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## **MIRABEGRON IN TREATMENT OF PATIENTS WITH NEUROGENIC BLADDER RESISTANT TO ANTICHOLINERGIC THERAPY**

### Hypothesis / aims of study

Evaluation of mirabegron efficacy in treatment patients with neurogenic bladder resistant to mixed therapy with the use of two anticholinergic medications in high doses.

### Study design, materials and methods

Mixed therapy including two anticholinergic drugs (solifenacine 5-10 mg (receptor M3) in connection with oxybutynine 5 mg (receptors M1, M2, M3) and solifenacine 5-10 mg in connection with tolterodine 1- 2 mg (all receptors, especially M2, M3)) was used in 30 patients with neurogenic bladder resistant to anticholinergic monotherapy. In twelve patients (40%) of 30 treated with two anticholinergic drugs achieved success with decrease of detrusor pressure to 20-30 cm H<sub>2</sub>O, but 18 patients (60%) of them demonstrated lack of treatment efficacy. In these group of 18 patients without effectiveness of treatment with mixed therapy 8 (44.4%) had urine incontinence between CIC and 5 (27.7%) dilatation of upper urinary tract.

All these 18 patients with lack of anticholinergic mixed therapy effect were qualified to mirabegron therapy. In all anticholinergic therapy was discontinued and in all started mirabegron therapy in dose of 50 mg. Urodynamic examination was performed after 3, 6, 12 months of mirabegron treatment.

### Results

The follow-up examination performed in 17/18 patients (94.4%). The dilatation of upper urinary tract disappeared in all 5 patients. Urinary continence achieved in 7/8 patients and 1/8 demonstrated intermittent urinary incontinence.

Decrease of detrusor pressure to 20 cm H<sub>2</sub>O was observed in 4/17 patients (24%), but unsatisfactory decrease of detrusor pressure to 30-40 cm H<sub>2</sub>O obtained in 13/17 patients (76%).

In group of 13/17 patients without satisfactory decrease of detrusor pressure, combination of small dose of anticholinergic medication and mirabegron was applied. Solifenacine in dose of 5 mg combined with mirabegron in dose of 50 mg was used in 9/13 patients and tolterodine in dose of 2 mg was applied in 4/13 patients. These combinations became successfully to decreased of detrusor pressure to 20-25 cm H<sub>2</sub>O in all.

### Interpretation of results

### Concluding message

1. Mirabegron can be used in the treatment of patients with neurogenic bladder, especially those, who are resistant to anticholinergic therapy, as monotherapy or more often in combination with small dose of anticholinergic medication.
2. This type of therapy allows to avoid surgical treatment, especially, bladder augmentation with the use of different bowel segments and following that metabolic disorders.

### Disclosures

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