

LOWER URINARY TRACT SYMPTOMS OF NEUROLOGICAL ORIGIN IN UROLOGICAL ROUTINE WORK

Hypothesis / aims of study

Among the numerous types of neurological diseases, many are additionally complicated by lower urinary tract symptoms (LUTS). Previous study proved multiple system atrophy (MSA) and multiple sclerosis (MS) to be the most common neurologic conditions characterized by high LUTS complication rates 1). Coming to reports related to the period when LUTS appears, in 17% of the MSA cases LUTS alone occurred without being accompanied by other neurological symptoms 2). Some MSA patients were diagnosed with benign prostatic hyperplasia (BPH) 3). As shown in these reports, we have experienced cases where LUTS occurred arising from neurological diseases but was then overlooked at neurology, ending in inappropriate treatment. In order to reveal the neurological diseases that are likely to be overlooked during routine work, we performed examination using cases with a history of visiting urology before the first visit of neurology.

Study design, materials and methods

We performed retrospective analyses of 75 patients with histories of visiting the urological section before the first visit of neurology and being suspected of suffering from nervous system disorders. The existence of urological treatment was not inquired of during the first visit. After establishing the neurological conditions involved, we considered the diagnoses by the urologist, LUTS, associated symptoms, urology treatment, etc. Then we compared associated symptoms at the time of the first visit and revisit to confirm of the associated symptoms admitted early stage of a neurological diseases. We also performed detailed examination on cases where UDS was performed before the first visit of neurology and on cases where surgery was performed. Finally, we selected cases we examined (the cases examined neurologist at the time of the first visit of the urological section), and performed examination of medical therapy at urological routine work.

Results

Classification of the neurological diseases was shown at Fig 1. At the first urological visit, LUTS reported were dysuria in 58 cases (77%) including urinary retention (16) and urinary incontinence in 20 cases (27%). Associated symptoms was shown at Fig 2. The prescribed urology treatment proved to encompass many conservative regimens: 31 cases (41%) of oral drug administration, 15 (20%) of urethral catheterization, and 7 (9%) of clean intermittent catheterization (CIC), while surgeries were performed on 10 patients (13%).

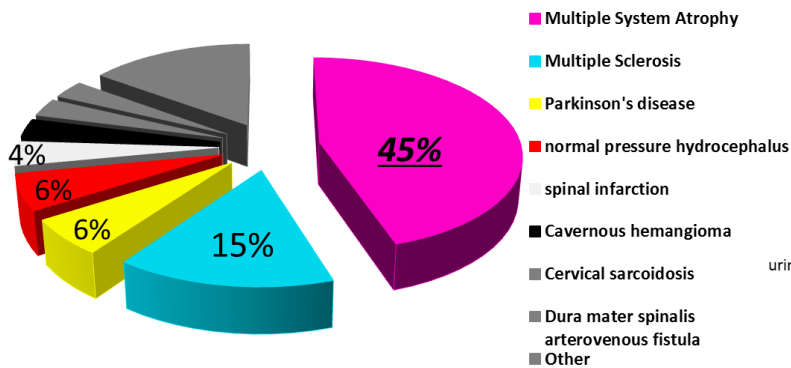


Fig. 1 : Classification of the neurological diseases

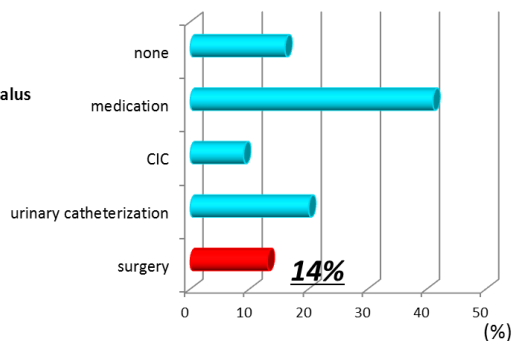


Fig. 3 : Classification of LUTS

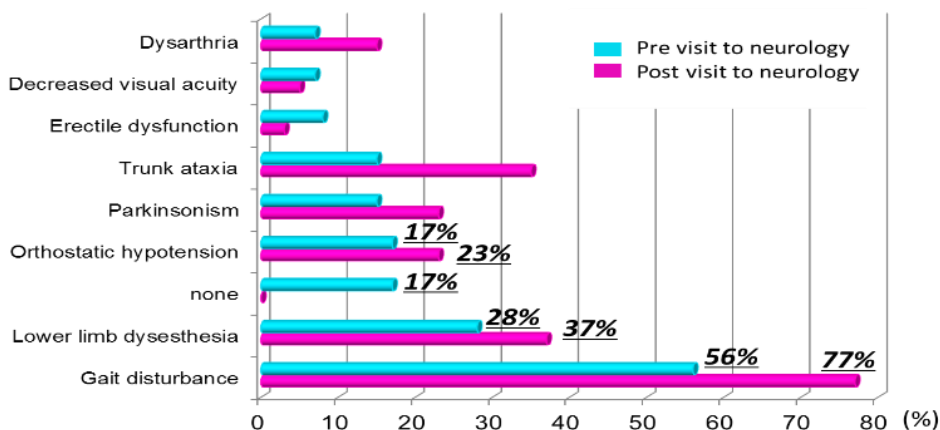


Fig. 2 : Classification of associated symptoms

Investigation of cases in which UDS was performed before the first visit of neurology

The 16 cases thus defined included 10 cases of MSA. UDS findings revealed 10 cases of decrease in bladder compliance and 15 cases of detrusor underactivity; no normal cases were observed. The investigated group included 4 cases in which LUTS alone were observed upon the first urological visit. During the prescribed treatment, surgeries were performed on these 4 patients (TUR-P on 3 and TVT on 1) (Fig 4).

