뇌신경재활
발표일시 및 장소 : **10 월 26 일(금) 14:05-14:15 Room C(5F)**

OP2-1-6

Different Functional Recovery Pattern According to Sex in the First-ever Strokes in Korea

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Objective
The objective of this study was to investigate differences of functional recovery pattern between men and women and identify the factors associated with functional recovery pattern according to sex in stroke patients.

Materials and Methods
This study was an interim analysis of the Korean Stroke Cohort for Functioning and Rehabilitation (KOSCO) designed as 10 years long-term follow-up study of stroke patients. In this study, we analyzed 10,636 stroke patients to investigate differences in demographics and clinical features between male and female stroke patients. Serial data

up to 24 months of multi-facet functional assessments such as Korean-Modified Barthel Index (K-MBI), Fugl-Meyer Assessment (FMA), Functional ambulation classification (FAC), American Speech-Language-Hearing Association-National Outcomes Measurement System (ASHA-NOMS), Korean version of Frenchay Aphasia Screening Test (K-FAST) were analyzed to identify differences in recovery patterns and factors associated with these recovery patterns according to sex in the first-ever stroke patients after adjustments for difference with age, educational level, initial stroke severity, premorbid functional level, degree of comorbidity, and multi-facet functional levels at 7 day after stroke.

Results

Out of total 10,636 stroke patients (6,043 male and 4,593 female), female patients showed significantly older age, lower education level, lower body mass index, worse premorbid functional level, higher co-morbidity and more severe initial severity assessed by NIHSS compared with male stroke patients ($p<0.05$, Table 1). Even after multiple adjustments for differences, multi-facet functional outcomes were more severe in female stroke patients such as lower FMA, K-FAST, and FAC at 7 day; lower K-MBI, K-FAST, and FAC at 3, 12, and 24 months; lower ASHA-NOMS at 24 months ($p<0.05$, Table 2).

Conclusion

These Results revealed that there are sex-specific differences in multi-facet functional recoveries in stroke patients. The Results of this study could provide more specific information for establishing the stroke rehabilitation strategy according to sex.

Table 1. Demographics and clinical features in male and female stroke patients.

	Sex (Mean±SD)		P value
	Male (6,043)	Female (4,593)	
Age	62.9±13.2	68.1±13.3	<0.001*
Education level	6.2±2.4	4.3±2.5	<0.001*
Body Mass Index	23.7±3.2	23.2±3.5	<0.001*
Initial NIHSS	4.9±5.4	6.1±6.3	<0.001*
Initial GCS	12.1±4.0	12.1±3.1	0.917
Premorbid mRS	0.7±1.3	0.8±1.4	<0.001*
CCAS	3.1±1.5	3.4±1.5	<0.001*

*p<0.05

NIHSS, National Institutes of Health Stroke Scale; GCS, Glasgow Coma Scale; mRS, modified Rankin Scale; CCAS, Combined condition and age-related score

Table 2. Differences in functional assessment score between male and female stroke patients after multiple adjustments using analysis of covariance.

	7 days			3 months			12 months			24 months		
	Sex (Mean±SD)		P value	Sex (Mean±SD)		P value	Sex (Mean±SD)		P value	Sex (Mean±SD)		P value
	Male	Female		Male	Female		Male	Female		Male	Female	
K-MBI				87.4±0.3	86.2±0.4	0.015*	91.0±0.3	89.1±0.4	<0.001*	92.0±0.3	90.1±0.4	0.001*
FMA	76.1±0.5	73.2±0.6	<0.001*	87.9±0.3	87.6±0.4	0.465	90.1±0.3	89.4±0.4	0.164	90.7±0.3	89.8±0.4	0.110
ASHA-NOMS	5.7±0.03	5.6±0.03	0.379	6.7±0.02	6.8±0.019	0.567	6.8±0.01	6.7±0.017	0.099	6.8±0.01	6.7±0.02	0.049*
K-FAST	19.9±0.1	17.2±0.2	<0.001*	22.9±0.1	21.2±0.1	<0.001*	24.4±0.1	22.4±0.1	<0.001*	24.8±0.1	22.4±0.1	<0.001*
FAC	2.8±0.03	2.5±0.03	<0.001*	4.2±0.019	4.0±0.023	<0.001*	4.4±0.02	4.3±0.02	<0.001*	4.5±0.02	4.3±0.02	<0.001*

*p<0.05

K-MBI, Modified Barthel Index; FMA, Fugl-Meyer Assessment; ASHA-NOMS, American Speech-Language-Hearing Association-National Outcomes Measurement System; K-FAST, Korean version of Frenchay Aphasia Screening Test; FAC, Functional ambulation classification.