

THE ASSOCIATION BETWEEN LOWER URINARY TRACT SYMPTOMS AND DEPRESSION IN AGING MEN: HALLYM AGING STUDY

Hypothesis / aims of study

Lower urinary tract symptoms (LUTS) can impact health related quality of life (HRQOL), and may be associated with several comorbidities such as depression, erectile dysfunction and cardiovascular disease. However, association between LUTS and depression has been rarely investigated, especially in population-based studies.

The aim of this study was to investigate the relationship between lower urinary tract symptoms (LUTS) and depression in a population-based cohort study, Hallym Aging Study (HAS).

Study design, materials and methods

Of 1,520 participants in HAS, 382 men aged ≥ 45 years, who underwent detailed health evaluations, including health-related questionnaires, evaluations of the medical history and various life style factors as well as clinical measurements, were included. LUTS and depression were assessed by validated questionnaires, the International Prostate Symptom Score (IPSS) and the Geriatric Depression Scale (GDS) and the relationship between LUTS and depression was investigated.

Results

The mean age of the participants was 69.3 ± 8.1 . Of the 382 men, 206 (53.9%) had moderate/severe LUTS (IPSS >7) and 199 (52.1%) had depression. The prevalence and severity of LUTS and depression increased significantly with age (Fig.1, $p < 0.001$). The multivariate logistic regression analysis, controlling for age, life style factors and comorbidities, showed that men with moderate/severe depression were 2-3 times more likely to have moderate/severe LUTS than men without depression (Table 1, $p < 0.05$); in addition, men with severe LUTS were 4-5 times more likely to have depression than men with no/mild LUTS (Table 2, $p < 0.05$).

Interpretation of results

The presence and severity of LUTS were strongly related to those of depression and the relationship between LUTS and depression is independent of age, life style factors and comorbidities such as smoking, alcohol, obesity, diabetes, hypertension, hyperlipidemia, cerebral vascular accident.

Concluding message

The presence and severity of depression were independent risk factors for LUTS and vice versa. These results highlight the clinical importance of evaluation depression in patients with LUTS, and the need to consider the presence LUTS in the management of patients with depression.

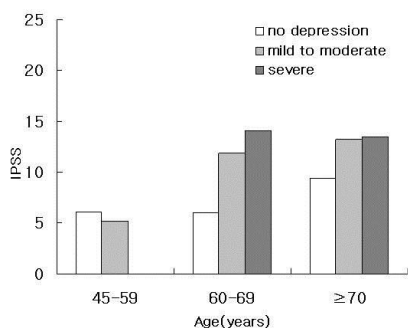


Figure 1. IPSS by severity of depression in each age group

Table 1. Multivariate logistic regression result for relative risk of moderate/severe LUTS by depression and comorbidity

		Moderate/severe LUTS	
		Odds ratio (95% confidence interval)	p-value
	no depression	1	
Depression	mild/moderate	2.21 (1.21-4.03)	0.010
	severe	2.70 (1.21-6.07)	0.016
	no ED	1	
Erectile dysfunction	mild	1.89 (0.71-5.07)	0.204
	moderate	4.34 (1.37-14.17)	0.015
	severe	3.13 (1.64-5.95)	0.001
Age		1.03 (0.99-1.07)	0.115
Body mass index (≥ 25 kg/m ²)		0.77 (0.45-1.31)	0.333
Diabetes mellitus		0.92 (0.41-2.04)	0.836
Hypertension		1.19 (0.66-2.14)	0.574
Hyperlipidemia		0.77 (0.17-3.43)	0.731
Cerebral vascular accident		1.30 (0.44-3.88)	0.634
Heart disease		1.94 (0.63-5.99)	0.248
Smoking		1.30 (0.69-2.46)	0.413
Alcohol		1.00 (0.59-1.72)	0.992
Regular exercise		1.24 (0.65-2.37)	0.508

Table 2. Multivariate logistic regression result for relative risk of depression by LUTS and comorbidity

		Depression	
		Odds ratio (95% confidence interval)	p-value
	no/mild LUTS	1	
LUTS	moderate	1.85 (0.99-3.42)	0.051
	severe	4.49 (1.74-11.56)	0.002
	no ED	1	
Erectile dysfunction	mild	1.46 (0.50-4.31)	0.490
	moderate	1.38 (0.40-4.71)	0.613
	severe	1.5- (0.74-3.01)	0.264
Age		1.05 (1.01-1.09)	0.021
Body mass index (≥ 25 kg/m ²)		1.00 (0.56-1.77)	0.989
Diabetes mellitus		1.38 (0.60-3.17)	0.453
Hypertension		0.90 (0.49-1.68)	0.746
Hyperlipidemia		0.39 (0.07-1.60)	0.167
Cerebral vascular accident		3.01 (0.76-11.87)	0.115
Heart disease		1.48 (0.45-4.93)	0.520
Smoking		2.27 (1.14-4.50)	0.019
Alcohol		0.94 (0.53-1.66)	0.818
Regular exercise		0.29 (0.16-0.55)	0.000

Disclosures

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