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Application effect of synergy theory-centered rehabilitation nursing on nursing of patients with peripheral facial paralysis.

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Abstract

Objective: This paper aims to observe and analyse application effect of rehabilitation nursing centered on synergy theory on nursing of patients with peripheral facial paralysis.
Methods: A total of 112 patients with peripheral facial paralysis admitted in our hospital from January 2015 to September 2016 were selected randomly. They were then divided into the observation group (n=56) and control group (n=56) by digital random methods according to nursing mode. The control group was given conventional nursing, whereas the observation group was given rehabilitation nursing based on synergy theory. The nursing effects of the two groups were compared.
Results: The two groups have no statistically significant difference in anxiety and depression scores before the nursing treatment (P>0.05). The anxiety and depression scores of the two groups decrease significantly after the nursing treatment (P<0.05). The anxiety and depression scores of the observation group are significantly lower than those of the control group after the nursing treatment (P<0.05). The Quality of Life (QOL) and nursing satisfaction of the observation group are considerably higher than those of the control group (P<0.05).
Conclusions: Rehabilitation nursing centered on synergy theory can effectively reduce the anxiety and depression of a patient with peripheral facial paralysis. This approach also improves the QOL and nursing satisfaction. Thus, it deserves wide application in clinics.

Keywords: Peripheral facial paralysis, Synergy theory, Rehabilitation nursing, Quality of life.

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Introduction

Peripheral facial paralysis is a common clinical disease which is caused by nonspecific inflammation of facial nerve and has high morbidity [1]. It often attacks one side of the face. Its main clinical symptoms are facial distortion, closing eyes, and pout lips, which have negative emotional effects, such as anxiety, depression, and fear, on patients [2,3]. These negative emotions can exacerbate illness state, affect the physical rehabilitation progress of the patient, and decrease Qualities of Life (QOL) of the patients. Therefore, providing an effective nursing treatment during the therapeutic process is important. Synergy theory refers to the collaborative intervention among nursing measures and aims to satisfy the nursing demands of patients [4,5]. In this paper, the application effects of rehabilitation nursing based on synergy theory in the nursing of patients with peripheral facial paralysis were observed and analysed to provide references to clinical nursing. Results were introduced in the following test.

General Information and Methods

General information

A total of 112 patients with peripheral facial paralysis admitted in our hospital from January 2015 to September 2016 were selected randomly. All the patients had met the diagnosis standard for peripheral facial paralysis. Patients with mental disease, disturbance of consciousness, and cerebrovascular disease were eliminated. This study was approved by the Medical Ethics Committee of the hospital. The patients signed the informed consent form. They were divided into the observation group (n=56) and control group (n=56) by digital random methods according to nursing mode. The observation group had 29 males and 25 females, and their ages ranged from

22 years to 61 years (35.39 ± 9.48 in average). The course of disease was 1-15 days, and the average course of disease was 5.39 ± 1.34 days. The control group had 28 males and 26 females, and their ages ranged from 22 years to 64 years (35.78 ± 9.24 in average). The course of disease was 1-16 days and the average course of disease was 5.92 ± 1.73 days. No statistically significant difference in general information, such as gender, age, and disease course, were observed between the groups (P>0.05).

Nursing modes

The control group underwent conventional nursing, whereas the observation group was treated by rehabilitation nursing based on synergy theory. The specific nursing programs were the following: Psychological nursing: Facial distortion of patients with peripheral facial paralysis influences the appearances of the patients, resulting in unhealthy emotions (e.g., depression, anxiety and dysphoria) and influencing the therapeutic effects of the patients. Nurses shall treat patients warmly and introduce disease knowledge, therapeutic process and effect, and successful cases to them; answer the questions of the patients and pay close attention to the psychological changes in the patients; relieve negative emotions to increase the treatment-nursing compliance. Conventional nursing: Appropriate nursing measures are made according to the therapeutic method of patients (e.g., acupuncture, moxa-moxibustion, and intravenous administration). Characteristics of the therapeutic method, matters requiring attention, nursing cooperation in the therapeutic process, and processing of adverse reaction shall be introduced to the patients. Therapeutic effect is observed and adverse reactions are processed. Diet nursing: The facial myoparalysis of patients leads to inconvenient chewing, and thus affects food intake and leads to anomalotrophy. Scientific and effective diet plans shall be made according to the state of illness and physical conditions of the patients to ensure that they receive adequate nutrition. Rehabilitation nursing: Massaging the faces, applying hot compress to the facial acupoints, and guiding patients to frown, close their eyes, whistle, bulge their cheeks, and other rehabilitative actions, are performed twice every day and 8 min each time. Patients are instructed to prevent washing their faces with cold water and directly blowing air to their faces in order to facilitate facial warming.

