

Clinical Features of Dysphagia in Oldest Old Population

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Objective

Dysphagia is an important issue in an aging society. Stroke is the most common cause, but dysphagia can occur without a stroke or underlying disease. Aging itself can cause or aggravate dysphagia and there have been many studies that describe the effect of aging on swallowing physiology. Among the elderly population, there is a need to examine how the dysphagia in oldest old people differ from others.

Methods

From January 1, 2017 to December 31, 2017, patients with aged 60 years or older who underwent VFSS due to dysphagia were included. The WHO and the UN defined the older/elderly criteria as 60 to 79 years old and the oldest old as 80 or older patients. Based on this, a total of 206 patients were divided into two groups. : group I(60~79 years old, n=135), group II(80~96 years old, n=71). General characteristics such as gender, cognition, and duration of symptom were compared between the groups. Through a VFSS, widely used penetration aspiration scale(PAS) and videofluoroscopic dysphagia scale(VDS) scores were evaluated and compared between the groups. The etiologies of dysphagia were classified into two categories: neurologic disorders(ND) and non-neurologic disorders(nND). ND included CNS disorders(stroke, brain tumor, neurodegenerative disease, traumatic brain injury, other brain disorders, spinal cord injury) and PNS disorders(NMJ disorders, myopathy, peripheral neuropathy). nND included local structural lesions involving the head and neck, poor general medical condition, and unknown etiology.

Result

The male ratio was significantly higher in both groups, the ratio was statistically significantly lower in Group II(n = 56, 78.9%) than Group I(n = 124, 91.9%). K-MMSE was significantly lower in group II(12.61 ± 9.08) than group I(17.85 ± 9.89). The duration of dysphagia was 17.78 ± 20.04 months in group I and 11.96 ± 17.73 months in group II, which was shorter in group II.(Table 1) PAS was statistically significantly higher, meaning more severe dysphagia, in group II(5.60 ± 2.71) than in group I(4.26 ± 2.88)(p value = 0.004). Oral VDS score, pharyngeal VDS score, and total VDS score also showed higher value, meaning more severe dysphagia, in group II : oral VDS score, 6.37±6.56 in group I, 8.77±7.22 in group II(p-value=0.009); pharyngeal VDS score, 23.23±14.19 in group I, 30.59±14.54 in group II(p-value=0.001); total VDS score, 29.60±18.12 in group I, 39.36±18.62 in group II(p-value 0.001).(Table 2) In an etiology, the ratio of nND was higher in group II than group I(n=34, 25.2% in group I, n=24, 33.8%), but there was no statistical significance(p value=0.192).(Fig 1)

Conclusion

Among the elderly population, dysphagia in the oldest old population has a tendency to be more severe with shorter duration of onset compared to the elderly population. If oldest old patients present with swallowing difficulty, immediate evaluation and therapeutic intervention should be carried out regardless of the etiology.

Table 1. General characteristics

Characteristics	Group I (n=135)	Group II (n=71)	<i>p</i> -value
Sex	male 124 (91.9%)	male 56 (78.9%)	0.008*
Age (years)	71.53±3.76	86.13±3.50	0.000*
K-MMSE	17.85±9.89	12.61±9.08	0.000*
Duration of dysphagia(months)	17.78±20.04	11.96±17.73	0.047*

Values are presented as mean±standard deviation(%)

K-MMSE, Korean version of the Mini-Mental State Examination

**p*<0.05

Table 2. VFSS findings

Scale	Group I (n=135)	Group II (n=71)	<i>p</i> -value
PAS	4.26±2.88	5.60±2.71	0.004*
Oral VDS score	6.37±6.56	8.77±7.22	0.009*
Pharyngeal VDS score	23.23±14.19	30.59±14.54	0.001*
Total VDS score	29.60±18.12	39.36±18.62	0.001*

Values are presented as mean±standard deviation

PAS, penetration aspiration scale; VDS, videofluoroscopic dysphagia scale

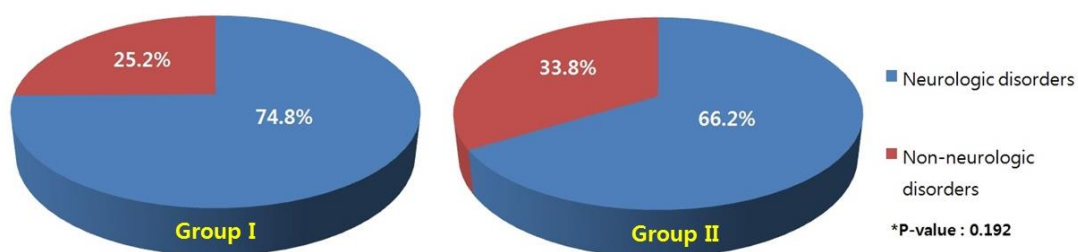


fig 1. Etiology of Dysphagia