

# Effect of Individualized and Standardized Vestibular Rehabilitation Strategy in Peripheral Vertigo

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**Abstract:** Objective: To explore and study the effect of individualized and standardized vestibular rehabilitation strategy in peripheral vertigo. Methods: 120 patients with peripheral vertigo in Shaanxi Provincial People's Hospital were analyzed. The 120 patients can be randomly divided into training group and control group, with 60 patients in each group. The treatment methods used in the control group included Hemorheology treatment, ion channel blocking treatment, dehydration treatment, antioxidant treatment, anti-virus treatment, etc. after treatment, no rehabilitation training measures were taken. On the basis of the treatment method of the control group, the training group carried out rehabilitation training according to the actual condition of the patients. The recurrence and improvement of vertigo symptoms of the two groups were compared, and the UCLA vertigo score and Berg Balance Scale score were analyzed. Results: after vestibular rehabilitation, the UCLA vertigo score of the training group was significantly lower than that of the control group ( $P < 0.05$ ); After 4 weeks of vestibular rehabilitation training in the training group, the vertigo symptoms of the patients were significantly relieved. Compared with the control group, the difference was statistically significant ( $P < 0.05$ ); Compared the BBS scores of the two groups, the training group was higher than the control group, the difference was statistically significant ( $P < 0.05$ ); There were 7 cases of recurrence in the training group and 7 cases in the control group during the follow-up period. The difference was statistically significant ( $P < 0.05$ ). Conclusion: individualized and standardized vestibular rehabilitation strategy for patients with peripheral vertigo can effectively reduce the course of disease, improve the cure efficiency, have significant therapeutic effect, and can be widely promoted and applied.

**Keywords:** Vestibular Rehabilitation; Peripheral Vertigo; Application Effect

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## Introduction

Vertigo is a kind of spatial illusion of human body, which produces an illusion that does not exist. Peripheral vertigo is a symptom that many patients are prone to. Some symptoms such as dizziness, migraine and sudden deafness often occur, which will directly lead to the gradual reduction of vestibular function until it disappears. Some patients will have the symptoms of recurrent dizziness, unstable posture, blocked walking, nausea and vomiting, which will directly cause the patients' physical discomfort and burden their lives. In this study, 60 patients in the training group were treated with personalized and standardized vestibular rehabilitation training according to the actual situation of the patients on the basis of clinical treatment methods, and good treatment results have been achieved.

## 1. Materials and methods

### 1.1 General information

120 patients with peripheral vertigo in the surgery department of Shaanxi Provincial People's hospital were taken as the research objects. These patients were randomly divided into the training group and the control group according to the ratio of 1:1. In the control group, there were 21 males and 39 females, aged 20-59 years, with a duration of 5 months to 22 years. In

the training group, there were 23 males and 37 females, aged 21-60 years, with a duration of 7 months to 23 years, The data of the two groups were not statistically significant, and had strong comparability.

## **1.2 Inclusion criteria**

Each patient in the training group voluntarily received vestibular rehabilitation treatment, and all patients had no communication disorder, mental retardation or visual impairment.

## **1.3 Exclusion criteria**

Patients with malignant tumor, weak system, uncomfortable symptoms during training, and unable to adhere to the whole process of rehabilitation training shall be excluded.

## **1.4 Treatment methods**

The patients in the control group were treated with Hemorheology therapy, blocking ion channel therapy, dehydration therapy, oxidant therapy, antiviral therapy, hyperbaric oxygen therapy, etc. instead of vestibular rehabilitation training. During the treatment of patients in the training group, personalized and standardized vestibular rehabilitation training and treatment methods should be adopted according to the situation of each patient, and special nurses should accompany and guide the patients. According to the vestibular rehabilitation theory, the vestibular rehabilitation training strategies are formulated, mainly including: ① vestibular adaptive training, patients' gaze when turning their heads, horizontal turning head movement, head vertical movement, oblique vertical movement, head circle movement, visual target training, saccade training, visual tracking training, etc; ② Static balance training, Romberg static standing exercise, enhanced Romberg static standing exercise, toe heel standing exercise; ③ Dynamic balance training, ankle swing exercise, ball throwing exercise, circular swing, walking exercise. Benign positional vertigo training, Brandt daroff training, Semont method training, Epley method training, horizontal rolling method training; Alternative training, functional activity training, etc.

