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ATTEMPT TO CREATE A CHECKLIST DUE TO SUSPICION OF NEUROLOGICAL DISEASES. --EXAMINATION ON NEUROLOGICAL DISEASE CASES WITH HISTORY OF VISITING UROLOGICAL SECTION PRIOR TO VISITING NEUROLOGY

Hypothesis / aims of study

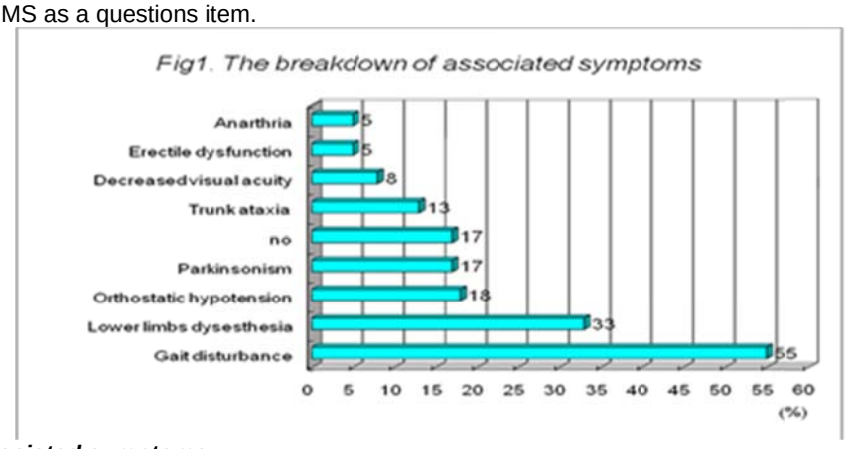
There are many types of neurological diseases. There are also many types of diseases that are complicated with LUTS but with differences in complication rates. Coming to reports related to the period when LUTS appears, in 17% of the multiple system atrophy (MSA) cases LUTS alone occurred without being accompanied by other neurological symptoms 1). Some MSA patients were diagnosed with benign prostatic hyperplasia (BPH) 2). Multiple sclerosis (MS) reports reveal that there are 2% of cases where LUTS occurs alone the first time 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. This time, we tried the making of the check list to doubt presence of the neurologic disease from a symptom and laboratory findings.

Study design, materials and methods

We performed examination retrospectively for 60 cases with histories of visiting the urology prior to visiting neurology and being suspected of having neurological diseases. We first performed examination on the breakdown of disease. Next, we extracted an associated symptom to be found in disease with much number of cases as a questions item, and calculated a positive rate. Then with a case performed UDS at first visit, we extracted laboratory findings, and calculated a positive rate equally. We also performed detailed examination on cases where surgery was performed.

Results

The breakdown of the diseases includes 27 of MSA, 11 of MS, and four cases of Parkinson's disease. Associated symptoms included 33 of gait disturbances, 20 of lower limbs dysesthesia, 11 of orthostatic hypotension, and 10 of parkinsonism while associated symptoms were not observed for 10 cases (17%) (Fig1). From these symptoms, we extracted the symptom that was found a lot in MSA and MS as a questions item.



Examination only associated symptoms

(a) 55%, (b) 33%, (c) 18%, (d) 17%, (e) 7%, A 37%, B 32%, C 67%, D were 78% when they assumed it (a)gait disturbances, (b)dysesthesia, (c)orthostatic hypotension, (d)parkinsonism , (e)decreased visual acuity, A(b or e), B(c or d), C(b or c or d or e), D(a-e) (Fig2) .

Examination on cases where UDS was performed prior to visiting Neurology

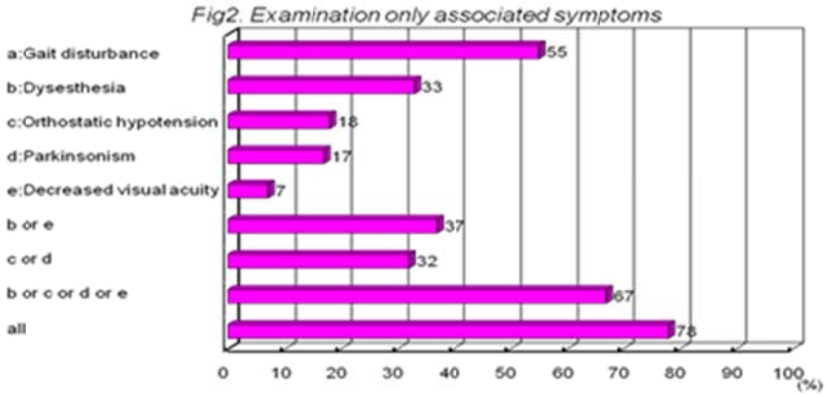
The breakdown of the 15 cases includes 10 of MSA, three of MS, and others. (a) 33%, (b) 7%, (c) 20%, (d) 20%, (e) 7%, A 13%, B 40%, C 53%, D were 60% when we examined in a similar questions item. According to UDS findings, there are 10 of decrease in bladder compliance, 14 of detrusor underactivity, etc.; no normal cases were found. Therefore when we extracted UDS findings and examined equally, (f)decrease bladder compliance, (g) detrusor underactivity and E (f or g) became 67%, 93% and 100%. And (D or f), (D or g) became 93%, 100% when we could put together with an associated symptoms (Fig3).

