Original Research Paper

Volume-8 | Issue-6 | June-2018 | PRINT ISSN No 2249-555X

Urology

CORRELATION BETWEEN THE VISUAL PROSTATE SYMPTOM SCORE AND INTERNATIONAL PROSTATE SYMPTOM SCORE IN PATIENTS WITH LOWER URINARY TRACT SYMPTOMS

Dr. Saraswathi Assistant Professor, Institute of Urology, Madras Medical College, Chennai-600003.

Dr. Kalimuthu.K* Final year MCh postgraduate, Institute of Urology, Madras Medical College, Chennai – 600003. *Corresponding author

Dr. Saravanan K Professor, Institute of Urology, Madras Medical College, Chennai- 600003.

Dr. Govindarajan P Professor, Institute of Urology, Madras Medical College, Chennai- 600003.

ABSTRACT

Introduction:BPH is common disease affecting elderly males. Quantification of symptoms is important for assessing severity & treatment response. IPSS & VPSS system are used for assessing severity of LUTS.

Materials and Methods: This was observational study at Institute of Urology, Madras Medical College August 2015 to January 2016. 150 patients were enrolled. Patients with LUTS due to BPH were included. Score's of each patient for IPSS (0 – 35) and VPSS pictogram (0 – 18) calculated.

Results: Data about LUTS was collected from 150 patients.The average age was 61.3 years. 70% of patients presenting were having moderate IPSS scores. Quantification of symptom by IPSS and VPSS yielded comparable scores. 95% people found VPSS easier than IPSS.

Conclusion: Our study proves VPSS is comparable to the gold standard. In some aspect, it may be even better than IPSS. Making VPSS scoring system the standard protocol requires further studies.

KEYWORDS : IPSS, VPSS, BPH

Introduction:

BPH is one the most common disease affecting elderly males, causing troublesome lower urinary tract symptoms and decreased QOL. Quantification of symptoms is important for assessing severity & treatment response. WHO approved the AUA IPSS system for assessing severity of LUTS. This system is time consuming, requires literacy, good cognitive function and translation. To overcome these disadvantages, VPSS was developed by Van der Walt et al. It uses only four pictograms, overcomes problem of illiteracy, poor cognition and observer bias and has been validated.

Aim:

1.To validate VPSS questionnaire in patients of south indian population presenting with LUTS due to BPH
2. To analyze the correlation between the VPSS and IPSS
3. To prove the usefulness of VPSS in men with LUTS

Materials and Methods:

This was an observational study conducted at the Institute of Urology, Madras Medical College from August 2015 to January 2016. 150 male patients were enrolled after obtaining informed consent and were given Tamil version of IPSS questionnaires and VPSS pictograms. Only patients with LUTS due to BPH were included. A complete history, physical, RFT, PSA, urine examination, uroflowmetry and PVR were performed. The IPSS questionnaire comprises of 7 questions with six responses each to a total score of 35. The VPSS system comprises of only four pictograms, 3 carry score to maximum of 6 each (3 x 6=18) and one for quality of life. The score of each patient for IPSS (range 0 – 35) and VPSS pictogram (range 0 – 18) were calculated. Correlation analysis between IPSS and VPSS were evaluated using Spearman's correlation coefficients. $p < 0.05$ were considered significant. Bland-Altman plot was used to check for agreement between the two scores.

Results :

Data about LUTS was collected from 150 patients using both IPSS & VPSS scoring systems. The average age of our patient group was 61.3 years. Most patient's literacy level was below 10th grade. 70% of patients presenting were having moderate IPSS scores. Quantification of symptom by IPSS and VPSS yielded comparable scores both pre and post treatment. 95% people found VPSS easier than IPSS. Bland –Altmann plot shows good correlation between all domains of VPSS and IPSS($p<0.001$).

Figure 1: AGE OF PATIENTS

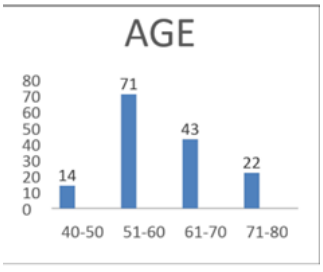


Figure 2: LITERACY LEVEL

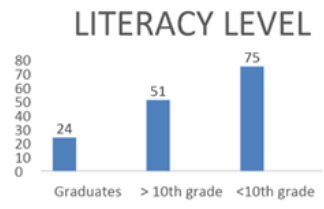


Figure 3 : PRETREATMENT LEVEL

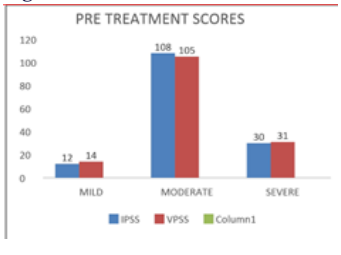
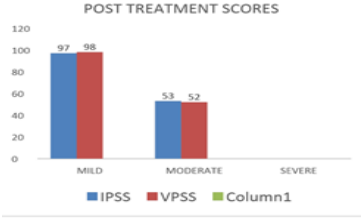
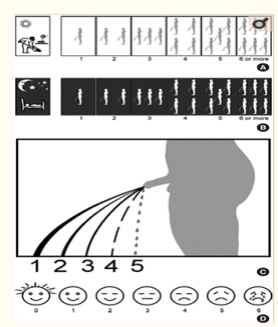


