

# *Application of Pulmonary Rehabilitation Nursing in Patients with Ctd-Ild*

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**Abstract:** Objective: To explore the effect of pulmonary rehabilitation nursing for patients with interstitial lung disease related to connective tissue disease (CTD-ILD). Methods: This study is conducted from February 2020 to February 2021. During this period, 96 patients with CTD-ILD in our hospital are studied. The patients can be treated according to the nursing plan. They are divided into two groups: rehabilitation group and control group. Patients in the rehabilitation group receive pulmonary rehabilitation care, while patients in the control group receive routine care. The Borg scale scores, FEV1 and FVC of these two groups are compared. Results: Compared with Borg scale scores, FEV1 and FVC, the rehabilitation group is better than that of comparison group,  $p < 0.05$ . Conclusion: the effective application of pulmonary rehabilitation nursing in patients with CTD-ILD can enhance the pulmonary function of patients.

## 1. Introduction

Connective tissue disease (CTD) is a group of clinical autoimmune diseases. Its pathological basis is mainly chronic non-infectious inflammation of blood vessels and connective tissues throughout the body. CTD can be involved in various tissues and organs of the human body. When the patient's liver is damaged, the patient will have CTD, that is, CTD-ILD <sup>[1]</sup>. CTD-ILD can harm the health of patients, and clinical treatment and care are needed for patients. In this study, patients are given pulmonary rehabilitation nursing. The detailed research content is described as follows.

## 2. Materials and Methods

### 2.1 General Information

This study is conducted from February 2020 to February 2021. During this period, 96 patients with CTD-ILD in our hospital are studied. The patients can be treated according to the nursing plan. They are divided into two groups: rehabilitation group and control group. And each of group contains 48 patients. The number of male patients in the rehabilitation group is 25, and the number of female patients is 23. The age of the patients is concentrated in the range of 35-69 years old, and the average age range is  $(47.36 \pm 1.89)$  years old. While the number of male patients in the control group is 27, and the number of female patients is 21. The age of the patients is concentrated in the

range of 36-70 years old, and the average age range is (49.37±1.86) years old. Comparing the general clinical data of these two groups,  $p>0.05$ .

## 2.2 Methods

The patients in the control group are given routine care in the clinic, and the nursing staff urge the patients to follow the doctor's advice and educate the patients about disease knowledge. While patients in the rehabilitation group are given pulmonary rehabilitation nursing that is specifically described as follows: (1) Making a rehabilitation plan: nurses evaluate the patient's disease development in detail, create medical files for the patient, discuss with the patient's attending doctor, and determine the patient's personalized rehabilitation program after discussion. (2) Pulmonary function training: nurses instruct patients to carry out deep breathing training for the whole lung. The patient should keep upright, the width of the separation of the feet should be the same as that of the shoulders, and the arms should be extended outwards. Then the patient need to raise their hands, and take deep breath when lifting their hands. When the hands reach the top of the patient's head, they will be folded, then slowly put their hands back to both sides of the body for deep inhalation. (3) Psychological intervention: the patient will experience a long course of disease and the disease is easy to relapse, which will cause the patient to experience depression, irritability and other bad emotions during the treatment. At this time, the nursing staff needs to give the patient appropriate comfort and use a language that the patient can understand to educate them about the disease. In addition, the nursing staff introduces to the patients the examples of successful treatments, so that the patients can adjust their emotions. (4) Diet intervention: Nursing staff advise patients to eat foods rich in protein and vitamins, and to eat more vegetables and fruits in daily life, and to reduce the intake of hard, irritating, and greasy foods. At the same time, family members are required to supervise patients not to smoke and drink in their daily life.

## 2.3 Observation Indexes

The Borg scale scores, FEV1 and FVC are observed in the rehabilitation group and the control group. Borg scale scores mainly evaluate the degree of dyspnea of the patients. The higher the score, the more difficult the patient is to breathe

## 2.4 Statistical Methods

SPSS 26.0 is used to analyze the data. The measurement data can be expressed by mean ± standard deviation, t value is tested, and  $P < 0.05$  is used as the basis of statistical significance between the research data.

## 3. Results

Compared with Borg scale scores, FEV1 and FVC, the rehabilitation group is better than that of the control group,  $P < 0.05$ . The specific data are shown in Table 1.

Group	number of cases	Borg scale scores	FEV1(%)	FVC(L)
the rehabilitation group	48	8.50±0.18	62.87±6.39	1.68±0.32
the control group	48	10.38±0.49	57.29±3.26	1.54±0.45
t	--	9.365	9.328	9.551
p	--	0.001	0.001	0.001

*Table 1 Comparison of Borg Scale Scores, Fev1 and Fvc between the Rehabilitation Group and the*

*Control Group ( $X \pm s$ )*

## 4. Discussion

Patients with CTD-ILD will have symptoms such as fatigue, shortness of breath, cough and chest tightness in the clinic. When the patient's body is exercising, the above clinical symptoms will be more obvious, which will not only affect the patient's daily life, but also pose a threat to the patient's health [2]. Patients with CTD-ILD need not only to receive clinical scientific treatment, but also to receive clinical scientific and reasonable nursing intervention. Scientific treatment and nursing can make the patient's prognostic effect more significant [3].

Although conventional nursing can assist the clinical treatment of patients and help eliminate obstacles in the clinical treatment of patients, the limitations of this nursing model are relatively large, and it is difficult to achieve breakthroughs in the nursing effect of patients [4]. As the medical level continues to rise, clinical nursing concepts are constantly being updated. Modern nursing concepts focus on the feelings of patients. Therefore, clinical nursing can be formulated in accordance with the actual conditions of patients. Pulmonary rehabilitation nursing is a new nursing mode based on the characteristics of patients with CTD-ILD [5]. Pulmonary rehabilitation nursing includes five contents: rehabilitation plan, pulmonary function training, psychological intervention, and diet intervention. The development of rehabilitation program can make the implementation of nursing planned and ensure the gradual progress of nursing. Pulmonary function training is conducive to the recovery of patients' lung function. Psychological intervention helps patients maintain a stable mood. Diet intervention can prevent the patient from getting worse due to improper eating, and supplement the patient's body with nutrition [6]. The data comparison of the research results shows that the scores of Borg scale, FEV1 and FVC of the rehabilitation group is significantly better than that of the control group, so the effect of pulmonary rehabilitation nursing is significantly better than that of conventional nursing.

Based on the above content, it can be seen that after patients with CTD-ILD receive effective pulmonary rehabilitation nursing in the clinic, they can restore their pulmonary function well and avoid serious dyspnea, which is helpful to improve the survival rate of patients.

## 5. Acknowledgment

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