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# The Impact of Continuous Care on Independent Living Skills and Psychosocial Adaptation of Patients with Hypertensive Intracerebral Hemorrhage After Discharge

**Xiaomin Sun***

Taizhou Second People's Hospital, Taizhou 225500, Jiangsu, China

**Corresponding author: Xiaomin Sun, 13921725082@163.com*



**Abstract:** *Objective:* To analyze the value of continuous care for patients with hypertensive intracerebral hemorrhage (HICH). *Methods:* A total of 80 patients with HICH who visited our hospital from January 2024 to December 2024 were selected as samples and randomly divided into two groups. The observation group received continuous care, while the control group received routine care. The Functional Independence Measure (FIM), Symptom Checklist-90 (SCL-90), and complications were compared between the two groups. *Results:* The FIM score of the observation group was higher than that of the control group ($P < 0.05$). The SCL-90 score of the observation group was lower than that of the control group ($P < 0.05$). The incidence of HICH complications in the observation group was lower than that in the control group ($P < 0.05$). *Conclusion:* The application of continuous care in HICH nursing can enhance patients' independent living skills outside the hospital, optimize their psychosocial adaptation, and is safe and efficient.

**Keywords:** Hypertensive intracerebral hemorrhage; Continuous care; Psychosocial adaptation; Independent living

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## 1. Introduction

HICH refers to a type of disease caused by abnormal blood pressure leading to intracerebral hemorrhage, which is the rupture and bleeding of intracranial small arteries induced by excessive blood pressure and atherosclerosis. It poses risks of disability and fatality. The recovery process of HICH is slow, and the damage to brain tissue is irreversible. After onset, patients are prone to psychological and physical impairments, requiring nursing intervention to optimize psychological and physical functions and shorten the recovery time of HICH. Routine care, which focuses on the management and control of HICH symptoms, has limitations [1]. Continuous care extends inpatient HICH nursing to the home, ensuring the quality of home care as much as possible, optimizing

patients' independent living skills outside the hospital, and facilitating their return to society. Based on this, this study explores the value of continuous care using 80 HICH patients who visited the hospital from January 2024 to December 2024 as samples.

## 2. Materials and methods

### 2.1. Materials

Eighty patients with HICH who visited our hospital from January 2024 to December 2024 are selected as samples and randomly divided into groups. The baseline data of HICH patients in the observation group were compared with those in the control group ($P > 0.05$), as shown in **Table 1**.

**Table 1.** Analysis of baseline data of HICH

| Group | n | Gender(%) | | Age (years) | | History of hypertension (years) | | Bleeding volume(ml) | |
|---|---|---|---|---|---|---|---|---|---|
| | | Male | Female | Range | Mean | Range | Mean | Range | Mean |
| Group A | 40 | 23(57.50) | 17(42.50) | 41–72 | 56.88 ± 2.43 | 2–6 | 4.21 ± 0.88 | 22–52 | 40.02 ± 1.48 |
| Group B | 40 | 24(60.00) | 16(40.00) | 42–71 | 56.91 ± 2.41 | 2–7 | 4.19 ± 0.91 | 22–53 | 40.11 ± 1.51 |
| $X^2$/t | - | 0.0516 | | 0.0554 | | 0.0999 | | 0.2692 | |
| *P* | - | 0.8203 | | 0.9559 | | 0.9207 | | 0.7885 | |

### 2.2. Inclusion and exclusion criteria

The inclusion criteria are: (1) Meet the criteria for HICH in the "Guidelines for the Prevention and Treatment of Hypertension in China" [2]; (2) Signed informed consent; (3) No severe cardiovascular and cerebrovascular diseases.

Meanwhile, the exclusion criteria are: (1) Organ function impairment; (2) Incomplete case information; (3) Death.

### 2.3. Methods

#### 2.3.1. Control group

(1) File creation

For HICH patients who meet discharge criteria, healthcare providers should offer a thorough explanation of discharge precautions, create a HICH file to record basic information, diagnosis and treatment information, medication information, and contact details, as well as provide patients with departmental consultation phone numbers.

(2) Education

Patients should be encouraged to adopt regular and healthy lifestyle habits, to extend sleep time, pay attention to slowly changing body positions, and avoid getting up immediately after waking up. It is recommended to maintain a supine position for 30 seconds after waking up, then slowly turn to a sitting position, maintain the sitting position for 30 seconds before turning to a standing position, and stand at the bedside for 30 seconds before walking. Additionally, healthcare providers should guide patients in performing proper home rehabilitation exercises. These include bed exercises in different positions, such as active and passive movements of the joints and body, rolling over, and turning the body forward,

backward, and side to side. Patients should also practice sitting balance exercises to help them maintain a stable and comfortable sitting position. Standing exercises should be included as well, such as standing while eating, dressing themselves, using the toilet, and climbing stairs.

