

## **Dysphagia accompanying aspiration after peritonsillar abscess followed by deep neck space infection**

Han Eum Choi<sup>1\*</sup>, Sang Won Min<sup>1</sup>, Ho Joong Jeong<sup>1</sup>, Young Joo Sim<sup>1</sup>, Dong Kyu Kim<sup>1</sup>, Ghi Chan Kim<sup>1†</sup>

Kosin University College of Medicine, Department of Physical Medicine and Rehabilitation<sup>1</sup>

### **INTRODUCTION**

Dysphagia is one of the complications that can be seen after deep neck space infection, and most of the symptoms are temporary, complaints of throat irritation or effortful swallowing but swallowing difficulty with failure of esophageal bolus transit or accompanied aspiration has never been reported. We report a case of a patient with structural change due to deep neck space infection in which swallowing difficulty due to esophageal bolus transit failure caused by lack of upper esophagus sphincter(UES) opening and pharyngeal muscle movement was improved by swallowing rehabilitation.

### **CASE REPORT**

A 72-year-old man visited the emergency room with the left tonsillar edema and pain for 5 days. Hypertrophy and redness of the left tonsil and posterior pharyngeal wall were observed. Peritonsillar abscess and deep neck space infection were diagnosed by neck computed tomography(CT)(Fig. 1). Intravenous antibiotics were administered. Incision with drainage and quincy tonsillectomy were performed on the second day of admission. On the 6th day of admission, mediastinitis was found in chest CT and incision and drainage were done. The patient underwent fasting and total parenteral nutrition until 12 days after admission. The nasogastric tube was used to start feeding on the 13th day of admission. In the video fluoroscopic swallowing study(VFSS) performed on the 23rd day of admission, mild decrease of tongue movement, mastication with moderately decrease of laryngeal movement was observed. Liquid and pudding diets did not advance to the esophagus with lack of the UES opening. After VFSS, he began the swallowing rehabilitation designed to facilitate the movement of the pharyngeal muscles and the opening of the UES. The rehabilitation was performed twice a day for 30 minutes with functional electrical stimulation therapy. And the patient was instructed by Masako, Mandelsohn maneuver and Shaker exercise three times a day for 50 times respectively. Although UES opening was improved in VFSS performed 2 weeks after rehabilitation, aspiration is still showed in 2cc liquid. Most of the pudding remained in the vallecula and stagnated without compensation for repetitive swallowing attempt. Three weeks after the rehabilitation, the patient discharged for outpatient rehabilitation. On VFSS after 4 weeks of outpatient rehabilitation, direct aspiration was observed in liquid, but no aspiration and penetration were observed in pudding, banana, semi-solid and solid diet feeding and UES opening was improved(Fig. 2). By Result of this study, we started for him to ingest liquid with viscosity enhancer and to intake advanced dysphagia diet.

## CONCLUSION

We report a case, which had a therapeutic effect of swallowing rehabilitation in severe dysphagia with dysfunction of UES and decreased movement of pharyngeal muscle due to sequelae of deep neck space infection treatment, whose dysphagia mechanism was clearly identified and active swallowing rehabilitation was applied.

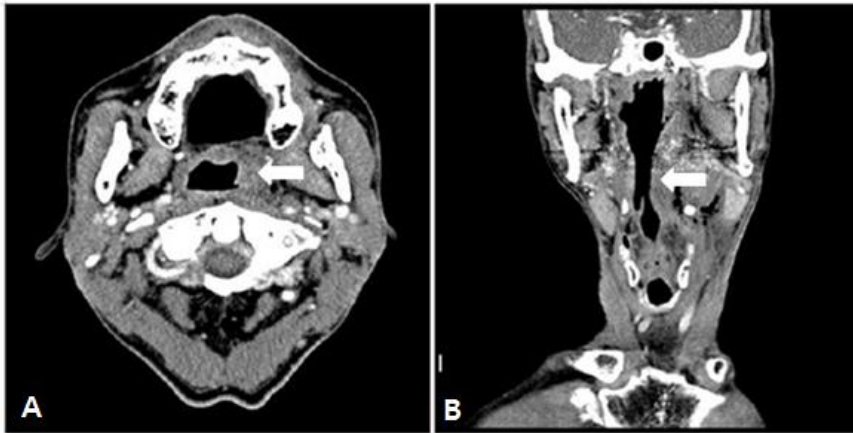


Fig. 1 CT of the neck, transverse view (A), sagittal view (B) Neck CT showed irregular peripherally enhancing low density collection in lt. palatine tonsil and parapharyngeal space(arrow).

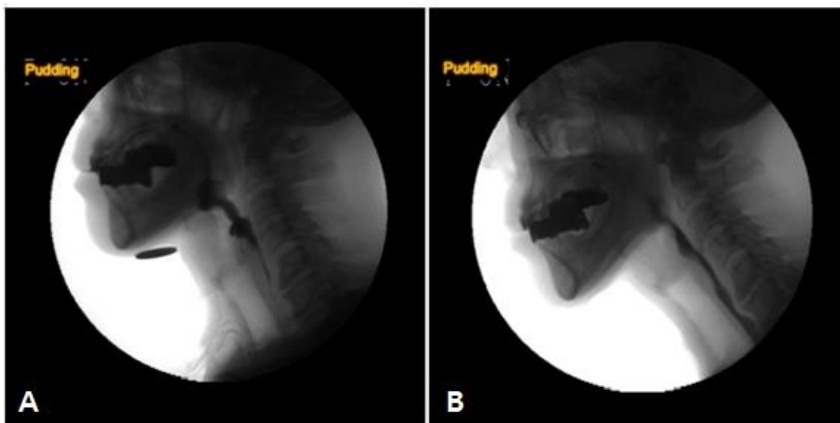


Fig. 2 VFSS before (A) and after (B) swallowing rehabilitation VFSS showed improvement of the bolus transit through the esophagus.