## **1.5 Evaluation index**

Compare the vertigo condition, degree of vertigo and the impact of vertigo on quality of life before and after treatment. Score the vertigo questionnaire. The higher the score, the more serious the condition is. After treatment, the lower the score, the better the treatment effect. Grade the recurrence rate of patients within 6 months after treatment. Carry out rehabilitation training for the patients for 4 weeks, and record Berg Balance score every week. The patients should be required to complete the training within the specified time, including sitting, standing, rotating, single foot standing switching, single leg standing, bending over to pick up objects, arm straightening, original turning, turning back, alternating feet on the bench and other actions. The score of each activity item is set to 0-4 points, and the action that cannot be completed is 0 point, The score of normal completion is 4 points. The higher the score the patient gets, the better the balance is.

## **1.6 Statistical methods**

SPSS13.0 statistical software is used for calculation to realize the analysis of data, and " $x \pm s$ " is used for data measurement. T is used for test between the two groups, and examples are used for counting  $\chi^2$ . Compare the rate (%) between data groups.

## **2. Results**

### **2.1 UCLA vertigo score comparison**

There was no significant difference in UCLA vertigo score between the two groups before treatment; The UCLA vertigo score of the two groups after treatment was significantly lower than that before treatment ( $P < 0.05$ ); After treatment,

the UCLA vertigo score of the training group was significantly lower than that of the control group ( $P < 0.05$ ).

## **2.2 Comparison of vertigo symptoms and improvement between the two groups**

After 4 weeks of vestibular rehabilitation training, the vertigo symptoms of the patients in the training group had been completely improved, and the improvement was significantly higher than that of the control group ( $P < 0.05$ ).

## **2.3 Comparison of BBS scores between the two groups**

After 4 weeks of vestibular rehabilitation training, the BBS score of the patients in the training group was significantly higher than that before training, and the BBS score of the training group was significantly higher than that of the control group ( $P < 0.05$ ).

## **2.4 Comparison of recurrence rate between the two groups**

During the follow-up of the control group, 7 patients had recurrence, and the recurrence rate was 12.13%. There was no recurrence in the training group. There was significant difference in the recurrence rate between the two groups ( $\chi^2 = 7.652, P < 0.05$ ).

## **3. Discussion**

Vestibular rehabilitation training for patients with peripheral vertigo can effectively alleviate their vertigo, reduce the symptoms of patients and improve their quality of life. The eyes can be used to better observe the surrounding things and feel the beauty of life. The vision can feel the surrounding things. The body can adjust its movement and posture. The vestibule can determine the direction and speed of the body. Among them, the vestibule is very important. The balance of the human body is directly related to the running state of the vestibular function. In the process of vestibular rehabilitation training, the principle of vestibular reflex should be combined. The vestibular system has good adaptability and plasticity. The training and improvement of vestibular function can improve the functions of patients' vestibular system. This training belongs to physical therapy, which requires professional medical staff to carry out regular and scientific training on the patient's head, neck and body, so as to realize the continuous enhancement of vestibular metabolism. While effectively alleviating dizziness, the brain is also restored to a balanced state. Medical staff can conduct some movement training for patients that are easy to induce dizziness symptoms, so as to promote the improvement of vestibular metabolism. This training method is also suitable for patients whose condition is in a stable period and who have symptoms such as imbalance.

## **Conclusion**

When carrying out individualized and standardized vestibular rehabilitation training for patients with peripheral vertigo, we should pay attention to the protection of patients, avoid their falling, always pay attention to their spirit, psychology and emotion, reasonably guide and overcome their depression, anxiety, anxiety and panic, pay attention to the psychological comfort of patients, and create a comfortable, good and loose treatment environment for patients, Help the patient adapt to the training process. After this training, the comparative study showed that for the training group, after vestibular rehabilitation training, the dizziness of patients was significantly lower than that of the control group, the difference was statistically significant ( $P < 0.05$ ); For the patients in the training group, after 4 weeks of training, the vertigo symptoms were significantly improved ( $P < 0.05$ ); During the 6 months of follow-up, there was no relapse in the training group and 6 relapses in the control group. The difference was statistically significant ( $P < 0.05$ ). The standardized and personalized vestibular rehabilitation training method can significantly shorten the course of peripheral vertigo, improve the cure efficiency and treatment effect. The training process is relatively safe, and it is worthy of extensive application and

promotion.

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