

Key Points for Implementing Comprehensive Nursing Intervention for Chronic Pain in Cervical Spondylosis

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Abstract: *Objective:* To analyze the key points of comprehensive nursing intervention for chronic pain in patients with cervical spondylosis and evaluate its effects. *Methods:* Eighty patients with chronic pain due to cervical spondylosis were included in the study from June 2023 to October 2024. The control group ($n = 40$) received routine nursing care. The study group ($n = 40$) received comprehensive nursing intervention. The effects were compared. *Results:* After 2 weeks of nursing care, the Cervical Spondylosis Clinical Evaluation (CASCs) score and nursing satisfaction rate in the study group were higher than those in the control group ($p < 0.05$). After 2 weeks of nursing care, the scores of cervical dysfunction index (NDI), neck pain (NPQ), anxiety (SAS), and sleep quality index (PSQI) in the study group were all lower than those in the control group ($p < 0.05$). The pain relief time in the study group was shorter than that in the control group ($p < 0.05$). *Conclusion:* Comprehensive nursing intervention is beneficial for reducing pain and negative emotions in patients with chronic pain due to cervical spondylosis, improving cervical function, improving sleep quality, and increasing patient satisfaction.

Keywords: Comprehensive nursing intervention; Cervical spondylosis; Chronic pain; Cervical spine function; Sleep quality

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1. Introduction

Cervical spondylosis is a common type of degenerative cervical spine disease in clinical practice^[1]. Chronic pain is a common symptom of this disease. If not treated in time, it will affect sleep, increase the risk of adverse psychological events such as anxiety, and lead to a decline in overall quality of life^[2]. At present, physical therapy, exercise therapy, and drug therapy can be used to treat patients with cervical spondylosis^[3]. During the treatment period, patients need to receive effective and high-quality nursing services to ensure and improve the treatment effect^[4]. However, routine nursing care focuses on simple medication guidance, etc. The comprehensive nursing intervention model has the advantage of more comprehensive nursing measures^[5]. Therefore, this article analyzes the key points of the implementation of comprehensive nursing intervention

for chronic pain in cervical spondylosis and evaluates the effect. The report is as follows.

2. Materials and methods

2.1. General information

From June 2023 to October 2024, our hospital treated a total of 80 patients suffering from chronic cervical degenerative disease accompanied by pain. The control group consisted of 20 females and 20 males, aged 31–58 years (mean age 42.11 ± 2.17 years), with a disease duration of 4.48 ± 0.12 years (3–6 years). The study group consisted of 18 females and 22 males, aged 30–59 years (mean age 42.08 ± 2.23 years), with a disease duration of 4.51 ± 0.13 years (3–5 years). Baseline data were compared between the two groups ($p > 0.05$).

2.1.1. Inclusion criteria

- (1) Meeting the diagnostic criteria for chronic pain in cervical spondylosis;
- (2) Informed consent.

2.1.2. Exclusion criteria

- (1) Malignant tumor;
- (2) Cervical spine surgery within the past month;
- (3) Mental illness

2.2. Methods

The control group received routine nursing care, while the study group received comprehensive nursing intervention.

(1) Health education nursing care

Explain the causes of cervical spondylosis and the progress of treatment. Instruct patients to pay attention to maintaining correct sitting, standing, and lying postures and to develop good living habits. Pay attention to keeping the neck warm.

(2) Psychological counseling nursing care

Actively care for patients, soothe their emotions, emphasize the safety of clinical treatment plans, introduce successful cases, encourage patients to actively cooperate with treatment, respond to patients' questions in a timely manner, and eliminate tension and worry.

(3) Pain care

Maintain a warm and comfortable environment. In the acute phase, when the pain is severe and sleep is impossible, administer analgesic drugs. Medium-frequency electrotherapy can be used to improve the analgesic effect. When the chronic persistent phase is reached, moxibustion and other traditional Chinese medicine strategies can be used for nursing care to reduce the patient's neck pain.

(4) Rehabilitation training nursing care

Massage the patient's neck muscles and instruct them to keep the cervical spine in a neutral position when sitting or lying down, and avoid bending over, flexing the back, or lowering the head for a long time. Instruct them to keep the pillow as close to the shoulders as possible when sleeping to avoid the neck being suspended. Encourage patients to persist in exercise and instruct them to perform stabilizing muscle training and cervical spine health exercises.

2.3. Observation Indicators

- (1) Cervical Spondylosis Clinical Evaluation (CASCs). Score 0–100; lower scores indicate a more severe condition.
- (2) Neck Dysfunction Index (NDI). Maximum 50; higher scores indicate poorer cervical function.
- (3) Northwick Park Neck Pain (NPQ). Score 0–100; higher scores indicate more severe pain.
- (4) Anxiety Scale (SAS). Score < 50 indicates no anxiety. Higher scores indicate more severe anxiety.
- (5) Sleep Quality Index (PSQI). A score > 7 indicates a sleep disorder. Higher scores indicate poorer sleep quality.
- (6) Pain relief time was recorded.
- (7) Nursing satisfaction rate. The Newcastle Nursing Satisfaction Scale was used for evaluation, with a maximum score of 95. Very satisfied: > 90; Somewhat satisfied: 80–90; Unsatisfied: 50–79; Very dissatisfied: < 50.

