. However, greater health promotion efforts are needed to encourage patients to arrive at the urology clinic on time.

Abbreviations

AUA, American Urological Association; BOO, Bladder Outlet Obstruction; BPH, Benign Prostatic Hyperplasia; DRE, Digital Rectal Examination; IPSS, International Prostate Symptoms Score; KCMC, Kilimanjaro Christian Medical Centre; KCMUCo, Kilimanjaro Christian Medical University College; LUTS, Lower Urinary Tract Symptoms; PSA, Prostate Specific Antigen; QoLS, Quality of Life Score.

Ethical Approval

Research ethical clearance was received from the KCMUCO Research and Ethical committee. Patient informed consent was required due to the anonymized patient data. It was conducted in accordance with the Declaration of Helsinki and permission was obtained from the head of the Urology Institute.

Consent for Publication

I Dr. Mbarouk Mohammed hereby declare, I participated in the study and development of manuscript entitled *"Resolution of Lower Urinary Tract Symptoms due to Benign Prostatic Hyperplasia after Transurethral Resection of Prostate in Northern Zone of Tanzania."* I have read the final version and give consent to be published in BP International Journals.

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Disclosure

The authors report no conflicts of interest for this work.

References Références Referencias

1. Stothers L, Mutabazi S, Mukisa R, Macnab AJ. The burden of bladder outlet obstruction in men in rural Uganda. Int J Epidemiol. 2016; 45(6): 1763–6.
2. Irwin DE, Kopp ZS, Agatep B, Milsom I, Abrams P. Tract Symptoms, Overactive Bladder, Urinary Incontinence and Bladder Outlet Obstruction. BJU Int. 2011; 108: 1132–9.
3. Amu OC, Udeh EI, Ugochukwu AI, Dakum NK, Ramyil VM. The value of international prostate symptom scoring system in the management of bph in jos, nigeria. Niger J Clin Pract. 2013; 16(3):273–8.
4. Michael J. BARRY. 1992.
5. Bae J, Kang HW, Lee HW, Lee KS, Cho MC. Predictors of de novo urge urinary incontinence after photoselective vaporization of the prostate. World J Urol. 2016; 34(3): 413–8.
6. Anutrakulchai S. Residual LUTS after Transurethral Resection of Prostate (TURP): The Urodynamic

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Studies in Chiangmai University. Thai J Surg. 2005; 26: 82–7.
7. Luitel B, Gupta D, Chalise P, Subedi P, Chapagain S, Sharma U, et al. Change in storage symptoms after transurethral resection of prostate: a prospective observational study. J Soc Surg Nepal. 2016; 17(1): 35–8.
8. Gacci M, Bartoletti R, Figlioli S, Sarti E, Eisner B, Boddi V, et al. Urinary symptoms, quality of life and sexual function in patients with benign prostatic hypertrophy before and after prostatectomy: A prospective study. BJU Int. 2003; 91(3): 196–200.

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