

# Research on the Application Effect of Acupoint Massage Combined with Swallowing Rehabilitation Training in the Rehabilitation of Patients with Dysphagia after Stroke

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**Abstract: Objective:** To observe the effect of acupoint massage combined with swallowing rehabilitation training on patients with swallowing dysfunction after stroke. **Methods:** 68 patients with swallowing dysfunction after stroke in our hospital from February to November 2024 were selected and randomly divided into two groups. One group was given conventional swallowing rehabilitation training (34 cases, control group), and the other group was given acupoint massage combined with swallowing rehabilitation training (34 cases, observation group). The swallowing function and the score changes of Watian drinking water test in the two groups were analyzed. **Results:** the swallowing function score of the observation group was higher than that of the control group after treatment,  $P < 0.05$ . The score of Watian drinking water test in the observation group was higher than that in the control group after treatment,  $P < 0.05$ . **Conclusion:** acupoint massage and swallowing rehabilitation training for patients with swallowing dysfunction after stroke can help patients recover their impaired swallowing function, and the effect is ideal.

**Keywords:** Acupoint Massage; Swallowing Rehabilitation Training; Stroke; Dysphagia; Rehabilitation

## 1. Introduction

Stroke is the most common cerebrovascular disease in clinic. It has the characteristics of sudden onset, rapid progress and high risk. If patients are not treated effectively in time, it is easy to endanger the life safety of patients [1-2]. Under the influence of cerebral ischemia, hypoxia and other factors, it is easy to lead to different types of dysfunction in patients, and

swallowing function is the most common, which will directly affect the prognosis of patients. In the process of rehabilitation treatment for patients with swallowing dysfunction after stroke, more effective treatment measures should be taken to help patients recover their swallowing function [3]. This study mainly observed the effect of acupoint massage and swallowing rehabilitation training in the rehabilitation treatment of this part of patients.

## 2. Materials and Methods

### 2.1 General Information

Sixty-eight patients with post-stroke dysphagia admitted to our hospital from February to November 2024 were enrolled and randomly divided into two groups by random sampling. One group (34 cases, control group) received conventional swallowing rehabilitation training, and the remaining group (34 cases, observation group) received acupoint massage combined with swallowing rehabilitation training. In the control group, there were 17 males and 17 females, aged 57-79 years, with an average age of  $(62.15 \pm 1.68)$  years. The body mass index was 21-24  $\text{kg}/\text{m}^2$ , with an average of  $(22.56 \pm 0.98)$   $\text{kg}/\text{m}^2$ . In the observation group, there were 18 males and 16 females, aged 57-78 years, with an average age of  $(61.98 \pm 1.58)$  years. The body mass index was 21-24  $\text{kg}/\text{m}^2$ , with an average of  $(22.87 \pm 0.85)$   $\text{kg}/\text{m}^2$ . There was no significant difference in baseline data between the two groups ( $P > 0.05$ ).

### 2.2 Methods

The control group received swallowing rehabilitation training during recovery. ① Preparation before training. Before instructing the patient to carry out swallowing exercise training, the patient should be instructed to

take three deep breaths to relax, avoid the patient's emotional tension, and keep sitting upright. ②Shoulder movement. Instruct the patient to put his hands on his hips and swing his shoulders back and forth for 5min at a time. ③Head and neck movement. Guide the patient to move the head up and down slowly, lasting for 10 times, and then change it to swing left and right, lasting for 10 times. During the head and neck activities, the patient should be guided to perform empty swallowing. ④Lip and pronunciation training. Instruct the patient to show their teeth, and toot their lips, and then bite their teeth tightly on both sides of the face for grinning movement. And guide the patients to carry out simple pronunciation training, mainly monosyllabic words, gradually transition to polysyllabic words, a single 15min. ⑤Tongue training. Instruct the patient to extend their tongue and perform left-right and up-down activities. Or shut up and use your tongue to jack up the cheeks on both sides for 10min at a time. ⑥Respiratory function training. Instruct the patient to take the initiative to carry out respiratory function training, inhale to the maximum extent, and then exhale slowly after 5 seconds, and repeat for 10 times. The observation group needs acupoint massage on the basis of the control group, including Lianquan point, Tiantu point, Wangu point and buccal car point. The single acupoint is massaged 20 times, with moderate strength, to ensure that the patients' acupoints have a sense of acid swelling, once a day. The patients in the two groups continued to recover for 4 weeks.