Observation indexes

The anxiety and depression degree, QOL, and nursing satisfaction of the two groups before and after the nursing treatment were observed. Anxiety and depression degrees before and after the nursing treatment were evaluated through Self-rating Anxiety Scale (SAS) and Self-rating Depression Scale (SDS). High scores represent highly serious anxiety and depression. QOL was evaluated through the SF-36 scale. High scores indicate high QOL. Nursing satisfaction was investigated through a self-designed questionnaire, using very satisfying, satisfying, acceptable, and unsatisfying rates. The following formula was used to obtain nursing satisfaction: (Very satisfying+Satisfying)/Total patients × 100%.

Statistical analysis

Data were processed by SPSS22.0. Measurement data were expressed by as ($\bar{x}$ ± S), and t-test was implemented between the groups. Enumeration data were expressed as %, and χ^2 test was implemented between the groups. A difference with P of 0.05 is statistically significant.

Results

Comparison of anxiety and depression scores of the two groups before and after nursing

No statistically significant difference in anxiety and depression scores is observed between the groups before the nursing treatment (P>0.05). The anxiety and depression scores of the two groups after the nursing treatment decrease significantly. The anxiety and depression scores of the observation group after the nursing treatment are significantly lower than those of the control group (P<0.05). Details are shown in Table 1.

QOL comparison of the two groups

The QOL score of the observation groups is far higher than that of the control group (P<0.05). Details are shown in Table 2.

Nursing satisfaction comparison of the two groups

The observation group has significantly higher nursing satisfaction than the control group (P<0.05). Details are shown in Table 3.

Table 1. Comparison between the anxiety and depression scores of the two groups before nursing and those after nursing.

Groups	Before		After	
	SAS score	SDS score	SAS score	SDS score
Observation group (56)	54.69 ± 7.06	54.39 ± 7.24	39.21 ± 5.99*	38.55 ± 5.57*
Control group (56)	54.21 ± 6.86	54.79 ± 7.21	43.71 ± 6.07*	42.25 ± 5.91*

t	0.284	0.228	3.077	2.657
P	0.777	0.820	0.003	0.010

Note: *means comparison with those before the nursing treatment, P<0.05.

Table 2. *QOL comparison of the two groups.*

Groups	Mental function	Role function	Social function	Body function	Total score
Control group (56)	74.28 ± 3.82	75.74 ± 6.11	69.98 ± 3.66	73.27 ± 6.13	73.28 ± 4.44
t	13.822	5.329	6.552	7.737	8.330
P	0.000	0.000	0.000	0.000	0.000

Table 3. *Nursing satisfaction comparison of the two groups.*

Groups	Very satisfying	Satisfying	Acceptable	Unsatisfying	Satisfaction
Control group (56)	26 (46.43%)	15 (26.79%)	8 (14.29%)	7 (12.5%)	41 (73.21%)
χ^2	1.595	4.438	2.672	5.396	6.468
P	0.206	0.035	0.102	0.020	0.011

Discussions

The facial nerve is the longest nerve in the human bone tube and the most vulnerable nerve. Peripheral facial paralysis has complicated pathogeneses. Owing to the fact that the facial nerve is extremely long and tires easily, any lesion along the travelling meridian can cause facial paralysis [6]. Peripheral facial paralysis causes facial distortion, paresis, ipsilateral gestation loss, and psychological and physical discomfort. These effects influence the appearances, daily lives, and working conditions of the patients. Moreover, the negative emotions of patients during the therapeutic process influence the therapeutic effect, delay physical health, and decrease the QOL of patients considerably [7,8]. Thus, providing psychological nursing, diet nursing, and rehabilitation nursing during the therapeutic process are beneficial for the physical rehabilitation of the patients. Synergy theory reveals that although different systems have different attributes, they interact and cooperate mutually in the entire environment.

