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Status of subjective memory complaints evaluated with SMCQ in post-stroke patients

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Introduction

Subjective memory complaints (SMC), “memory difficulties or problems reported by patients themselves and whether these are irritating and/or worrying for them”, are common after stroke. SMCQ was self-rated questionnaires for SMC and reported to be a reliable and valid instrument for evaluating SMC in elderly. Therefore, the purpose of the present study was to find out the status of SMC in vascular dementia patients.

Method

In this study, subjects were consecutively recruited from inpatient post-stroke patients of stroke unit for younger population under age of 65, a rebailitation hospital in Seoul, Republic of Korea from June 2014 to July 20. The inclusion criteria were as follows; (1) Subjects were diagnosed as cerebrovascular disease with imaging evidence (CT and/or MRI) of cerebrovascular disease and (2) Age over 20 and less than 65 years. We excluded subjects diagnosed other neurodegenerative disorder, severe depression, severe aphasia. We measured SMCQ. SMCQ consists of 14 items reflecting meta-cognition of general and specific memories. 4 items of the SMCQ (SMCQ-G) access global memory function, and 10 items of the SMCQ (SMCQ-E) access everyday memory function, and 60 minutes Korean version of Vascular Cognitive Impairment Harmonization Standards Neuropsychological (60m-K-VCIHS-NP),MMSE, CDR. To evaluate the validity of the SMCQ, Pearson correlation coefficients were used for the scores of the SMCQ and the scores of MMSE and the neuropsychological tests from K-VCIHS-NP.

Results

Table 2 presents concurrent validity of the SMCQ in stroke patients. SMCQ score showed good correlation with neuropsychological assessment tool which evaluates not only tests for memory, but also executive function (COWAT-animal, COWAT phonemic), and language function (K-BNT). In addition, SMCQ score showed good correlation with MMSE, widely used screening test for dementia. There is no significant correlation with MBI.

Conclusion

Subjective cognitive impairment is reported by almost all patients after stroke. This study suggests that SMCQ showed good correlation with other validated study, such as K-VCIHS-NP, MMSE.

Table 1. Comparison of the demographic factors between vascular dementia group and control group

		Control group (n=26)	VaD group (n=38)	p-values
Subjects		26	38	
Onset to exam time (days)		356.12(391.63)	202.27(176.45)	0.070
Ages, years		47.35(10.755)	48.03(7.258)	0.763
Sex				0.849
	Male	20 (%)	30 (%)	
Education levels		13.81(2.713)	12.84(2.785)	0.966
K-MMSE				
	Raw	28.92(1.853)	25.71(3.876)	**<0.001***
	Z-score	0.0696(1.23980)	-2.3587(2.87710)	**<0.001***
MBI		74.27(18.351)	67.18(19.715)	0.152
Etiology				0.132
	Ischemic / hemorrhagic / mixed	14 /12/ 0	12 /24 /2	
Lateralization				**0.030***
	Right / left / bilateral	19 / 6/ 1	15 /19 /4	
SMC				0.114
	Yes	15	29	
	No	11	9	

Data are expressed as: mean(SD)

Significant level : $p<0.05$

Table 2. Concurrent validity of the SMCQ in stroke patients

K-VCIHS-NP		n	SMCQ-T (r, (P-value))	SMCQ-G	SMCQ-E
Visuospatial function					
	RCFT	63	-0.191(0.134)	-0.166(0.194)	-0.186(0.145)
Memory					
	SVLT-E, immediate	64	-0.424(0.000)*	-0.421(0.001)*	-0.381(0.145)
	SVLT-E, delayed recall	64	-0.415(0.001)*	-0.453(0.000)*	-0.349(0.005)*
	SVLT-E, recognition	64	-0.432(0.000)*	-0.382(0.002)*	-0.417(0.001)*
Executive function					
	COWAT-animal	64	-0.404(0.001)*	-0.363(0.003)*	-0.386(0.002)*
	COWAT-phonemic	64	-0.439(0.000)*	-0.458(0.000)*	-0.382(0.002)*
	K-TMT-E	58	-0.239(0.071)	-0.197(0.138)	-0.238(0.072)
	DSC	57	-0.322(0.015)*	-0.339(0.010)*	-0.238(0.041)*
Language					
	K-BNT	52	-0.405(0.003)*	-0.429(0.001)*	-0.343(0.013)*
MMSE		64	-0.359(0.004)*	-0.324(0.009)*	-0.342(0.006)*
MBI		64	0.030(0.811)	0.006(0.965)	0.042(0.740)