

[ EDITORIAL ]

## Aspiration Pneumonia: A Key Concept in Pneumonia Treatment

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Aspiration pneumonia continues to be a major cause of hospitalization and mortality in elderly people (1). Robust diagnostic criteria for aspiration pneumonia have not been established (1), resulting in a heterogeneous patient population and challenges in epidemiology studies. In contrast to community-acquired, hospital-acquired, and healthcare-associated pneumonias, which are categories based on where pneumonia was acquired, aspiration pneumonia is a category based on the pathogenic mechanism. Regardless of where the pneumonia was acquired, most cases in elderly patients are aspiration pneumonia (2). In addition, because micro-aspiration, which refers to aspiration of small amounts of oropharyngeal secretions, is the major pathogenic mechanism of most pneumonias (1, 3), preventing aspiration should be a core feature of pneumonia treatment in general.

In this issue of *Internal Medicine*, Yoshimatsu et al. reported a case of recurrent aspiration pneumonia and diffuse aspiration bronchiolitis that was successfully treated by addressing the dysphagia and the cause of aspiration (4). Three points regarding their success are important.

First, the authors noticed hemorrhaging from an intramedullary cavernous malformation as a cause of aspiration in their case. The pneumonia and intramedullary cavernous malformation were followed up at different clinics. Revealing the cause of dysphagia and aspiration allowed the authors to approach the causal treatment and predict the course of dysphagia. As described in the authors' recent publication, a causative condition of aspiration was initially unrecognized in one-third of patients with aspiration pneumonia (5).

Second, the authors focused on improving the swallowing function as a treatment for recurrent pneumonia. The authors found that the nasogastric tube was disrupting pharyngeal movement, and by replacing it with gastrostomy, the symptoms and diffuse aspiration bronchiolitis resolved. Although

nasogastric tubes do not have a statistically significant effect on the incidence of aspiration (6, 7), the effect of a nasogastric tube should be re-evaluated in certain patients. Replacing the nasogastric tube allowed not only adequate pharyngeal movement but also adequate nutrition intake and subsequent restoration of the swallowing function. Recently, the relationship between dysphagia and sarcopenia, which is a nutritional issue, was demonstrated (8, 9). In addition to appropriate antibiotic treatment, approaches that address functional impairments are necessary for the management of aspiration pneumonia. These functions include not only the swallowing function but also the coughing function, which is the final hurdle preventing microorganisms from entering the lung (10, 11).

Third, they addressed the dysphagia with a multidisciplinary team. Because the causes and consequences of dysphagia cross the traditional boundaries of professional disciplines, patients with dysphagia are best managed by a multidisciplinary or interdisciplinary team of specialists (12). Multidisciplinary management of dysphagia ensures that dysphagic patients receive careful, in-depth assessments and treatment/rehabilitation of their swallowing disorders and the underlying etiology. These specialists work together and with the patient and family to achieve the best outcome. Critically important decisions, such as stopping oral intake indefinitely, should not to be decided by a primary doctor alone, even if the doctor has substantial experience.

Under the 2020 medical fee revision in Japan, a dysphagia team addition (200 points) was created to promote effective intervention by multidisciplinary teams for patients with dysphagia. The standard facility approach is to establish a feeding and swallowing multidisciplinary support team for dysphagia, and the intended target population is patients who are expected to recover their feeding or swallowing function following interventions recommended by the

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dysphagia team. For patients, video-fluoroscopic or video-endoscopic examinations of swallowing should be performed at least once a month, and a conference on the creation and review of intervention plans should be held at least once a week based on the examination results.

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