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The Role of the Speech and Language Pathologist in the Rehabilitation of Patients with Amyotrophic Lateral Sclerosis: Letter to Editor

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Letter to Editor

Abstract

One of the common symptoms of amyotrophic lateral sclerosis (ALS) is swallowing and speech paralysis, which has a significant impact on the quality of life (QOL) of affected people. Paralytic speech often appears from the very beginning of the disease, and with the progress of the disease, it destroys the possibility of communicating through speech. On the other hand, all the muscles of the tongue, lips, palate, jaw, pharynx, larynx, and upper body will gradually become weak or spastic, which will result in ineffective transmission. Speech therapy has a special place in the speech and swallowing rehabilitation of these patients; to facilitate speech, focusing on breathing, correcting inefficient compensatory strategies, and teaching the use of alternative means of communication are done gradually and with the progress of the disease. Swallowing rehabilitation is also necessary with the aim of preventing aspiration and maintaining the person's nutritional level. Although it does not make the patient's swallowing process remain normal, it is very important in improving the person's QOL. As the disease progresses, it may be necessary to feed other than orally.

Keywords: Amyotrophic lateral sclerosis; Speech therapy; Swallowing; Speech paralysis

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Introduction

Amyotrophic lateral sclerosis (ALS) is a common disease that damages the cells of the upper and lower motor nervous system. The symptoms of bulbar involvement, such as difficulty in swallowing and speech paralysis, are common and can lead to a decrease in the quality of life (QOL) of these patients, eventually affecting their life expectancy too (1).

Patients with ALS commonly experience flaccid, spastic, and mixed speech paralysis as the disease progresses. The disease initially causes mild changes in voice and speech, but later, symptoms such as low speech speed, inaccurate production of speech sounds, and hypernasality with nasal emission are observed. Breathing volume decreases, leading to reduced loudness of the voice. Moreover, as the disease progresses, the ability of patients to communicate through speech is also lost (2).

Dysphagia in ALS can be caused by the weakening or spasticity of the muscle innervated by the trigeminal, facial, hypoglossal, glossopharyngeal, or vagus nerves. During the disease, all muscles of the tongue, lips, palate, jaw, pharynx, larynx, and upper trunk can be affected, leading to inefficient food transport. With decreased motility, strength, and sometimes the coordination of oral and tongue muscles, problems arise in preparing the mouth, chewing, and transferring food, leading to remaining food residue or oral secretion in the mouth or pharynx. Patients with ALS generally have difficulty managing dry, hard, or crisp food and thin liquids (3). The symptoms of ALS-related dysphagia include increased eating time, unwanted weight loss, fever of unknown origin, frequent respiratory infections, progressive loss of muscle tone and

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strength in the muscles that control lip closure, and difficulty swallowing saliva. Thickening of oral secretions, weakness of hypopharyngeal muscles, accumulation of saliva in the mouth and oropharynx, failure of the larynx to move upward or forward during the swallowing reflex, and incomplete closure of the larynx during swallowing have also been observed (4).

Speech therapists play a crucial role in the speech and swallowing rehabilitation of patients with ALS. They can use various general and specialized speech therapy strategies to facilitate speech in these patients. In the early stages of the disease, therapists can improve speech clarity by focusing on the coordination of speech and the correct production of speech sounds. Additionally, a palatal lifting prosthesis can help reduce nasality in these patients. Patients with ALS often use ineffective compensatory strategies to improve speech intelligibility. For example, they may exert excessive pressure on the larynx to enhance the quality of their voice, which can lead to a loss of breath and excessive pressure on the speech apparatus. Speech therapists can address this issue. As the disease progresses, speech therapists should provide alternative means of communication. When the speech speed of patients decreases to below 100 words per minute, alternative communication methods are necessary (5).

Swallowing therapy aims to achieve two main goals in patients with ALS – safe swallowing to prevent aspiration and its complications and effective swallowing to maintain adequate nutrition (6). To achieve these goals, special measures are taken, such as advising the person and their family members to maintain a quiet and calm environment while eating, providing enough time to eat, and ensuring the patient is in a normal physiological position when eating and drinking. The correct posture for eating is sitting with the back straight, feet flat on the floor, and head slightly tilted forward. If the patient cannot sit upright, they should be placed in a vertical position as much as possible with the head tilted back. It is important to note that the patient should not be given food if they are lying down (7).

Although there is no strong evidence that swallowing rehabilitation is effective, compensatory swallowing treatments like chin-tuck, neuro-muscular exercises, and sensory therapies can prevent the aspiration of food, especially in the early stages of the disease. Changing food texture is also important in treating dysphagia and should be evaluated regularly based on the individual's swallowing capacity. Modifying the diet can help patients achieve better nutritional status and QOL. However, swallowing impairment is a progressive condition in patients with ALS. If oral swallowing becomes impossible or the patient is severely malnourished, it may be necessary to consider alternative feeding methods (6).

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Authors' Contribution

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Conflict of Interest

There is no conflict of interest in this article.

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