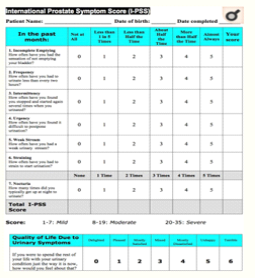
Figure 4 : POSTTREATMENT LEVEL



Discussion:

In this study, we attempted to evaluate the relationship between the VPSS (Fig.1) and IPSS (Fig.2) in Indian population.





International Prostate Symptom Score (I-PSS)

Patient Name: _____ Date of birth: _____ Date completed: _____

In the past month:	Not at All	Less than 1 in 5 Times	Less than Half the Time	About Half the Time	More than Half the Time	Almost Always	Your score
1. Incomplete Emptying: How often have you had a sensation of not emptying your bladder?	0	1	2	3	4	5	
2. Frequency: How often have you had to urinate less than every two hours?	0	1	2	3	4	5	
3. Intermittency: How often have you found you stopped and started again several times when you urinated?	0	1	2	3	4	5	
4. Urgency: How often have you found it difficult to postpone urination?	0	1	2	3	4	5	
5. Weak Stream: How often have you had a weak urinary stream?	0	1	2	3	4	5	
6. Straining: How often have you had to strain to start urination?	0	1	2	3	4	5	
	None	1 Time	2 Times	3 Times	4 Times	5 Times	
7. Nocturia: How many times did you typically get up at night to urinate?	0	1	2	3	4	5	
Total I-PSS Score							

Score: 1-7: Mild 8-19: Moderate 20-35: Severe

Quality of Life Due to Urinary Symptoms	Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible
If you were to spend the rest of your life with your urinary condition just the way it is now, how would you feel about that?	0	1	2	3	4	5	6

Fig. 2

International Prostate Symptom Score questionnaire.

The IPSS questionnaire has seven questions, which are used to evaluate storage and voiding symptoms in patients with BPH. The patient is given five options for the first seven questions and each option indicates severity of that symptom. The total score ranges from 0 to 35 and LUTSs are classified as mild to severe depending on the total score. Patients having a total score ≤7 are classified as having mild symptoms, scores from 8 to 19 are classified as moderate symptoms, and symptom scores ≥20 are classified as severe symptoms.1 The last question of the IPSS is about Qol. Studies have shown that this question is the single best predictor of outcome related to treatment prescribed.2

One of the major problems associated with the IPSS questionnaire is its complex nature. Rodrigues et al3 showed that almost 50% of the patients were unable to complete the IPSS questionnaire when they were given the freedom to not answer any question that they are not clear about. Another study by Luján Galán et al4 confirmed these findings. They found that around 33% of patients could not complete the IPSS questionnaire.

Cam et al5 in their study found that 34% of patients with a low (elementary school) educational level did not even fill the IPSS questionnaire and returned them totally unmarked. Van der Walt et al6 observed that 87% of patients with an education level ≤ 7th grade required assistance to complete the IPSS questionnaire compared with 24% of patients with an education level ≥ 10th grade. In this study, it was clear that patients with education level ≤ 9th require more assistance for completing the IPSS questionnaire.

There have been previous studies from Namibia, Turkish society, Korean populations, and Indonesian populations that have evaluated the correlation between the IPSS and VPSS.7,8,9,10.

They all found a positive correlation between IPSS total score and VPSS total score. Similarly, a positive correlation was observed between VPSS total score and VPSS Qol, IPSS total versus IPSS Qol, and IPSS Qol versus VPSS Qol. Both total VPSS and total IPSS showed a negative correlation with Qmax. Similarly, a negative correlation was observed between IPSS total versus Qavg and VPSS total versus Qavg. All VPSS questions showed a statistically significant correlation with the corresponding IPSS questions: poor stream, VPSS Q3 versus IPSS Q5; nocturia, VPSS Q2 versus IPSS Q7; and frequency, VPSS Q1 versus IPSS Q2. Our results were found to be consistent with all these studies.

Conclusion:

Our study proves VPSS is comparable to the gold standard IPSS for assessing severity of LUTS. In some aspect, it may be even better than IPSS. Making VPSS scoring system the standard protocol requires further studies.

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