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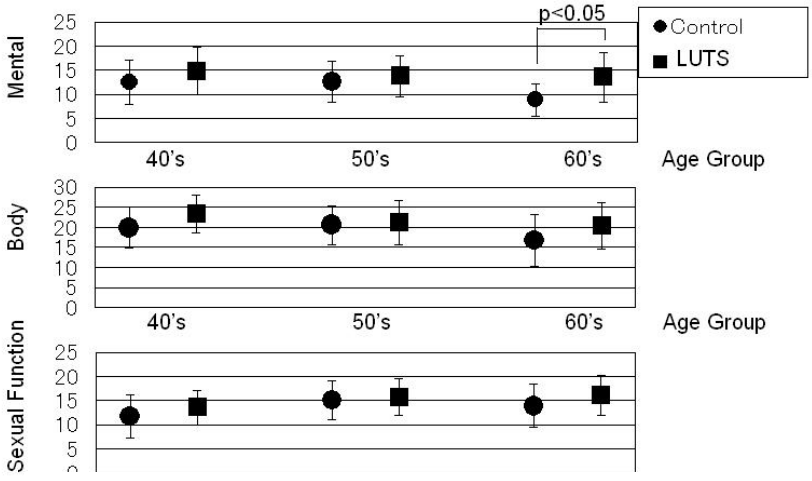
HEALTH BURDEN OF LOWER URINARY TRACT SYMPTOM (LUTS) IN JAPANESE MALE

Hypothesis / aims of study
This study aims to clarify health burden due to lower urinary tract symptom (LUTS) from psychological and physical viewpoints.

Study design, materials and methods
Subjects consist of patients who visited the Late-onset hypogonadism (LOH) outpatient clinic of our university hospital. They responded the questionnaire concerning International Prostate Symptom Score (IPSS), Aging Male Symptom(AMS), International Index of Erectile function 5(IIEF5), Hopsital Anxiety Depression(HAD) Score, SF-36, age and past histories. We got the written informed consent from all participants before enrolling this study. This study had got the ethical permission from institutional review board. The number of enrolled subjects was 190(Age: 54.7 +/- 9.1 y.o.). The subjects less than 40 y.o were excluded for analysisng this study. LUTS group were defined as the subjects whose IPSS exceeded 9 point. Control group were defined as the subjects whose IPSS were less than 9. Number of LUTS and control groups were 83, and 107 respectively. The prevalence of LUTS among LOH ouotpatients was 43.7%. The prevaleces of LUTS in age 40s, 50s, 60s were 19.3%, 49.4%, 61.5%, respectively. Two-way (Age * LUTS) ANOVA was applied to HAD score, each domain of AMS and SF36, IIEF5 for elucidating the influence of LUTS.

Results
The LUTS group had the significantly higher depression and anxiety scores than the control group. The prevalences of anxiety patients defined by HAD were 33.7%(28/83) among LUTS group and 23.4%(25/107) among control group. The prevalences of depressive patients defined by HAD were 43.4%(36/83) among LUTS group and 29.9%(32/107) among control group. According to AMS score (shown in Fig.1), mental and physical domains indicated the LUTS group was significantly higher than the control. Concerning the mental health (MH) domain of SF36, the score of LUTS group showed significantly lower than that of the control group (shown in Fig.2). Other domains of SF36 showed no significant differece between two groups. There was no significant difference of erectile dysfunction's score defined by IIEF5 between two groups. The prevalences of erectile dysfunction defined by IIEF5 were 34.9% (29/83) among LUTS group and 47.7%(51/107) among control group. There were no statistical differences of ED prevalence between LUTS and control group by each age group. This difference between LUTS and control group was remarkably observed in the subjects who were over 60 y.o. Erectile domain of AMS indicated no significant difference between two groups. However, erectile domain of AMS, vitality (VT) domain, role emotional (RE) domain and physical function (PF) domain of SF36 increased with age significantly. Free teststerone decreased with age, but no significant relationship was observed. Total teststerone indicated no relationship to both age and LUTS.



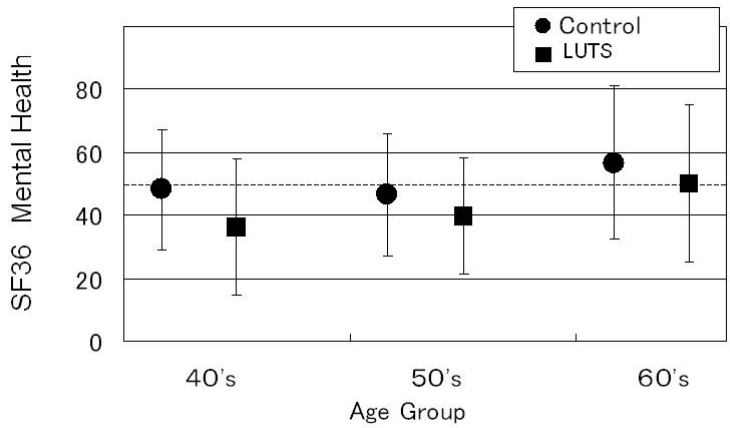


Fig.2 Mental Health sub-domain of SF36 by LUTS

Interpretation of results
Even among the outpatinets of LOH clinic, over 40% of patinets complained the LUTS. The results from AMS and SF36 showed LUTS group indicated that psychological health burden was mainly influenced by LUTS. Concerning the mental health (MH) domain of SF36, the LUTS groups decreased 24.4% of MH score of control group. However, LUTS had no siginificant physical health burden concerning erectile dysfunction

Concluding message
Medical treatment for urinary LUTS was expected to generally relieve psychological health burden.

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HUMAN SUBJECTS: This study was approved by the St.Marianna University and followed the Declaration of Helsinki Informed consent was obtained from the patients.