2.4. Statistical Processing

SPSS 20.0 was used for analysis. Quantitative data were expressed as ($\bar{x} \pm s$) and analyzed using *t*-tests. Count data were expressed as percentages (%) and analyzed using *chi-square* tests. $p < 0.05$ was considered statistically significant.

3. Results

3.1. Comparison of CASCs and NDI scores between the two groups

Two weeks after the start of the nursing care, the CASCs score in the study group was higher than that in the control group ($p < 0.05$), while the NDI score was lower than that in the control group ($p < 0.05$). See **Table 1**.

Table 1. Comparison of CASCs and NDI scores between the two groups

Group	Number of examples	CASCs score (points)		NDI (Rating)	
		Before nursing	After 2 weeks of care	Before nursing	After 2 weeks of care
Control group	40	65.42 ± 3.37	72.46 ± 4.34*	32.15 ± 2.18	25.46 ± 1.89*
Research group	40	65.55 ± 3.46	81.35 ± 4.03*	32.11 ± 2.23	19.68 ± 1.12*
<i>t</i> -value	-	0.6964	10.2839	0.3915	8.2516
<i>p</i> -value	-	0.4951	0.0000	0.8416	0.0000

Note: *Comparison before and after nursing care in this group, $p < 0.05$.

3.2. Comparison of NPQ, SAS, and PSQI scores between the two groups.

Two weeks after the start of the nursing care, the NPQ, SAS, and PSQI scores in both groups of the study were lower than those in the control group ($p < 0.05$). See **Table 2**.

Table 2. Comparison of NPQ, SAS, and PSQI scores between the two groups

Group	Number of examples	NPQ score (points)		SAS score (points)		PSQI score (points)	
		Before nursing	After 2 weeks of care	Before nursing	After 2 weeks of care	Before nursing	After 2 weeks of care
Control group	40	67.58 ± 5.12	46.58 ± 4.11*	54.79 ± 3.19	50.58 ± 1.36*	12.39 ± 1.15	8.12 ± 0.74*
Research group	40	67.61 ± 5.09	39.26 ± 3.12*	54.82 ± 3.26	46.18 ± 1.07*	12.41 ± 1.28	6.09 ± 0.58*

<i>t</i> -value	-	0.7316	9.1527	0.8519	7.1425	7.1945	6.1217
<i>p</i> -value	-	0.6815	0.0000	0.7986	0.0000	0.8915	0.0000

Note: *Comparison before and after nursing care in this group, $p < 0.05$.

3.3. Comparison of pain relief time between the two groups

The pain relief time in the study group was significantly shorter than that in the control group ($p < 0.05$). See Table 3.

Table 3. Comparison of pain relief time between the two groups

Group	Number of examples	Pain relief time (d)
Control group	40	4.36 ± 0.45
Research group	40	2.15 ± 0.22
<i>t</i> -value	-	6.5958
<i>p</i> -value	-	0.0000

3.4. Comparison of nursing satisfaction rates between the two groups

The study group had a higher nursing satisfaction rate ($p < 0.05$). See Table 4.

Table 4. Comparison of nursing satisfaction rates between the two groups

Group	Patient (Number of examples)	Very satisfied example (%)	Quite satisfied example (%)	Dissatisfied example (%)	Extremely dissatisfied (%)	Nursing satisfaction rate example (%)
Control group	40	10 (25.00)	13 (32.50)	7 (17.50)	10 (25.00)	30 (75.00)
Research group	40	12 (30.00)	20 (50.00)	6 (15.00)	2 (5.00)	38 (95.00)
χ^2 value	-	-	-	-	-	6.2745
<i>p</i> -value	-	-	-	-	-	0.0122

4. Discussion

The clinical incidence of chronic pain in cervical spondylosis is relatively high, and it is mostly caused by factors such as degenerative changes in the cervical spine. Affected by pathological factors, the spinal cord, nerves, and blood vessels will be stimulated or compressed, leading to cervical spine dysfunction, symptoms such as head, shoulder, and neck pain, and a significant reduction in quality of life. Treatment plans with definite efficacy and high safety should be adopted in a timely manner [6]. At the same time, how to adopt effective nursing strategies is related to the patient's rehabilitation process and prognosis [7]. Therefore, this article analyzes the key points of comprehensive nursing intervention for chronic pain in cervical spondylosis and evaluates the effect.

The results showed that the study group had better performance in all indicators ($p < 0.05$). This demonstrates that comprehensive nursing intervention has a significant impact on patients with chronic pain due to cervical spondylosis, helping to reduce pain and negative emotions, improve cervical function, enhance sleep quality, and increase patient satisfaction. This is mainly because, in terms of health education nursing, systematic guidance on cervical behavioral correction reduced the interference of neck pain on fine motor activities. In terms of psychological counseling nursing, it effectively reduced anxiety and indirectly improved sleep quality. In terms of

pain management, the use of medium-frequency electrotherapy to relieve muscle spasms and moxibustion to warm the meridians and promote blood circulation effectively alleviated patients' pain. In terms of rehabilitation training nursing, through rehabilitation training, the dynamic stability of the cervical spine was rebuilt, significantly improving cervical function and increasing nursing satisfaction.

5. Conclusion

In conclusion, comprehensive nursing intervention has a significant impact on patients with chronic pain due to cervical spondylosis, helping to alleviate pain and negative emotions, improve cervical spine function, enhance sleep quality, and increase patient satisfaction.

Disclosure statement

The authors declare no conflict of interest.

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