Synergic nursing focuses on the cooperation among medical workers and among medical workers, patients, and families of the patients. Patients must prevent cold, wear mask outside, focus on facial warming, and apply hydropathic compress to the ipsilateral face by hot towel, five to six times every day and 10 min every time [9]. Applying hot compress or hot-water bag on the face for about 70 min three to four times every day and 20-30 min every time is acceptable. In addition, peripheral facial paralysis degrades gustation and masticatory function, thus influencing appetite. Nursing methods for peripheral facial paralysis include encouraging patients to consume food; providing nutritious, delicious, light, and digestible semifluid or soft diet to patients; and prohibiting pungent, raw and cold foods [10]. Given that peripheral facial paralysis influences mastication, food stays in the spaces between the ipsilateral teeth and cheeks. Thus, proper mouth care must be performed, for example, gargling with 3% soda water or warm water after each meal and brushing the teeth before sleep. For eyelid closure failure, spongarion can be applied before sleep and eyes are covered with normal saline gauze to protect the cornea. Peripheral facial paralysis attacks suddenly, and thus some patients have few knowledge on it and become anxious about the changes in their appearances. Consequently, they refuse to speak and worry about prognosis. Meanwhile, medical workers must answer the questions of the patients sincerely and patiently and explain the pathogeneses, disease changes, and prognosis of peripheral facial paralysis. Being considerate to patients with facial distortion, increasing life assistance, and reducing verbal communication are suggested. Once the patients feel respected and comfortable, they become happy and confident, achieve smooth Qi and blood flow, and cooperate to therapy, which are conducive to rehabilitation. The application effects of rehabilitation nursing based on synergy theory on patients with peripheral facial paralysis are observed and analysed in this paper. Research results show that no statistically significant difference between the anxiety and depression scores of the two groups before the nursing treatment (P>0.05). After the nursing treatment, the anxiety and depression scores of the two groups decrease significantly (P<0.05). Moreover, the anxiety and depression scores of the observation group are significantly lower than those of the control group (P<0.05). The QOL and nursing satisfaction of the observation group are considerably higher than those of the control group (P<0.05). The rehabilitation therapy under synergy theory can increase rehabilitation confidence and improve the number of peripheral facial paralysis patients complying with therapy.

Conclusion

In summary, rehabilitation nursing based on synergy theory can reduce the anxiety and depression of patients with peripheral facial paralysis and improve the QOL and nursing satisfaction of the patients effectively. Thus, this nursing treatment has promising application values in clinics.

References

1. Suribabu R, Pindiprolu SSS, Talluri SV, Chintamaneni P, Samidala N. Protective effects of hydroxytyrosol from diabetic peripheral neuropathy in rodents: implications of antioxidant and anti-inflammatory effects. Lat Am J Pharm 2017; 36: 373-379.
2. Gopal B, Rajagopal S. Localization of neurodegenerative brain MRI image for gene expression evaluation. Biomed Res India 2017; 28: 539-548.
3. Belec L, Gherardi R, Georges AJ, Schuller E, Vuillecard E. Peripheral facial paralysis and HIV infection: report of four African cases and review of the literature. J Neurol 1989; 236: 411-414.
4. Wu X, Huang Q, Zheng H, Tian J, Zhou P, Liu Z. Effect of Vera pammy on early healing strength after peripheral nerve injury repair. Lat Am J Pharm 2015; 34: 593-597.
5. Furuta Y, Ohtani F, Aizawa H, Fukuda S, Kawabata H. Varicella-zoster virus reactivation is an important cause of acute peripheral facial paralysis in children. Pediatr Infect Dis J 2005; 24: 97-101.
6. Rao GS, Razavi M, Karimian H, Kumar NP, Khajuria DK, Srinivas P, Sahebrao DS. Antinociceptive effect of Terminalia bellirica in diabetic peripheral neuropathy: a comparison with fluoxetin, imipramine and quercetin. Lat Am J Pharm 2012; 31: 520-525.
7. Karabulut EM, Ibrikci T. Discriminative deep belief networks for microarray based cancer classification. Biomed Res India 2017; 28: 1016-1024.
8. Swart BJ, Verheij JC, Beurskens CH. Problems with eating and drinking in patients with unilateral peripheral facial paralysis. Dysphagia 2003; 18: 267-273.
9. Selvaraj V, Srinivasan P. Interaction of an EM wave with the breast tissue in a microwave imaging technique using an ultra-wideband antenna. Biomed Res India 2017; 28: 1025-1030.
10. Van RC, Ijpma FF, Nicolai JP, Werker PM. Bell's palsy before Bell: Evert Jan Thomassena Thuessink and idiopathic peripheral facial paralysis. J Laryngol Otol 2009; 123: 1193-1198.

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