



VOIDING DYSFUNCTION AND COMPLICATIONS IN MULTIPLE SCLEROSIS

Abello, A., Das, AK.

Beth Israel Deaconess Medical Center

AIM

- Describe frequency of urologic complications in a cohort of Multiple Sclerosis (MS) patients
- Report changes in UDS during follow-up
- Identify characteristics that increase MS patients odds to develop urologic complications

METHODS

- Consecutive patients diagnosed with MS who had been followed regularly by urology were analyzed.
- Lower urinary tract symptoms (LUTS), expanded disability status score (EDSS), creatinine, imaging, urodynamics (UDS) and urologic complications were recorded at each visit.
- T tests or Wilcoxon for continuous variables, and Chi-square for binomial variables were used to assess statistical significance (P value <0.05).
- Univariate and Multiple variate logistic regression were performed with complications as the dependent variables.

RESULTS

- 107 MS patients (80% females) with a mean age at diagnosis of 37 years/old
- Followed by Urology for a mean of 97 months
- 73% had Relapse-Remitting (RR) subtype; mean EDSS was 3.2.
- The 2 most frequent UDS patterns at baseline were Detrusor Overactivity (DO) + Dyssynergia (DSD) and DO alone in 32% and 20% respectively.
- Started treatment with medications alone in 46%, CIC in 24%, SPT or indwelling catheter in 12%, Botox w/wo CIC in 10% and behavioral techniques alone in 8%
- During follow-up, MS progressed in 39% and EDSS progressed to a mean of 5.6.
- Among all patients, 35% developed 1 complication and 18% ≥ 2 complications (**Table 2**)
- EDSS > 6.0 (OR 7.2, 95% CI 2.8-18; P value < 0.001) and EDSS progression >2.5 (OR 4.8, 95% CI 2.0-11.7; P value <0.001) were significantly associated with **increased odds for overall urologic complications.**
- Bladder capacity significantly decreased during follow-up but was not related to complications.

Table 1: UDS changes

	Baseline UDS	Follow-up UDS	P value
Bladder Capacity	304.4 ml	254.5 ml	0.02
Pdet.Qmax	35.3 cmH2O	27.7 cmH2O	0.1
Qmax	10.1 ml/s	7.7 ml/s	0.1
PVR	147.2 ml	137 ml	0.2
Voided Volume	158.8 ml	169 ml	0.1

Table 2: Complications during FU

Complications (%)	
-Lower UTI	53%
-Pyelonephritis	7%
-Urosepsis	7%
-Kidney stones	7%
-Bladder stones	6%
-Acute renal failure	6%
-Persistent hydronephrosis	1%
-Chronic renal failure	0%

CONCLUSIONS

- The overall frequency of severe urologic complications in MS patients over a 8-year period was low.
- Adverse outcomes in this population approximated the overall worsening status of the primary neurologic disease process and resultant increase in total disability during follow-up.
- Different UDS parameters or changes in voiding function were not related to complications.