

DOUBLE DOSE OF ANTIMUSCARINIC FOR THE TREATMENT OF NEUROGENIC DETRUSOR OVERACTIVITY

Hypothesis / aims of study

Neurogenic detrusor overactivity (NDO) is a bothersome condition, with increased incidence and a long list of subsequent complications. While antimuscarinics remain the first line therapy, there are many cases where the efficacy of treatment is sub-optimal, prompting for an alternative. We present our data from a prospective, open-label clinical trial with 20 mg of solifenacin a day.

Study design, materials and methods

All the patients started with a dose of 10mg solifenacin a day. After one month, the patients who were not satisfied with the efficacy of the treatment were given the choice to opt for a double dose of the drug, while others remained stable on the initial dose, for the next two months. Patients' evaluation included 3 days bladder diary, urinalysis, ultrasonography and filling cystometry, done at the inclusion and at the final visit. All adverse effects and observations of the patients were recorded during the study. We compared data from the bladder diary and cystometry between the two arms, at the end of the three months treatment, using the t-test analysis.

Results

A total number of 29 patients completed the study (19 males, 10 females), with various neurological conditions: spinal cord injury (SCI) – 10 cases, multiple sclerosis (6), Parkinson's disease (PD) – 5 cases and stroke – 6 cases. After one month, 13 patients switched to the 20 mg dose. Final data shows statistically significant improvements in voided volume, number of micturitions, Pdet max and reflex volume. There was a decrease in the number of incontinence episodes and an increase in post void residual volume (PVR), both without statistical significance (see table for actual data). Patients reported improvements as early as 7 days after shifting to the 20 mg dose. There was an obvious increase in the rate and intensity of common adverse reactions (dry mouth, constipation, dizziness, etc). By the end of the trial, no patient discontinued the treatment and no serious adverse events occurred.

Interpretation of results

	Voided vol (bladder capacity)	Number of voids	Incontinence episodes	PVR	V reflex	Pdet max
10 mg arm	280.63 ± 101.19	11.19 ± 3.1	3.44 ± 3.93	120 ± 70.8	238.44 ± 95.86	44.69 ± 15.71
20 mg arm	358.85 ± 101.22	8.23 ± 1.74	2.92 ± 2.81	143.08 ± 73.64	310.23 ± 93.59	34.08 ± 8.84
p-value	0.0482	0.005	0.6952	0.3988	0.0526	0.0392
Conclusion	Sign improved	Very sign improved	Not sign decreased	Not sign increase	Sign improved (borderline)	Sign improvement

Concluding message

A 20 mg dose of solifenacin is a good conservative treatment option for NDO. The storage and voiding parameters are improved, and the rate of adverse reactions, although higher, is fully balanced by the benefits and still reasonable for the patient.

Disclosures

Funding: Private funds (personal) **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** Hospital Ethics Comitee **Helsinki:** Yes **Informed Consent:** Yes