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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Risk factors for aspiration pneumonia in patients who undergo a videofluoroscopic swallowing study

Hyun Jung Kim[1†], Joon Woo Kim[1*], Ji Sang Jung[1]

Nowon Eulji Medical Center, Eulji University, Department of Rehabilitation Medicine[1]

Introduction

Aspiration pneumonia makes up a large proportion of cases of community-acquired and healthcare-associated pneumonia. Although dysphagia may expose patients to a higher risk of aspiration pneumonia, studies on the correlation between aspiration pneumonia and parameters of the videofluoroscopic swallowing study (VFSS), which is considered the gold standard in evaluating swallowing functions, are not well established yet. In addition, clinical risk factors for developing aspiration pneumonia have not been fully elucidated yet. Therefore, we aimed to identify significant risk factors associated with aspiration pneumonia in patients with suspected dysphagia who were evaluated with VFSS.

Methods

A total of 916 patients who underwent VFSS between September 2014 and June 2018 were enrolled. Patients were divided into two groups—those with and without aspiration pneumonia diagnosed within three months before and after the initial VFSS examination. Clinical information and VFSS findings were reviewed.

Results

The mean age of the enrolled patients was 71.40±13.19 years and comprised 486 men and 430 women. One hundred and seven subjects were classified into the aspiration pneumonia group. The univariate analysis results indicated that clinical variables, including history of smoking ($p<0.001$), a body mass index (BMI) under 18.5 ($p=0.004$), and the male sex ($p=0.036$) were possible significant risk factors for aspiration pneumonia. Within the parameters of initial VFSS, positive aspiration findings with a 2 mL puree or liquid trial showed significant differences between the two groups ($p<0.001$ and $p=0.048$, respectively), while the aspiration findings with 5 mL, irrespective of consistency, showed no significant differences. The multivariate analysis results indicated that the aspiration finding with a 2 mL puree trial in VFSS (OR = 4.18, 95% CI: 2.56–6.82), smoking history (OR = 2.56, 95% CI: 1.51–4.34), and a BMI under 18.5 (OR = 2.01, 95% CI: 1.18–3.43) were significantly associated with development of aspiration pneumonia.

Conclusion

The findings of aspiration with a small bolus in VFSS, history of smoking, and a BMI under 18.5 are the best predictors of developing aspiration pneumonia. The results highlight the importance of detecting small amounts of aspiration on routine VFSS. These results may be helpful to improve the measures for preventing aspiration pneumonia for patients with suspected dysphagia.