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EXAMINATION OF PELVIC ORGAN DYSFUNCTION IS HELPFUL IN DIAGNOSIS OF PARKINSON SYNDROME

Hypothesis / aims of study

It is well known that patients with Parkinson syndrome show various micturition symptoms. Parkinson syndrome includes idiopathic Parkinson's disease, multiple system atrophy, progressive supranuclear palsy, and vascular Parkinsonism. However, it is particularly difficult to differentiate between idiopathic Parkinson's disease (PD) and Parkinsonian-type multiple system atrophy (MSA-P) in early stage. Since prognosis of these diseases are quite different, it is important to make a precious diagnosis in early stage. We therefore examined whether examination of pelvic organ dysfunction is helpful in differentiation of PD and MSA-P

Study design, materials and methods

We recruited 61 patients with PD and 54 patients with MSA-P seen at our neurology clinic. The mean age of PD and MSA-P was 67 years old and 64 years old, respectively. The mean disease duration of both groups was 3.2 years. After each subject's informed consent was obtained, the questionnaire sheet was handed personally to the subject by a medical or co-medical staff member. The questionnaire was self-completed by the subject at their home and returned it to a medical or co-medical staff member on their next visit to the hospital. We administered a questionnaire on pelvic organ dysfunction to the PD and MSA-P groups. The questionnaire had sections focusing on the bladder, bowel, and sexual function. Dysfunction, as described in the responses, was evaluated as normal, mild (> once a month), moderate (>once a week), or severe (>once a day). The Mann-Whitney U-test was used for statistical analysis.

Results

As compared with the PD group, the prevalence and the severity of pelvic dysfunction in MSA-P group was significantly higher for urinary urgency (MSA-P 76%, PD 58%), retardation in initiating urination (79%,72%), and constipation (81%, 71%) (Figure 1). The prevalence and the severity of the sexual dysfunctions were severe in both groups without statistically significant difference. With regard to the QoL index among pelvic organ dysfunctions, urinary function was significantly impaired in MSA-P group as compared to PD group.

Interpretation of results

We have separately reported the prevalence and the severity of pelvic organ dysfunction in PD and MSA-P, previously (1,2). We concluded that pelvic organ dysfunction is common and severe in both PD and MSA. In the present study, urinary urgency, retardation in initiating urination, and constipation was significantly impaired in MSA-P groups, which suggested that the combination of these symptoms might help diagnosis of Parkinson syndrome. The reason why the patients with MSA-P showed more severe pelvic organ dysfunction might be attributable to widespread pathology especially in brain stem and spinal cord (intermediolateral nucleus), which play an important role in regulating autonomic functions.

Concluding message

Detailed examination of pelvic dysfunction is helpful in the diagnosis of Parkinson syndrome. The patients with MSA-P showed more severely impaired urinary function as compared to the patients with PD.

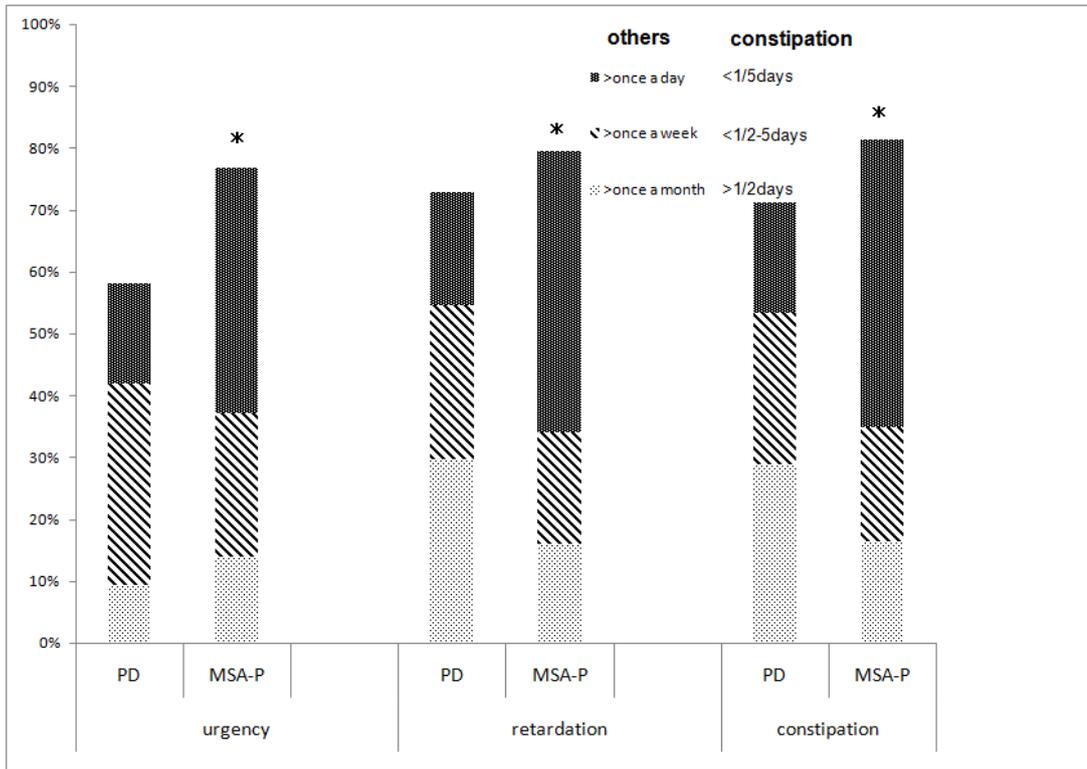


Figure 1 Bladder and bowel dysfunctions in patients with MSA-P and PD.

References

1. Auton Neurosci. 2001;92(1-2):76-85
2. Mov Disord. 2009 Epub ahead of print

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Is this a clinical trial?	No
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Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	Chiba University, Chiba, Japan
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes