

뇌신경재활

게시일시 및 장소 : 10 월 18 일(금) 13:15-18:00 Room G(3F)

질의응답 일시 및 장소 : 10 월 18 일(금) 15:45-16:30 Room G(3F)

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Characteristics of Dysphagia in Patients with Frontal Lobe Stroke: A Preliminary Study

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Introduction

The frontal lobe is the largest lobe of the brain, and is commonly involved in stroke. Previous research showed that left cortical stroke was associated with increased risk of oral dysfunction and right side was associated with increased risk of pharyngeal dysfunction. We investigated and analyzed specific characteristics of dysphagia in patient with frontal lobe lesion.

Method

Twenty-two patients were recruited by reviewing the electric medical records. Patients visited our hospital from January 2017 to June 2019 for rehabilitation treatment of dysphagia after frontal lobe stroke. Attending physicians physically examined each patient's swallowing function and evaluated it using clinical dysphagia scale (CDS) and videofluoroscopic swallowing study (VFSS). All patients were divided into 2 groups by cause, affected side, ability to obey command, sit alone and CDS score. Linear-by-linear association and Spearman correlation were used to analyze the association between each group and variables of VFSS.

Results

The cause of stroke was hemorrhage or infarction. In 22 patients, the number of hemorrhage and infarction was 18 (72%) and 4 (18%), respectively. The number of left, right and bilateral frontal lesion was 9 (41%), 5 (23%) and 8 (36%), respectively. In oral phase evaluation, 12 (55%) patients had difficulty in lip sealing, 17 (77%) had difficulty in chewing and 15 (68%) in tongue movement. Seventeen (77%) patients showed residue in mouth. In pharyngeal phase evaluation, 14 (64%) patients had aspiration and 17 (77%) had penetration. Six (27.2%) patients had reflux cough. Seventeen (77%) patients had residue in vallecular pouch and 14 (64%) had residue in pyriform sinus. Sixteen (72%) had premature bolus loss (PBL). The impossibility of obeying command is related to the presence of a PBL and the odds ratio was 2.286 (95% confidence interval: 1.311-3.984). The ability to sitting alone had moderate positive correlation with chewing function ($r_s=0.581$ $p<0.05$). There was no significant correlation between each group and variable.

Conclusion

Dysphagia with frontal lobe stroke was mainly from hemorrhage and over half of the patients had several problems in oral phase such as difficulty in lip sealing, chewing and tongue movement. In addition, the ability to obey command and sit alone was correlated with PBL and chewing function, respectively. This implies that general physical function as well as cognitive function may contribute to develop dysphagia in patients with frontal lobe stroke.