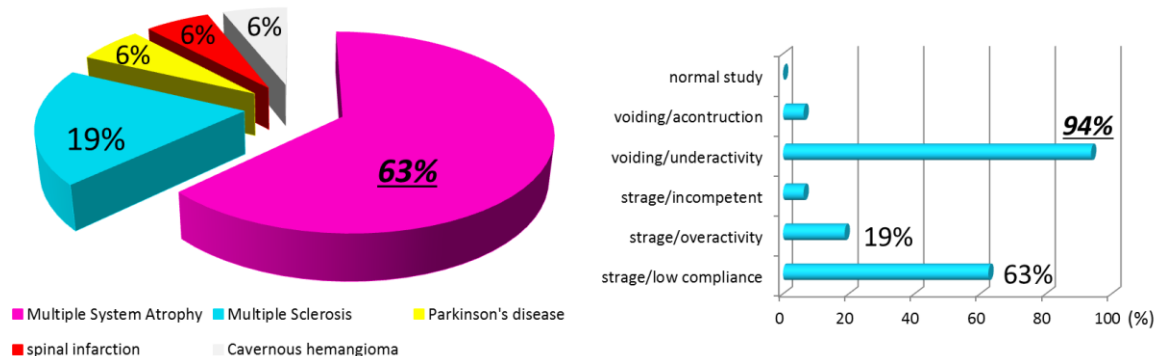


Fig. 4 : Investigation of cases in which UDS was performed before the first visit of neurology

Investigation of cases we examined before the first visit of neurology

The 14 cases thus defined included 6 cases of MSA. Associated symptoms included 4 of gait disturbances, 2 of orthostatic hypotension, while associated symptoms were not observed for 4 cases(29%). We were able to doubt the existence of the neurological disease on a multiple medical examination (Table I).

Table I. Investigation of cases we examined before the first visit of neurology

No.	final diagnosis	subjective symptoms	associated symptoms	diagnosis	therapy
1	MSA	pollakisuria	Orthostatic hypotension,ED	BPH,prostatitis	anticholinergic drug
2	MSA	dysuria (*)	Gait disturbance,Dyesthesia	BPH	TUR-P
3	MS	dysuria (*)	Gait disturbance,Parkinsonism	NB	urinary catheterization
4	MSA	dysuria,UUI	Trunk ataxia	BPH,NB	ablocker
5	PD	pollakisuria,dysuria	Gait disturbance,Parkinsonism	BPH	ablocker
6	MSA	MUI	none	MUI	anticholinergic drug
7	PD	UUI	none	NB	anticholinergic drug
8	NPH	dysuria,UUI	none	NB	ablocker
9	PSP	dysuria (*)	none	BPH,NB	CIC
10	Spinal infarction	dysuria (*)	constipation	NB	CIC
11	NPH	pollakisuria,dysuria	dementia	BPH	ablocker
12	Cerebral malignant lymphoma	dysuria,UUI	Gait disturbance,Dyesthesia	BPH,NB	ablocker
13	MSA	dysuria (*)	Trunk ataxia	BPH,NB	ablocker
14	MSA	dysuria (*)	Orthostatic hypotension	BPH,NB	ablocker

(*) urinary retention

SUI: stress urinary incontinence, UUI: urge urinary incontinence, MUI: mixed urinary incontinence, NB: neurogenic bladder

Interpretation of results

The case that did not show an associated symptom increased, and it seemed that the diagnosis only for LUTS and an associated symptom was difficult. However, the results of the present study indicated that careful examination of medical history, accounting for LUTS in all their diversity and fluctuation, combined with UDS enforcement, might be of vital importance in the early and correct diagnosis. We regarded orthostatic hypotension, gait disturbance, and large volume of residual urine as key symptoms.

Concluding message

This is the first report that examination from a standpoint of the urologist about a neurological disease to investigate by urological routine work. The study suggests that integrated approach of urologist and neurologist can be beneficial in the early identification of disease, rationalization of the treatment, and avoiding the unnecessary treatment of patients. Therefore, for patients who had findings that suggested a neurological disease, we required collaboration with neurology.

References

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3. Sakakibara R, Uchiyama T, Yoshiyama M and Hattori T: Urinary dysfunction. Clinical Neuroscience 19: 1285-1288. 2001.

Disclosures

Funding: This report is the examination that is retrospective. We received informed consent by oral informed consent and medical record making or an opto-out (information disclosure + refusal opportunity). We conformed to Helsinki Declaration and we considered human rights enough and examined this time. **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Kurosawa Hospital Ethical Review Board **Helsinki:** Yes **Informed Consent:** Yes