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노인에서 우울증상을 고려한 알코올 사용과 인지기능 관계

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INTRODUCTION

- The deleterious effects of alcohol on cognitive function were reported as early as 1880s by Wernicke and Korsakoff . Besides, the current literatures reflect developing understanding of effects and pathophysiology of alcohol on cognitive function.

- The older alcoholics have been distinguished from the younger alcoholics with regard to impaired cognitive functioning in alcoholics, because the aging brain is more vulnerable to the toxic effects of alcohol than the younger brain. However, few studies have included samples of exclusively older subjects.

- This study aims to investigate the association between alcohol use disorder and cognition in Korean community-dwelling elderly, especially the gender-specific difference.

METHOD

- Data obtained from 1,141 subjects (976 men and 165 women) aged above 60 years was analyzed from the Gwangju Dementia and Mild Cognitive Impairment Study (GDEMCIS).

- All subjects completed the study questionnaire including demographic characteristics, history of current and past illnesses, drug history, Korean version-Mini Mental State Examination (K-MMSE), and CAGE (cut down, annoyed, guilty feelings, eye-opener), SGDS-K(Short form of Geriatric Depression Scale-Korean version).

RESULTS

- Of the 1,141 subjects(mean age 72.17±6.20, mean educational level 6.50±4.48), 267 demonstrated alcohol use disorder (23.40%) and 874 were non-alcohol use disorder(76.60%).

Table 1. General characteristics of participants compared by one's current alcohol use disorder

	Non-AUD (N=874)	AUD (N=267)	p-value
Age (year)	72.22±6.28	72.01±5.93	0.195
Sex* (male%)	736(84.21%)	240(89.89%)	0
Educational level (year)	6.53±4.49	6.40±4.47	0.875
Presence of depressive symptoms*†	324(49.76%)	115(45.09%)	0.008
K-MMSE*	23.70±3.94	23.23±4.99	0.002

Data are presented as mean±SD, t-test was performed
*: p-values < 0.05
†: SGDS-K ≥ 8
AUD: Alcohol Use Disorder
K-MMSE: Korean-Mini mental state examination

Table 2. General characteristics of participants compared by one's sex

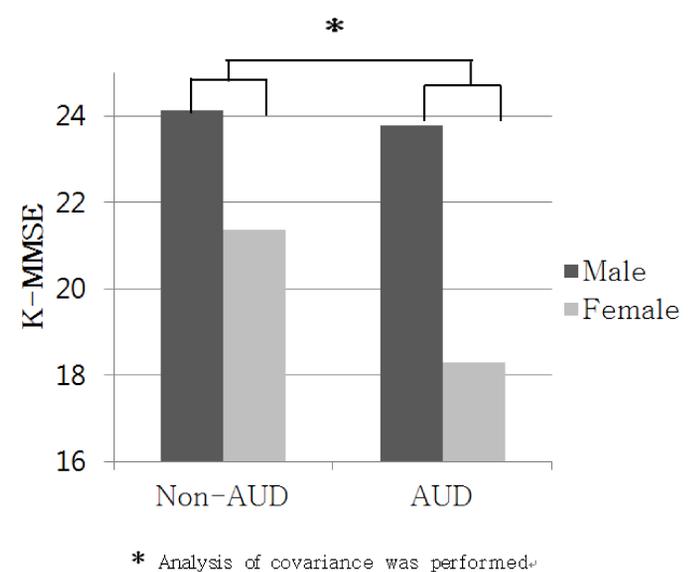|	Male (N=976)	Female (N=165)	p-value
Age (year)*	72.10±6.04	72.62±7.08	0.001
Educational level (year)	7.10±4.33	2.98±3.67	0.349
Presence of depressive symptoms*†	44.75%(337)	66.67%(102)	0.000
AUD*	24.59%(240)	16.36%(27)	0.000
K-MMSE*	24.05±3.86	20.87±5.13	0.000

Data are presented as mean±SD, t-test was performed

Table 3. Interactive effect on K-MMSE score between sex and AUD

	Sum of Squares	df	Mean of Squares	F	p-value
Age	811.549	1	811.549	67.339	0.000
Education level	2140.114	1	2140.114	177.577	0.000
Presence of depressive symptoms*	25.621	1	25.621	2.126	0.145
Sex	216.476	1	216.476	17.962	0.000
AUD	87.013	1	87.013	7.220	0.007
Sex * AUD	69.875	1	69.875	5.798	0.016

Tal interaction of AD and sex after adjusting for age, educational level

K-MMSE score is associated with sex and AUD respectively after adjusting for age, education level, depression. And there was interactive effect on K-MMSE score between sex and AUD. (F=5.798, p=0.016)

Figure 1. The decrement of K-MMSE score following sex and AUD

* Analysis of covariance was performed

Regression model illustrating the estimated marginal means of K-MMSE for the interaction of AUD and sex after adjusting for age, educational level, and depression. When alcohol use disorder is accompanying, the decrement of K-MMSE score was 3.07 for female, and 0.35 for male. And we confirmed the interactive effect on K-MMSE score between sex and AUD after adjusting for age, education level, depression.

CONCLUSION

- In conclusion, our study demonstrates an association between alcohol use disorder and cognitive impairment by gender in the elderly.