



Effects of Individualized Comprehensive Nursing on Treatment Compliance and Complication Prevention in Patients with Systemic Lupus Erythematosus

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Abstract: Objective: To investigate the efficacy of individualized comprehensive nursing in improving treatment compliance and preventing complications among patients with systemic lupus erythematosus. Methods: Altogether 80 patients were assigned to two groups via randomization. Routine nursing was provided for the control group, while the observation group was given individualized comprehensive nursing with an intervention course of 3 months. Results: The overall treatment compliance rate in the observation group was notably higher, its total complication rate was lower, and the scores of each dimension in the SF-36 scale were all higher than those of the control group, with the intergroup differences achieving statistical significance ($P < 0.05$). Conclusion: Individualized comprehensive nursing is able to notably enhance treatment compliance of patients, diminish the occurrence risk of complications and boost their quality of life, which is deserving of clinical popularization and application.

Keywords: systemic lupus erythematosus; individualized comprehensive nursing; treatment compliance

1. Introduction

Systemic lupus erythematosus is a common autoimmune disease in the department of rheumatology and immunology. It has a long and recurrent course and can affect multiple organs and tissues of patients. The clinical treatment of this disease mainly relies on long-term medication. Patients may have lower treatment compliance due to the burden of long-term medication and disease fluctuations. Low compliance can directly increase the risk of complications such as infection and organ function damage. Routine nursing has fixed content and does not take patients' individual conditions into account, so it cannot meet diverse nursing needs. Individualized comprehensive nursing is designed based on patients' conditions, psychological states and living habits, and has high application potential in clinical nursing. This study analyzes the effect of this nursing model to provide practical references for the clinical nursing of patients with systemic lupus erythematosus.

2. Materials and Methods

2.1 General Data

Eighty patients with systemic lupus erythematosus admitted to the Department of Rheumatology and Immunology of our hospital from April to July 2025 were enrolled. All patients met the clinical diagnostic criteria for the disease, with clear consciousness, good research cooperation and informed consent signed. Patients with severe cardiac, hepatic and renal dysfunction or mental disorders were excluded. The patients were randomly divided into an observation group and a control group via random number table method, 40 cases in each group. The observation group included 3 males and 37 females, aged 22–58 years (mean 36.8 ± 5.2 years), with a disease course of 1–10 years (mean 4.5 ± 1.3 years). The control group included 2 males and 38 females, aged 21–59 years (mean 37.2 ± 5.5 years), with a disease course of 1–9 years (mean 4.3 ± 1.4 years). No statistically significant differences were found in gender, age, disease course and disease type between the two groups ($P > 0.05$).

2.1.1 Individualized Condition Monitoring

Nurses conducted a comprehensive assessment of patients to clarify the involvement of skin, joints, kidneys and other organs, and adjusted the frequency and content of monitoring according to the severity of organ involvement. Vital signs and discomfort were recorded once daily for patients with mild organ involvement, and every 4 hours for those with severe involvement, along with joint pain and skin erythema. All data were documented completely to support the adjustment of clinical treatment.

2.1.2 Individualized Medication Nursing

Nurses sorted out all medications and provided one-on-one guidance for glucocorticoids, immunosuppressants and

other drugs, including administration methods, time, adverse reactions and coping strategies. Patients were instructed not to adjust or stop medications without permission. Simple medication reminder cards were made for elderly patients with poor memory. Medication adherence was checked daily to ensure safe and standardized drug use.

2.1.3 Special Skin and Mucosa Nursing

Nurses assessed skin and mucosa status and made personalized plans for patients with rashes, erythema or oral ulcers. Patients were advised to avoid direct strong light, wear long sleeves and sun hats, and use mild skin care products. Patients with oral ulcers were guided to use gentle mouthwash and eat soft food to reduce mucosal irritation.

2.1.4 Stratified Psychological Intervention

Nurses evaluated patients' emotional state through communication and observation, and carried out stratified intervention for anxiety and depression. Patients with mild mood swings were comforted and encouraged. Those with obvious negative emotions were informed of successful cases to relieve anxiety. Nurses helped patients relieve pressure and improve treatment cooperation.

2.1.5 Customized Diet and Exercise Plan

Nurses formulated personalized diet plans based on patients' condition, tolerance and preferences, recommending high-protein and high-vitamin foods, and restricting spicy, greasy food. Sodium and protein intake were controlled for patients with renal injury. Mild exercise such as walking and Tai Chi was arranged for stable patients, while bed rest and limb movement assistance for severe patients.

