

NEW CLASSIFICATION OF LOWER URINARY TRACT SYMPTOMS IN FEMALE PATIENTS VISITING TO PRIMARY CARE DOCTORS: CLUSTER ANALYSIS USING THE INTERNATIONAL PROSTATE SYMPTOM SCORE

Hypothesis / aims of study

Many factors may involve in the pathogenesis of female lower urinary tract symptoms (LUTS). Furthermore, an overlap between LUTS subtypes (voiding, storage and post-micturition symptoms) results in difficulty in accurate diagnosis and treatment. Recent report demonstrated that male with LUTS can be classified into 5 characteristic symptom groups, using International Prostate Symptom Score (IPSS) (1). In the present study, similar cluster analysis was performed using seven IPSS items to determine whether female patients could be classified into characteristic symptom groups. This classification of female with LUTS would clarify the pathological diversity and identifying corresponding pharmacotherapies.

Study design, materials and methods

Survey populations were female patients aged 40 years or older visiting the primary care doctors, except for urologists, for the treatment of life-style diseases. Questionnaires were sent to the about 1000 primary clinics in various areas of Japan. Patients received the questionnaires from their doctors and completed them, and the questionnaires were collected by mail individually. The questionnaires included information of patients' background, international prostate symptom score (IPSS), QOL index, OAB-symptom score (OABSS) and OABq. In the present report, hierarchical cluster analysis of IPSS was performed based on Ward's method of assessing the Euclidean distance between objects.

Results

Of 5168 female patients visiting to primary care doctors for treatment of life-style diseases, 2610 showed less than 1 point in each IPSS score (no symptom type). Six symptom clusters were identified in 2558 patients with LUTS (figure), and the symptom types of each cluster were examined. The largest cluster (33%) consisted of patients with daytime frequency and weak stream (frequency and weak stream type). And the second largest cluster (30%) consisted of patients with mild multiple symptoms, i.e. complaining of all symptoms with a mean score more than 0.5 and less than 1.6. In contrast, the smallest cluster (8%) consisted of patients with multiple severe symptoms, i.e. complaining of all symptoms with a mean score more than 2.5 (severe multiple symptoms type). The second smallest cluster consisted of storage symptoms (OAB type: all symptoms showed more than 1.7). Other two clusters were labelled on their dominant symptoms. The clusters were nocturia (19%) (nocturia type), and frequency (19%) (frequency type). Nocturia type was youngest and frequency type was oldest. The distribution of the QOL score was different among the clusters, QOL was worst in severe symptoms type.

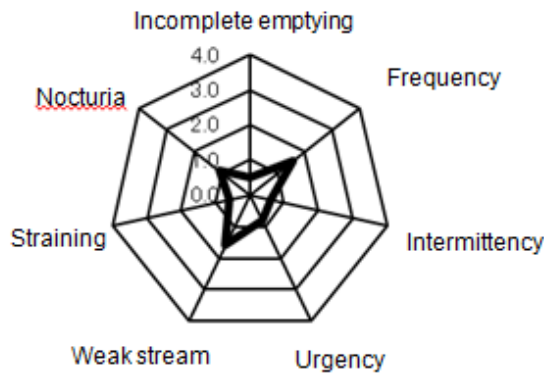
Interpretation of results

In the present study, six distinct clusters were identified in female LUTS patients who are visiting the primary care doctors for the treatment of life-style diseases. These different symptom patterns may reflect pathological differences among female with LUTS. A new approach to symptom-based classification may be useful to elucidate the pathology of female LUTS and individualize the therapeutic strategy for affected patients, although further studies are needed.

