The Influence of Urinary Incontinence and Depression on the Quality of Life in the Elderly

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Objectives

- This study was designed to evaluate the influence of urinary incontinence and depression on one's QoL(quality of life) of elderly population, whose age is over 60 years.

Background and Aims

- Little is known about the influence of urinary incontinence and depression on individual's QoL(quality of life).
- Most of studies about the relationship between urinary incontinence and depression remains at the exploratory level where exact temporal causality and biomedical evidence is still lacking.
- We aimed to clarify how the interaction between urinary incontinence and depression influences one's QoL and investigate specific domains of QoL under the influence of the two.

Methods

- A total of 1262 patients were enrolled in this study from April to July, 2011.
- We estimated the severity of depressive symptoms and QoL, using SGDS-K, EQ-5D respectively.
- We also investigated the morbidity of urinary incontinence for each patient by interview or by questionnaire.
- Comparisons of QoL between groups with or without depression, with or without urinary incontinence were established using MANOVA(multiple analysis of variance) and Bonferroni's post hoc analysis.
- The interaction between urinary incontinence and depression was analyzed for each domain of QoL, using MANOVA.

Results

- Patients with depression and urinary incontinence showed significantly higher EQ-5D scores on every domain of QoL than other patients, which means significantly lower QoL.
- Patients with depression, no urinary incontinence reported lower QoL, especially in the domain of 'usual activity', 'anxiety' and 'visual analogue scale(VAS)', whereas those with urinary incontinence, no depression showed lower QoL in 'motility', 'usual activities' and 'pain' domain.
- Statistically significant interaction effects of two diseases were observed in the domain of 'VAS', 'self care' and 'anxiety'.

Conclusions

- Comorbidity of urinary incontinence and depression showed significantly lower QoL of patients, compared with urinary incontinence or depression respectively, which implies additive interaction effects of the two diseases.
- Optimal diagnosis and treatment of depression should be emphasized for patients with urinary incontinence to improve their QoL.

Table 1. Prevalence of urinary incontinence and depression

	Population with Incontinence		Population with Depression		Population with Incontinence and Depression	
	n	%	n	%	n	%
Male	63/393	16	154/393	39.2	41/393	10.43
Female	318/869	36.6	366/869	42.1	187/869	21.5
Total	381/1262	30.1	520/1262	41.2	228/1262	18.1

Table 2. Comparisons of main and interaction effects of urinary incontinence and depression on each domain of EQ-5D

	n	Motility	Self care	Usual activities	Pain	Anxiety	VAS
Incontinence (-) Depression (-)	589	1.49	1.19	1.39	1.66	1.13	63.91
Incontinence (+) Depression (-)	153	1.68 ^a	1.25	1.57 ^a	1.88 ^a	1.14	59.09
Incontinence (-) Depression (+)	292	1.78 ^a	1.39 ^a	1.77 ^{ab}	2 ^a	1.72 ^{ab}	46.21 ^{ab}
Incontinence (+) Depression (+)	228	1.97 ^{abc}	1.64 ^{abc}	1.94 ^{abc}	2.16 ^{abc}	1.97 ^{abc}	37.13 ^{abc}
P-value (for interaction)	-	0.658	<0.001	0.56	0.733	0.001	0.012

^a Significantly higher (p<0.05) than those with no incontinence and no depression.

^b Significantly higher (p<0.05) than those with incontinence but no depression.

^c Significantly higher (p<0.05) than those with depression but no incontinence.

Figure 1. Visualization of the interaction effects of urinary incontinence and depression on each domain of EQ-5D

Conflicts of Interest / Disclosure

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