### 2.3 Observation Indicators

(1) Swallowing function assessment. The swallowing function of patients before and after nursing should be evaluated according to

the gugging swallowing function evaluation scale, which mainly evaluates patients from two dimensions: direct swallowing (0-15 points) and indirect swallowing (0-5 points). The nursing staff should evaluate the swallowing function recovery of patients in combination with the swallowing function recovery of patients. The higher the score, the better the swallowing function recovery of patients. (2) Watian drinking water test score. In the process of recovery, the patients need to carry out the Wada drinking water test before treatment and 3, 5, 7 and 10 days after treatment, and the score is counted. The total score is divided into 5 points. The patients are instructed to drink 30ml warm water. If they swallow successfully once, it is 5 points. 4 points if the patient needs to swallow twice and has cough symptoms. 3 points if the patient needs to swallow once and has cough symptoms. Need to swallow twice or more without cough symptoms, then 2 points. 1 point for frequent cough and inability to swallow smoothly.

### 2.4 Statistical Methods

The data in this study were analyzed by the statistical software SPSS 21.0. Measurement data were expressed as ( $\bar{x} \pm s$ ) and tested by t-test. Count data were expressed as percentages and tested by chi-square test.  $P < 0.05$  indicated that the difference was statistically significant.

## 3. Result

### 3.1 Analysis of Swallowing Function

After treatment, the Kubota Water Drinking Test score of the observation group was higher than that of the control group ( $P < 0.05$ ), as shown in Table 1.

**Table 1. Comparison of Kubota Water Drinking Test Scores Between the Two Groups ( $\bar{x} \pm s$ )**

Group	Number of Cases	Direct Swallowing		Indirect Swallowing	
		Before Treatment	After Treatment	Before Treatment	After Treatment
Observation Group	34	5.53±1.02	12.05±1.12	2.32±0.45	4.05±0.35
Control Group	34	5.56±1.11	8.99±1.22	2.36±0.36	2.11±0.26
<i>t</i>	-	0.585	25.452	0.953	21.052
<i>p</i>	-	0.811	0.000	0.325	0.000

### 3.2 Comparison of Kubota Water Drinking Test Scores

After treatment, the Kubota Water Drinking Test score of the observation group was higher

than that of the control group ( $P < 0.05$ ), as shown in Table 2.

## 4. Discussion

Stroke is a common cerebrovascular disease in

clinical practice, characterized by sudden onset, rapid progression, and extremely high risk. If patients do not receive timely and effective treatment, their lives may be endangered [1-2]. Affected by factors such as cerebral tissue ischemia and hypoxia, patients are prone to various types of functional impairments, with swallowing dysfunction being the most common, which directly affects patients' prognosis. In the process of rehabilitation treatment for patients with post-stroke swallowing dysfunction, more effective treatment measures need to be adopted to help patients restore their swallowing function [3]. Swallowing rehabilitation training is currently the main clinical measure to help restore the swallowing function of patients with post-stroke swallowing dysfunction. According to patients'

recovery status, guiding them to carry out various swallowing rehabilitation trainings in a step-by-step manner can help restore their swallowing function. At the same time, acupoint massage nursing for patients, by massaging acupoints such as Lianquan, Tiantu, Wangu, and Jiache, can promote local microcirculation, relieve spasm, and promote the recovery of patients' impaired functions [4-5]. In this study, the observation group received acupoint massage combined with swallowing rehabilitation training during the rehabilitation period. The observation showed that under the effect of this combined rehabilitation treatment, patients' swallowing function was improved, and the Kubota Water Drinking Test score increased, achieving the goal of helping patients recover.

**Table 2. Comparison of Kubota Water Drinking Test Scores Between the Two Groups**  
( $\bar{x} \pm s$ , Points)

Group	Number of Cases	Pre-treatment	3 Days Post-treatment	5 Days Post-treatment	7 Days Post-treatment	10 Days Post-treatment
Observation Group	34	1.25±0.11	1.98±0.22	2.98±0.05	3.35±0.22	4.35±0.15
Control Group	34	1.23±0.21	1.56±0.21	2.12±0.11	2.23±0.15	3.22±0.15
<i>t</i>	-	0.227	14.754	18.052	23.045	17.245
<i>p</i>	-	0.344	0.000	0.000	0.000	0.000

In conclusion, during the rehabilitation of patients with post-stroke swallowing dysfunction, acupoint massage combined with swallowing rehabilitation training can be carried out to help restore the impaired swallowing function.

## References

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