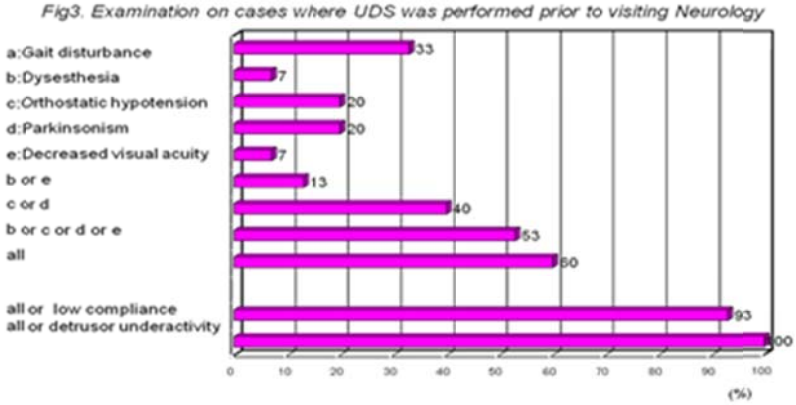
Examination on cases where surgeries were performed prior to visiting Neurology

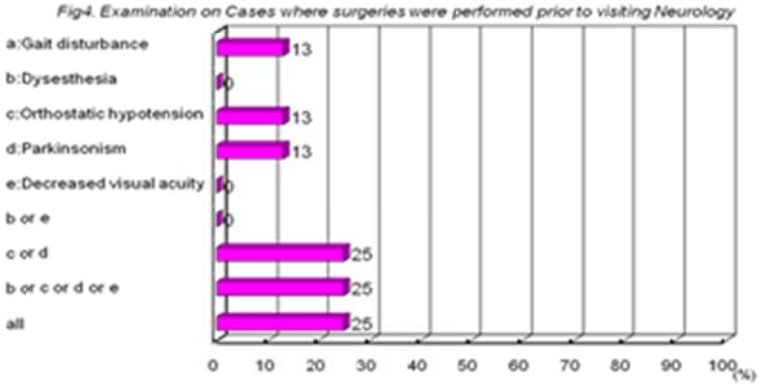
The breakdown of the eight cases includes seven of MSA and one of HAM. The positive rate was limited to 25% even if we examined questions by contents of (D). UDS was performed in four cases before operation, the positive rate was limited to 25% only an associated symptom, but it became 100% when we could put UDS findings together (Fig4).

Interpretation of results

When history taking was performed in the presence/absence of orthostatic hypotension and parkinsonism, 30% or more patients confirmed that they had neurological diseases; when decreased visual acuity and dysesthesia were added, the patients confirming reached approximately 70%. It is also considered that associated symptoms alone can possibly eliminate 25% of the surgery, and implementation till UDS can possibly eliminate all surgery. It suggests the possibility that when LUTS cannot be explained as a disease of the urology, the high percentage of presence of neurological diseases can be discovered by detailed examination through question, UDS, etc.







Concluding message

Associated symptoms and UDS check suggest the possibility that unneeded surgery can be avoided. The same examination has not been seen in the past, and it is being reported for the first time. It is being considered to examine validation by scoring the checklist and setting the cutoff level for referral to neurology.

References

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3. Miller H, Simpson C.A. amd Yeates W.K.: Bladder dysfunction in mltiple sclerosis. Br. Med. J., 1: 1265- 1269, 1965.

Specify source of funding or grant	**In this examination, we do not receive the subsidy at all.**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require ethics committee approval because	**This report is the examination that is retrospective, and the permission of the ethical committee does not obtain it. However, we explain contents of this examination for the case that can be followed as much as possible and oral obtain its consent. We conformed to Helsinki Declaration and we considered human rights enough and examined this time.**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**