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UROLOGICAL MANAGEMENT IN MULTIPLE SCLEROSIS: A REAL LIFE OBSERVATIONAL STUDY

Hypothesis / aims of study

Patients with Multiple Sclerosis often suffer with both storage and voiding lower urinary tract symptoms (LUTS). There are guidelines available regarding the management of such patients when LUTS develop. However, we do not have any data regarding the real life impact of these guidelines, nor about the frequency of use of antimuscarinics in such patients. The aim of this study is to assess the result of urological management and the use of antimuscarinics in patients with MS in a real-time clinical setting.

Study design, materials and methods

This is an observational study of a cohort of patients attending the national multiple sclerosis centre in one country over a two week period. Appropriate ethical approval was obtained. Informed consent was given by the patients. Data was collected on all the patients that attended the centre during this time frame. This included whether they were inpatients or outpatients. They were categorised according to the Extended Disability Status Scale (EDSS) into walking without aids (1-3.5), walking with aids(4-6.5), using a wheelchair (7-8) or bed bound (8.5-9.5). The type of urological management they were using was noted: using pads/condom catheter, using intermittent catheterisation or indwelling catheters, have a urinary diversion (stoma) or not using anything. Patients were asked for any involuntary urine loss that could not be controlled by their current method: e.g. a patient with a suprapubic catheter still leaking through the urethra, or patients that leaked through their pads. Patients who could control their incontinence by the method used were considered to be continent.
Next to that the use of antimuscarinics was noted.

Results

Three hundred and thirty six patients attended the centre during the study period. The majority of patients (68%) were on an outpatient basis. Overall 75% of all patients were continent and 50% were using antimuscarinics. Most patients (41,7%) used a wheelchair.
Table 1 shows the distribution of the patients according to their EDSS score and shows the continence rates per group.
Table 1

EDSS	% patients	% continent
1-3.5	20,5%	79,5
4-6.5	24,4%	75,6
7-8	41,7%	58,4
8.5-9.5	13,4%	86,7

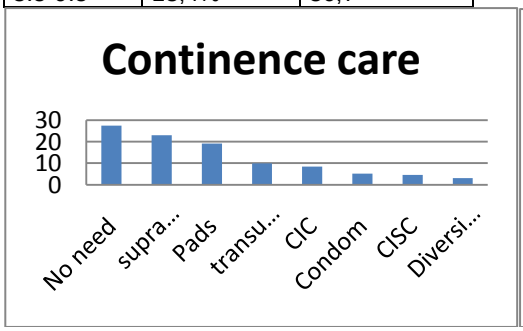


FIG 1

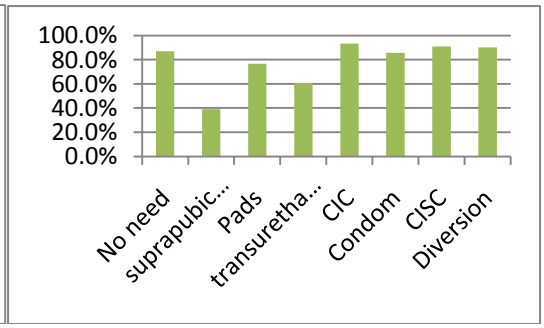
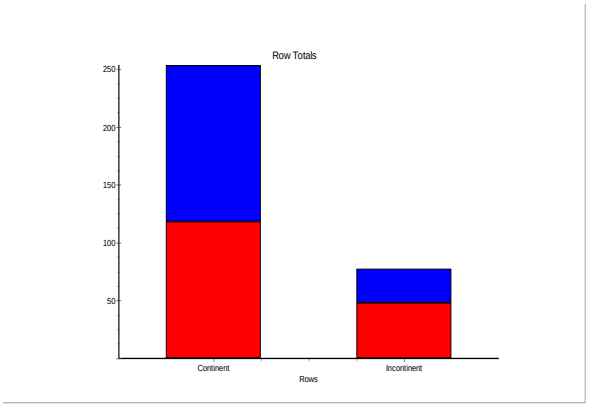


FIG 2

Fig 1 shows the urological management in this cohort
Fig 2 shows the continence rate per urological management method



O.R. 0.53 (p=0.019)

FIG 3

Figure 3 shows the impact of the use of antimuscarinics. Using the Fisher's exact test the Odds Ratio (OR) of 0.53 is significant, showing that taking antimuscarinics gives a higher probability of being incontinent.

Interpretation of results

This cohort has a high proportion of more advanced MS. The urological management in the more advanced MS is poorly studied so far. A wide variation of methods is being used in patients with MS to achieve 'social' continence. This study shows that overall 75% of patients will achieve that goal. Wheelchair bound patients only achieve 60%. Many of these patients are in a transition phase, going from intermittent catheterisation to a more definitive form of urinary drainage, usually a suprapubic catheter. In this transition phase, incontinence can be a very bothersome symptom.
Clean-intermittent self-catheterisation (CISC) and clean-intermittent catheterisation (CIC) are not often used in this population despite the fact that these methods achieve 90% continence. Suprapubic catheters (39% continence) and transurethral catheters (60.7%) performed poorly. A sub-analysis did not show any difference in those who used antimuscarinics or not. Fig. 3 shows that the probability of being incontinent is even higher in patients on antimuscarinics. Probably refractory detrusor overactivity causes this persistent incontinence. These patients might be better helped by e.g. botulinum toxin injections or a urinary diversion.

Concluding message

This is the first observational study to look at continence rates in a cohort of advanced MS patients. In most patients continence can be achieved by several methods. The group using suprapubic catheters needs further study as well as the use of antimuscarinics in this group.

Specify source of funding or grant	**None**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**National MS Centre, Melsbroek, Belgium**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**