2.1.6 Predictive Prevention and Control Nursing for Complications

Nurses assessed the risk of infection, renal injury, skin damage and other complications, and established personalized prevention records. Monitoring frequency was increased for high-risk patients, focusing on blood routine and renal function. Patients were guided to do personal protection, keep clean, avoid fatigue and cold, and early intervention was given for abnormal symptoms.

2.2 Observation Indicators

2.2.1 Treatment Compliance

Patients were divided into complete compliance, partial compliance and non-compliance.

2.2.2 Complication Rate

The number of infections, lupus renal injury, skin ulcers and aggravated joint swelling and pain was recorded. Complication rate = number of complications/total number × 100%.

2.2.3 Quality of Life Score

Quality of life was evaluated by the SF-36 scale. Higher scores indicated better quality of life.

2.3 Statistical Methods

Data were analyzed by SPSS 20.0 software. Measurement data were expressed as ($\bar{x} \pm s$) and tested by t-test. Enumeration data were expressed as % and tested by chi-square test. $P < 0.05$ meant the difference was statistically significant.

3. Results

3.1 Comparison of Treatment Compliance

Treatment compliance of the two groups was compared post-intervention. The total compliance rate of the observation group was higher than that of the control group, with a statistically significant difference ($P < 0.05$). Details are in Table 1.

Table 1. Comparison of treatment compliance between the two groups [n(%)]

Group	n	Complete Compliance	Partial Compliance	Non-compliance	Total Compliance Rate (%)
Observation group	40	32	7	1	39(97.5)
Control group	40	25	7	8	32(80.0)
χ^2	—	—	—	—	4.507
P	—	—	—	—	<0.05

3.2 Comparison of Complication Rate

Complications during intervention were recorded in both groups. The total complication rate of the observation group was lower than that of the control group, with a statistically significant difference ($P < 0.05$). Details are in Table 2.

Table 2. Comparison of complication rate between the two groups [n(%)]

Group	n	Infection	Renal Injury	Skin Ulcer	Total Complication Rate (%)
Observation group	40	1	1	1	3(7.5)
Control group	40	4	3	4	11(27.5)
χ^2	—	—	—	—	5.541
P	—	—	—	—	<0.05

3.3 Comparison of Quality of Life Scores

Quality of life was assessed using the SF-36 scale after intervention. The scores of all dimensions in the observation group were higher than those in the control group ($P<0.05$). Details are shown in Table 3.

Table 3. Comparison of SF-36 scores between the two groups ($\bar{x}\pm s$, score)

Group	n	Physical Function	Mental Function	Social Function	Bodily Pain
Observation group	40	82.36±6.12	80.54±5.87	79.68±6.03	81.25±5.96
Control group	40	68.71±7.25	67.39±6.51	66.82±7.14	67.93±6.82
t	—	8.924	9.157	8.763	9.035
P	—	<0.05	<0.05	<0.05	<0.05

4. Discussion

Individualized comprehensive nursing can effectively improve treatment compliance in patients with systemic lupus erythematosus. Nurses provide one-on-one medication guidance to help patients master drug administration and related precautions. Continuous psychological counseling relieves emotional stress caused by long-term illness, and targeted health education deepens patients' understanding of the disease and treatment plans. These detailed nursing services eliminate patients' treatment concerns, strengthen their treatment awareness, and improve their initiative to cooperate with diagnosis and treatment.

This nursing model also plays an important role in complication prevention. Nurses carry out early risk assessment, combined with special skin care and dynamic condition monitoring, to identify potential problems such as infection, skin injury and organ involvement. Early interventions effectively avoid various risk factors, reduce organ damage and lower the overall incidence of complications.

Systemic lupus erythematosus is a chronic disease that requires long-term management. Individualized comprehensive nursing fits the nursing characteristics of such chronic diseases, taking into account patients' physical symptoms, mental state and daily life. Multi-dimensional nursing comprehensively improves patients' physical and mental status and overall rehabilitation effect. This model meets clinical nursing needs and has strong practical value in the clinical care of patients with systemic lupus erythematosus.

In conclusion, individualized comprehensive nursing can significantly improve treatment compliance, reduce the risk of complications such as infection and organ injury, and effectively improve the quality of life of patients with systemic lupus erythematosus. This nursing model is worthy of clinical promotion.

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