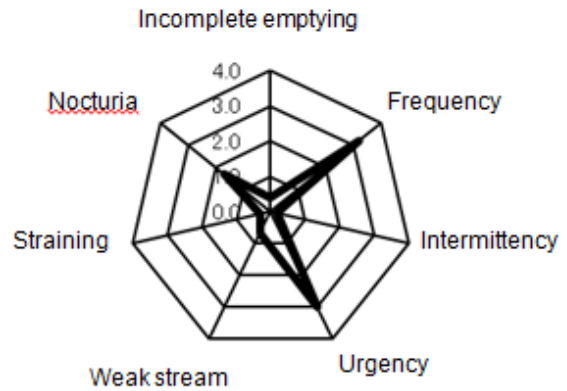
Concluding message

Cluster analysis using the IPSS showed that female patients visiting to primary care doctors for treatment of life-style diseases can be classified into seven characteristic symptom groups. This classification would provide a new insight for clarifying pathological diversity and identifying corresponding pharmacotherapy in female patient with LUTS.

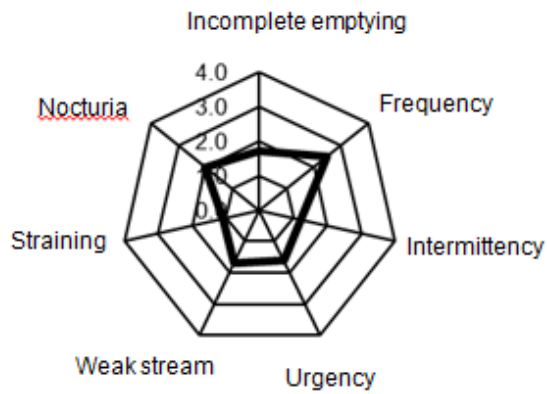
Frequency and weak stream type



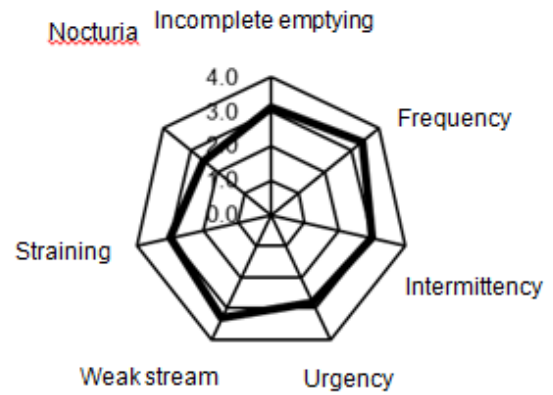
OAB type



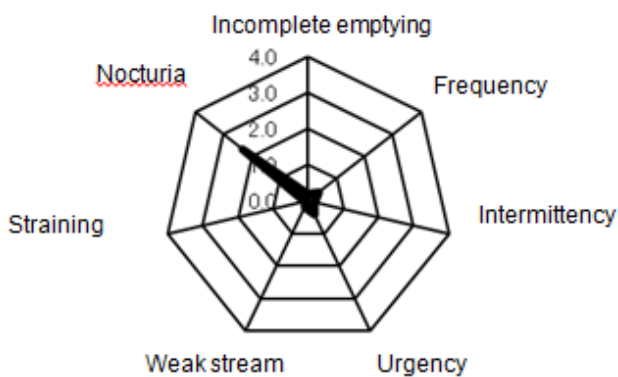
Mild multiple symptoms type



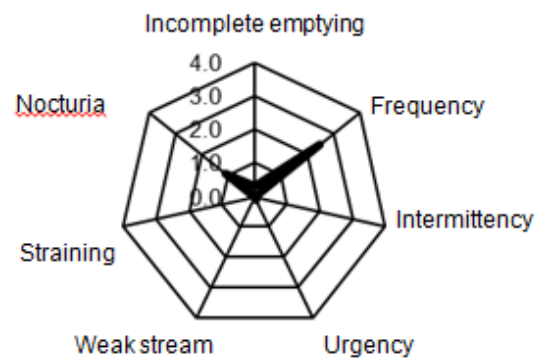
Severe multiple symptoms type



Nocturia type



Frequency type



References

1. BJU int 110: 408-412, 2011

Disclosures

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