#547 Urodynamic changes before and after treatment of lower urinary tract dysfunction after ischemic stroke in human

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Abstract

Aims of study：
The purpose of this study was to investigate the urodynamic manifestations of lower urinary tract dysfunction before and after clinical intervention in patients with ischemic stroke.

Methods and Materials

Fifty patients were divided into pre-treatment and post-treatment group. The maximum urinary flow rate, micturition volume and bladder residual urine volume were compared between the two groups.

The bladder function of the patients was evaluated and the characteristics of urodynamic examination were analyzed.

The curative effect, urodynamic performance and patient satisfaction after intervention were observed.

Results

Table 1 Changes in maximum flow and bladder residual urine volume rate before and after treatment

	Prior-treatment	Post-treatment	Paired T		OR（95%CI）
			t	P value	
Maximum flow rate	9.63±2.85	12.25±2.38	-23.917	<0.001	-2.460(-2.667,-2.253)
Bladder residual urine volume	111.83±10.47	90.53±10.22	47.009	<0.001	21.300(20.389,22.211)

Table 2 Changes in micturition volume before and after treatment

	Prior-treatment	Post-treatment	Paired rank sum test		OR（95%CI）
			z	P value	
Micturition volume	126.81±11.47	145.3±12.20	-6.161	<0.001	-18.500(-19.684,-17.316)

The maximum urinary flow rate, micturition volume, maximum detrusor systolic pressure and maximum bladder volume in patients were significantly lower than the normal value, while the bladder residual urine volume was significantly higher than the normal value, which were improved after clinical intervention.

Results

Table 3 Quality of Life score before and after treatment

	Prior-treatment	Post-treatment	Paired T		OR（95%CI）
			t	P value	
Score before and after treatment	4.5±0.5	3.0±0.5	-18.093	<0.001	-1.500(-1.667,-1.333)

The mean QOL score after 3 months of treatment was (3.0 ± 0.5), which was statistically significant compared with the mean (4.5 ± 0.5) score before the intervention.

Discussion

➢Ischemic stroke causes up to 60% of patients with bladder dysfunction, and most of the lower urinary tract symptoms caused by stroke are overactive bladder (urgent urination and frequent urination).

➢The urodynamic characteristics of bladder function in patients with lower urinary tract dysfunction after ischemic stroke are mainly characterized by detrusor hyperreflexia.

➢The maximum urinary flow rate and micturition volume were significantly lower than the normal reference value, while the bladder residual urine volume was significantly higher than the normal reference value, which were improved after clinical intervention. It is suggested that urodynamic guidance for treatment and follow-up has significant advantages.

Conclusions

The main manifestation of lower urinary tract dysfunction in ischemic stroke is the high incidence of detrusor overactivity, and a few patients may have detrusor weakness or even no reflex. The urodynamic performance was significantly improved after clinical intervention. Urodynamics can guide clinical treatment and improve the quality of life of patients.

References

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