

TERAZOSIN EVALUATION AS MALE LUTS TREATMENT USING IPSS SUB-SCORING RATIO

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ABSTRACT

Objective: To evaluate the improvement of Lower Urinary Tract Symptoms (LUTS) in males treated with terazosin based on sub scoring ratio of the International Prostate Symptom Score (IPSS). **Material & Method:** Sixty eight male with LUTS subjected to terazosin 1 mg daily and divided into two groups based on IPSS sub scoring ratio. After 3 months improvement of the symptoms were evaluated using the IPSS. Data analysis was done using paired T-test. The conclusion was based on significance level $p < 0,05$. **Results:** The IPSS score was improving on both failure to void group (IPSS- v/s > 1) and failure to store group (IPSS- v/s ≤ 1) after 3 months of Terazosin therapy (mean = 9,56 versus 6,94). Statistically superior improvement was observed on failure to voiding group ($p = 0,0003$) (95CI : 1,30-3,93). **Conclusion:** Terazosin is best given to male LUTS with IPSS- v/s > 1 although both groups respond well.

Keywords: International prostate symptom score, sub score, failure to voiding, failure to storage, male, lower urinary tract symptoms.

ABSTRAK

Tujuan Penelitian: Untuk mengetahui perbaikan dari gejala Lower Urinary Tract Symptoms (LUTS) pada pria setelah pemberian terazosin berdasarkan sistem rasio sub skor International Prostate Symptom Score (IPSS). **Bahan & Cara:** Enam puluh delapan pria dengan LUTS, masing-masing diberikan terazosin 1 mg sehari dan dibagi menjadi 2 kelompok berdasarkan sistem rasio sub skor IPSS. Setelah 3 bulan, perbaikan dari gejala dihitung dengan IPSS. Data dianalisis dengan uji t berpasangan. Kesimpulan efektivitas hasil berdasarkan nilai $p < 0,05$. **Hasil Penelitian:** Skor IPSS mengalami perbaikan baik pada kelompok failure to void (IPSS- v/s > 1) dan kelompok failure to store (IPSS- v/s ≤ 1) setelah mendapat terapi terazosin selama 3 bulan (rerata = 9,56 dan 6,94). Perbaikan lebih baik ditemukan pada kelompok failure to void dan secara statistik bermakna ($p = 0,0003$) (95CI : 1,30-3,93). **Simpulan:** Terazosin lebih baik digunakan pada pria LUTS dengan IPSS- v/s > 1 , walaupun kedua kelompok berespon baik.

Kata Kunci: International prostate symptom score, sub skor, failure to voiding, failure to storage, pria, lower urinary tract symptoms.

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INTRODUCTION

Alpha adrenoceptor antagonist therapy in men with Lower Urinary Tract Symptoms (LUTS) who were diagnosed with benign prostate enlargement or Benign Prostatic Hyperplasia (BPH) is still a problem.¹ Most guidelines refer to alpha adrenoceptor antagonist as the first line medical treatment in male LUTS. It is an evidence that not all patient showed a favorable response both voiding and storage symptoms to the therapy.²⁻⁵

Recent studies confirm LUTS not only produced by lower urinary tract obstruction but also failure of the bladder detrusor muscle.³⁻⁵ There is a shifting paradigm to start focus on the bladder pathology rather than the prostate alone.⁶⁻¹¹ Multiple studies already demonstrate the contribution of bladder dysfunction to male LUTS, and examine the relationship between symptoms and urodynamic findings.¹²⁻¹⁵

Liao et al (2011) introduced a sub scoring ratio system in IPSS to differentiate voiding or

storage symptoms as the more prominent symptoms responsible in the IPSS. We assess the symptoms improvement on male with LUTS whom given terazosin based on sub scoring ratio system.

OBJECTIVE

To evaluate the improvement of male with LUTS treated by terazosin based on sub scoring ratio of the IPSS.

MATERIAL & METHOD

Sixty eight males with LUTS were enrolled within March until May 2011 in Hasan Sadikin hospital, Bandung, Indonesia. Men older than 50 years old with LUTS and without urinary tract infection, bladder stone or cancer, history of urinary retention and neurovascular disease were included. They were divided into failure of storage ($v/s \leq 1$) and failure of voiding ($v/s > 1$) groups based on IPSS v/s sub score ratio system. Both groups were given 1mg of terazosin daily, which is the therapeutic dose in Indonesia. The symptoms and uroflowmetry results were recorded before and after 1, 2, and 3 months of terazosin therapy. Statistical comparisons between the groups were tested using paired T-test. The conclusion was based on significance level $p < 0,05$.

RESULTS

The mean age was 66 years (range, 54-81 years). Table 1 shows total IPSS and maximum flow rate (Qmax) of uroflowmetry on both groups before and after terazosin therapy. The mean IPSS score of failure to voiding group is 15,00 and failure to storage group is 15,03 ($n_1 = n_2 = 34$) before therapy. The Qmax is 6,79 cc/sec on failure to voiding group and 6,94 cc/sec on failure to storage group. The mean IPSS score after 1, 2, and 3 months therapy are 8,97; 6,97; and 5,44 on failure to voiding group and 11,56, 9,41; 8,08 on failure to storage group. The Qmax after therapy is 10,50 and 10,41 on failure to voiding

and storage groups respectively. Table 2 shows IPSS improvement on both groups after 1st, 2nd and 3rd months of therapy (6,03; 8,09; 9,56 and 3,47; 5,62; 6,95; failure to voiding and storage groups, respectively). The difference only in the 3rd month is statistically significant ($p = 0,0003$) (95CI : 1,30-3,93). Table 3 shows Qmax improvement on both groups after 3 months of therapy (3,71 and 3,47; failure to voiding and storage groups, respectively) but the difference between both groups is not significant.

Table 2. Total IPSS improvement in 3 months after terazosin therapy.

	Total IPSS improvement (month of therapy)		
	1	2	3
Failure to voiding	6,03	8,09	9,56
Failure to storage	3,47	5,62	6,95
p value	>0,05	>0,05	<0,05

Table 3. Qmax after 3 months of terazosin therapy.

	Qmax
Failure to voiding	3,71
Failure to storage	3,47
p value	> 0,05

DISCUSSION

Lower urinary tract symptoms are common in aging male. Many tools have been advocated for the therapeutic purposes including urodynamic study. IPSS sub scoring ratio system proposed by Liao is one of these tools especially when urodynamic study is unavailable.

In this study, we evaluated the symptoms improvement after terazosin therapy on male with LUTS based on sub scoring ratio system and we found better improvement on failure to voiding group.

Table 1. Total IPSS Score and Qmax before and after 3 months of terazosin therapy.

	Before terazosin therapy		After terazosin therapy			Qmax
	Total IPSS	Qmax	Total IPSS (month of therapy)			
			1	2	3	
Failure to voiding	15	6,79	8,97	6,91	5,44	10,5
Failure to storage	15,03	6,94	11,56	9,41	8,08	10,41
Total	15,01	6,87	10,26	8,16	6,76	10,46

CONCLUSION

We found that terazosin is best given to male LUTS with IPSS- v/s >1 although both groups respond well.

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