MP48-17

Alpha-1-Antagonists as Effective Treatment for Urinary Symptoms in Patients with Multiple Sclerosis
Raza, Daniel, BS.1, O'Dell, Diana, MPH, BS,2, Corona, Lauren, MD, 2, Lane, Giulia, MD, 2, Gupta, Priyanka, MD, 2, Clemens, Q. James, MD, 2, Romo, B. Paholo, MD, MPH, 2, Cameron, Anne, MD, 2, Stoffel, T. John, MD, 2
Tulane University School of Medicine, New Orleans, LA1-Department of Urology, University of Michigan, Ann Arbor, MI2

BACKGROUND

- 90% of MS patients have LUTS, impacting both management and quality of life.
- The 2005 North American Research Committee on Multiple Sclerosis (NARCOMS) found approximately 65% of MS patients out of the 10,000 assessed, reported urinary symptoms, which seem to increase with the progression of the disease.
- One treatment option for management of LUTS in MS patients includes alpha-1 antagonists, which are approved for non-neurogenic LUTS in males.
- There is very limited data on usage of alpha antagonists to control urinary symptoms by a neurologist or urologist.
- There are 3 randomized controlled trials on alpha-1 antagonists, which are approved for non-neurogenic LUTS in males.

AIM: To evaluate the use of alpha-1 antagonists for treating patients with urinary symptoms secondary to MS using post void residual volumes and quality of life assessment scores (AUA and M-IBI) pre and post treatment.

STUDY METHODS

- Design: Retrospective review of patients with MS with known documented urinary obstructive and retention symptoms
- Years examined: 2006 - 2013
- Inclusion Criteria: Patients with diagnosed and documented MS who were prescribed alpha antagonists to control urinary symptoms by a neurologist or urologist
- Study group: Patients using alpha antagonists for treatment of urinary symptoms
- Exclusion Criteria: Patients with other neurological diseases; patients who underwent surgical interventions in relation to their neurologic urinary symptoms
- Primary Outcome: Post-void residual before and within the three years of drug treatment
- Secondary Outcome: AUA-SS and M-IBI Quality of Life assessment scores
- Variables: age, gender, race, body mass index (BMI), stage of disease, location of MS lesion, pre and post treatment post-void residuals, and pre and post treatment AUA-SS and M-IBI scores
- Statistics: Data was analyzed using the Chi square test for binary/categorical variables and ANOVA for continuous variables

RESULTS

- Mean change in pre and post treatment PVR values was 78.8ml (38.71-11.38, p<0.001), indicating that using alpha-1 antagonists for treating patients with urinary symptoms secondary to multiple sclerosis is significant (Figure 2).
- Total AUA-SS changed from mean 19 to mean 13 (p<0.007) after treatment (Figure 4).
- Sub-group analyses measuring age, gender, BMI, location of the MS lesion, duration and stage of the disease were statistically non-significant.
- Fifty four percent of patients had a > 50% reduction in PVR and 32% had a 25-50% improvement after treatment (Figure 3).

CONCLUSIONS

- Overall, we found a decrease in post-void residual volume of 78.8ml (p< 0.001) and in patient AUA-SS quality assessment scores (p = 0.007). These findings suggest that alpha-1 antagonists may be a viable treatment option to reduce PVR and improve quality of life for multiple sclerosis patients with urinary bladder symptoms.
- Our study shows alpha blockers may relieve urinary bladder symptoms in MS patients. Additional research is needed to support this data.

LIMITATIONS

- Small sample size - subgroup analysis in our primary outcome and pair-wise comparisons in secondary measures could not be completed.
- Confounding variable: Twelve patients were also on anticholinergics or β-3 adrenergic receptor, both of which are known to have impact on LUTS.