

URINE INCONTINENCE TREATMENT USING ALPHA1-ADRENORECEPTOR ANTAGONISTS

Hypothesis / aims of study

The efficacy of conservative therapy of incontinence caused by stress using adrenoceptor agonists and hormonal replacement therapy still remains rather low. It does not allow physicians to achieve the complete response in women with expressed and even moderate involuntary urine loss at exercise stress. Training of pelvic floor muscles and stimulation of pelvic cross-striated muscles is also effective only in 2 of 3 cases.

The study objective was to investigate the conservative treatment efficacy in case of «stress» component of incontinence using α 1-adrenoreceptor antagonist doxazosine (Cardura) in patients with the mixed type of imperative-stress form of the disease.

Study design, materials and methods

19 women at the age of 37 - 76 years old (mean 58 years old) with average duration of the disease 9 years (from 1 to 38 years) were included in the study. Previously these patients had not been treated due to urine incontinence. For quantitative assessment of symptoms, a table of the urinary bladder function assessment was used, in which the main syndromes of micturating disorders occurring in women were given. Urine incontinence at stress was assessed using a special table, in which frequency and volume of urine being lost at stress were reflected. Entering parameters in both tables of symptoms and in International table of Quality of Life Assessment (QOL) was carried out before the treatment course beginning, immediately after the treatment course with alpha1-adrenoreceptor antagonists, and also 6 weeks after the treatment course completion. All patients received 6-week therapy with doxazosine (Cardura, «Pfizer»), according to the scheme: 1 mg for 2 weeks, then 2 mg 2 weeks following by 4 mg for 2 weeks.

Results

At the baseline, indices of the urinary bladder function and quality of life were 15,9 and 4,7, correspondingly. In 6 weeks, the mean urination disorder index decreased by 7 points. Increase of the dosage in accordance with the titration scheme was accompanied by aggravation for 3-5 days. After the drug withdrawal for the first 4 days, patients reported about significant improvement of the condition caused by the adverse effect of the drug on sphincter structures. After the treatment, symptoms of the imperative urination syndrome kept disappearing for the next 6 weeks, but less intensively - by 1,2 points only. Urine loss at cough and at active exercises became 3,3 times less frequent, volume of loss decreased by 3,5 times. In 3 months, 9 patients were completely continence, another 6 patients reported about positive dynamics and refused the operation expressing intension to continue the conservative treatment.

Interpretation of results

Alpha1-adrenoreceptor antagonists are situated in the peripheral vessels, influence on them should cause improvement of circulation in muscles, specifically in the urinary bladder sphincter, and consequently favor elimination of tissue hypoxia and restoration of lost control over the sphincter. The mechanism launch demands the period of time within 6 weeks, so the therapy effect always remains delayed and can be seen only after the drug withdrawal.

Concluding message

The conservative drug therapy with alpha1-adrenoreceptor antagonists is appropriate and effective in case of stress and mixed-type urine incontinence in women. The treatment effect duration is from 2 months to 2 years.

FUNDING: Scientific program of Medical University

CLINICAL TRIAL REGISTRATION: This clinical trial has not yet been registered in a public clinical trials registry.

HUMAN SUBJECTS: This study was approved by the Ethical Committee of University of Vladivostok and followed the Declaration of Helsinki Informed consent was obtained from the patients.