

Observation on Rehabilitation Effect of Combination of Motion and Static Exercise in Bone Injury

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Abstract: Object: To analyze the rehabilitation effect of the combination of static and dynamic exercises in the process of bone injury. Approach: From July 2018 to June 2019, 50 patients with bone injuries were randomly selected in our hospital. The principle of grouping was random method. 25 patients in the experimental group were given dynamic and static combined with exercise rehabilitation, and 25 patients in the control group were given routine methods. Result: Compared with the control group, the total clinical effective rate, the incidence of complications, discharge time and hospitalization expenses of the experimental group were significantly improved, and the difference was statistically significant ($P < 0.05$). Conclusion: The rehabilitation effect of the combination of static and dynamic exercises in the process of bone injury is comparatively efficient.

1. Introduction

For the patients with bone injuries, during the rehabilitation period, the job of reduction and fixation should be done in the early stage, functional exercise should be done in the late stage. For patients, they should take the initiative to cooperate. It is concluded that there are some worries and concerns in patients with bone injuries. They are too worried about the situation that functional exercise may affect the fixation of the fracture site, or worry about displacement. Therefore, in the course of functional exercise, if the patients do not cooperate actively¹, the fracture healing speed will be slower and muscle atrophy will easily occur. The clinical manifestations are joint adhesion, joint stiffness, bone rarefaction and so on. Based on this, clinical attention is paid to nursing intervention for patients with bone injuries. From the traditional Chinese medicine health science, the corresponding analysis and discussion of nursing intervention for patients with bone injuries, do a good job of optimization. Fifty patients were enrolled in the experiment. The research topic is to analyze the rehabilitation effect of the combination of static and dynamic exercises in the process of bone injury.

2. Data and Methods

2.1 Data

Fifty patients with bone injuries were selected from our hospital and informed consent was obtained. The experiment lasted from July 2018 to June 2019. In the course of grouping, 25 patients were enrolled in the control group randomly. Among them, 13 patients were male and 12 patients, aged from 28 to 76 years, with a median of 42.5 years. 25 patients were enrolled in the experimental group, including 12 patients and 13 patients, aged from 29 to 75 years, with a median of 42.0 years. Comparing the baseline data of the two groups, there was no difference in statistical expression, $P > 0.05$.

2.2 Methods

Routine methods were used for 25 patients in the control group: plaster was used to fix the patients.

For 25 patients in the experimental group, dynamic and static combined exercise rehabilitation was carried out: using small splint fixation, dynamic and static combined exercise rehabilitation was

carried out. 1-2 joint splints were used to fix unstable fractures. During the process of ligation, the tightness should be adjusted reasonably. The patients should be ligated loosely immediately after injury. The position of the splint should be adjusted in time to ensure proper fixation time and avoid excessive loosening or tightening². Tightness of bandage should be adjusted at any time. If swelling subsides, it should be adjusted immediately. During exercise, patients should be informed of the matters needing attention and should not exercise too much. Encourage patients and guide them how to exercise properly, including isometric contraction of affected limb muscles.

2.3 Observation and Judgment of Effect

Significant effect: After treatment, the clinical manifestations disappeared, X-ray fracture location had continuous callus, fracture line was not clear, there was no local abnormal activity; effective: most of the clinical manifestations were relieved, X-ray fracture location had callus, there were local slight abnormal activity; ineffective: not satisfied with above conditions.

2.4 Statistical Calculation

In this paper, the measurement data and counting data of the patients were comprehensively analyzed, and t test and X2 test were performed respectively. SPSS19.0 software was used to calculate the data, which was expressed in terms of (Mean±standard deviation) and rate, with statistical significance, $P < 0.05$.

3. Result

Compared with the control group, the total clinical effective rate, the incidence of complications, discharge time and hospitalization expenses of the experimental group were significantly improved, the difference was significant ($P < 0.05$).

Table 1 Comparison of Total Clinical Efficiency between Two Groups

Name of groups	Number of corresponding cases per group	Significant effect number	Effective number	Ineffective number	total clinical effective rate
Experimental group	25	20	4	1	96.00%
Control group	25	10	9	6	76.00%
X^2					4.1528
P					<0.05

Table 2 Comparisons of Complications, Discharge Time and Hospitalization Expenses between the Two Groups

Name of group	Corresponding number	Incidence of complications(%)	Discharge time (week)	Hospitalization expenses (10,000 RMB)
Experimental group	25	1(4.00)	4.72±1.32	1.025±0.211
Control group	25	6(24.00)	13.58±3.11	2.125±0.377
X^2/t		4.1528	13.1121	12.7305
P		<0.05	<0.05	<0.05

4. Conclusion

Traditional Chinese medicine holds that the interrelated things or phenomena has the principle of Yin and Yang, and they are a complete whole. Yin and Yang are interdependent. For either side, they cannot exist alone without the other side³. Only the interaction of Yin and Yang can effectively maintain human life activities.

For the Department of Bone Injury Rehabilitation of Traditional Chinese Medicine, the important guiding principles include the combination of static and dynamic. In the process of rehabilitation of patients with Bone Injury of traditional Chinese medicine, we should pay more attention to the

rehabilitation of systemic dysfunction and emphasize the rehabilitation of patients with psychological dysfunction. For the shape of body, appropriate exercise, using passive and active functional exercise can effectively improve the patient's body gas and blood flow, and promote the patient's physiological function to become normal. For the state of mind, the main principle of tranquility is to keep the mind calm. For the patients with bone injuries, good psychological state can greatly increase their confidence in treating diseases, promote the effective recovery of patients' body functions, and integrate the two effectively throughout the whole process of rehabilitation treatment of bone injuries, and achieve ideal results⁴.

Relevant experiments show that the combination of static and dynamic means functional exercise for the injured limbs of patients after injury, and corresponding fixation for the injured limbs of patients. In clinic, we should deal with the relationship between limb fixation and functional exercise in the later stage of patients with bone injuries effectively, and analyze the principle of combining static and dynamic, which embodies the dialectical relationship between acrobatics and relationship between unify and dialectical of the Department of Bone Injury Rehabilitation of Traditional Chinese Medicine. The use of small splints can implement the combination of static and dynamic movement [5], which can fix the fracture end of patients locally. According to the characteristics of small splints, we can guide patients to carry out early activities. Clinical practice has proved that this treatment can significantly improve the healing rate of fracture ends.

For the principle of dynamic and static balance, ensuring the stability of fracture internal fixation is the first condition. On this basis, patients with bone injuries should be restored to maximal limb function, and the strength should be kept at the minimum strength and minimum activity. Clinical experiments have proved that it is feasible to combine static and dynamic exercises in the process of bone injury. The guiding ideology is the integration of form and spirit. It can play the role of movement to nourish shape and static to nourish spirit, and promote the recovery of patients.

The experimental results showed that the total clinical effective rate, the incidence of complications, discharge time and hospitalization expenses of the experimental group were significantly improved.

Based on the above data, it can be concluded that the combination of static and dynamic exercise in the process of bone injury can significantly improve the incidence of complications, discharge time, hospitalization costs, and the rehabilitation effect is ideal, which is worthy of clinical recommendation.

References

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