

## **SYMPATHOMIMETIC DRUG AMELIORATES POSTURAL HYPOTENSION BUT MAY INCREASE THE RISK OF URINARY RETENTION**

### **Aims of Study**

Drugs act on vasoconstriction are one of the main streams of treating postural hypotension in patients with multiple system atrophy (MSA), i.e., Shy-Drager syndrome, that include midodrine, DOPS and amezinium. The lower urinary tract dysfunction is another autonomic feature in these patients, and both urinary urgency / frequency and voiding difficulty are common. We recently found that amezinium treatment may increase post-micturition residuals in MSA patients.

### **Methods**

Five patients with MSA included 4 men and one woman, mean age 58 years, mean duration of disease 4.6 years. Cardiovascular and urinary function tests were made in all patients, who showed central and peripheral types of the dysfunctions. In particular, four of the patients had high urethral closure pressure and 2 had detrusor-sphincter dyssynergia. Post-micturition residual volumes and clinical symptoms were re-evaluated after 6 months' treatment with 15 mg/day of amezinium metilsulfate.

### **Results**

After treatment, the mean systolic pressure fall in head-up tilting was decreased as compared to that before treatment (47 mmHg versus 51 mmHg for a change of 8%). The mean volume of post-micturition residuals was increased as compared to that before treatment (178 ml versus 113 ml for a change of 37%,  $p < 0.05$ ). A lessening in orthostatic dizziness was noted in three of five patients. None of the patients had change of their urinary filling symptoms. Voiding difficulty changed in none of four patients, but it appeared in one patient who had no voiding difficulty before the treatment. The increase in the volume of post-micturition residuals was related to none of the urodynamic parameters including detrusor-sphincter dyssynergia.

### **Conclusions**

Our findings suggest that sympathomimetic agents may increase the risk of urinary retention in patients with MSA, most probably by stimulating both  $\alpha_1$ -receptors in the vascular walls and  $\alpha_1$ -receptors in the proximal urethra.

### **References**

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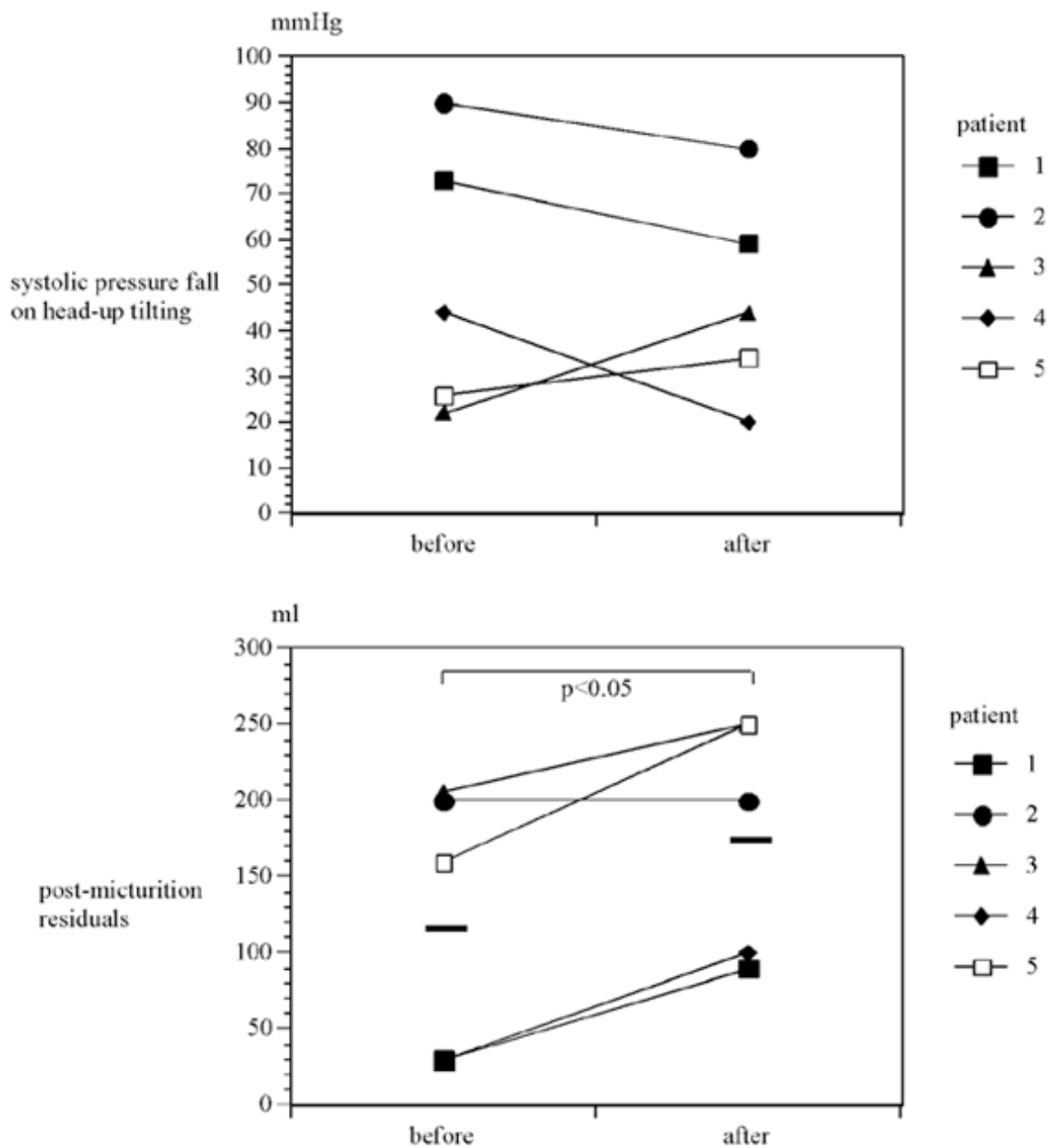


Figure 1 Systolic pressure fall on head-up tilting and post-micturition residuals before and after amezinium treatemnt. bar: mean volume of residual urine