### 2.3.2. Research group

(1) Telephone follow-up

After discharge from HICH, complete a telephone follow-up every 15 days to evaluate patients' home exercise status, diet planning, lifestyle habits, recovery status, and emotional changes. Simultaneously, inquire about medication adherence and comprehensively analyze the physical health status of HICH patients. Correct bad habits promptly, urge regular exercise and a balanced diet, and remind patients to take medication as prescribed. Deepen the popularization of HICH knowledge, including risk factors and pathogenesis of cerebral hemorrhage, explain daily precautions in detail, and stabilize anxiety and tension to reduce the recurrence of cerebral hemorrhage.

(2) Home visits

After discharge from HICH, healthcare providers should complete a home visit every month to evaluate patients' medication adherence, blood pressure monitoring cooperation, analyze changes in body mass, and assess their cognition. Home education for patients with HICH should focus on promoting a healthy lifestyle and preventing complications. Patients are advised to follow a low-fat diet, ensure adequate intake of vitamins and high-quality protein, avoid greasy foods, and increase consumption of fruits and vegetables to prevent constipation. Foods rich in iodine, such as seaweed and kelp, are recommended to help reduce cholesterol buildup in the arteries. For patients with facial paralysis, it is important to prevent choking and aspiration by limiting talking during meals and choosing soft or liquid foods. Patients should be taught to monitor and record their blood pressure independently using an arm-type monitor, and seek timely medical attention if they experience symptoms such as fatigue, chest tightness, or high blood pressure. Harmful habits like smoking and alcohol use should be avoided, and attention should be given to cold prevention, warmth preservation, and blood lipid regulation to reduce the risk of increased blood viscosity and rebleeding. For those with hyperlipidemia, regular aerobic exercise should be encouraged to promote metabolism and stabilize lipid levels. Patients with significant anxiety or depression should be supported through emotional expression and provided with positive examples of successful HICH recovery to enhance confidence and reduce psychological stress.

(3) WeChat follow-up

Invite HICH patients to join the home care management WeChat group. The nurse in charge should share health knowledge daily, including emotion regulation methods, blood pressure monitoring methods, etc., and guide patients to ask questions in the group. The nurse should professionally answer their questions and inspire patients' confidence in recovery.

## 2.4. Observation indicators

(1) Independent living ability: Twelve weeks after discharge, the independent living ability of HICH patients is evaluated using the FIM scale, which consists of 18 items (ranging from 18-126 points). The score is positively correlated with independent living ability.

(2) Psychosocial adaptation: Twelve weeks after discharge, the psychosocial adaptation ability of HICH

patients is evaluated using the SCL-90 scale, which consists of 9 items (ranging from 1–5 points based on asymptomatic to severe symptoms). The score is negatively correlated with psychosocial adaptation ability.

(3) Complications: Record cases of pulmonary infection, electrolyte imbalance, and negative nitrogen balance.

### 2.5. Statistical analysis

The data is processed using SPSS 23.0 software. Count data are recorded as percentages and analyzed using the chi-square test. Measurement data are recorded as mean ± standard deviation and analyzed using the t-test. Statistical differences are considered significant at $P < 0.05$.

## 3. Results

### 3.1. FIM scores of HICH patients

The observation group had higher FIM scores compared to the control group, with $P < 0.05$, which is shown in **Table 2**.

**Table 2.** Comparison of FIM scores in HICH patients ($\bar{X} \pm s$)

| Group | Self-care | Sphincter control | Transfer | Mobility | Communication | Social cognition | Total score |
|---|---|---|---|---|---|---|---|
| Observation group ($n$=40) | 26.61 ± 0.41 | 8.61 ± 0.33 | 11.96 ± 0.36 | 8.89 ± 0.38 | 15.31 ± 0.58 | 17.21 ± 0.62 | 88.38 ± 1.73 |
| Control group ($n$=40) | 25.11 ± 0.36 | 5.42 ± 0.22 | 11.01 ± 0.32 | 5.87 ± 0.31 | 11.05 ± 0.39 | 16.08 ± 0.51 | 77.36 ± 1.28 |
| $t$ | 17.3873 | 50.8694 | 12.4741 | 38.9475 | 38.5485 | 8.9022 | 32.3862 |
| $P$ | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

### 3.2. SCL-90 scores of HICH patients

The SCL-90 scores of the observation group were lower than those of the control group ($P < 0.05$), as shown in **Table 3**.

**Table 3.** Comparison of SCL-90 scores for HICH patients ($\bar{X} \pm s$)

| Group | Obsessive symptoms | Somatization | Depression | Anxiety | Interpersonal sensitivity |
|---|---|---|---|---|---|
| Observation group ($n$=40) | 1.25 ± 0.25 | 1.75 ± 0.25 | 1.32 ± 0.26 | 1.21 ± 0.27 | 1.54 ± 0.21 |
| Control group ($n$=40) | 1.59 ± 0.33 | 1.91 ± 0.33 | 1.91 ± 0.44 | 1.87 ± 0.46 | 1.59 ± 0.28 |
| $t$ | 5.1940 | 2.4442 | 7.3012 | 7.8259 | 0.9035 |
| $P$ | 0.0000 | 0.0168 | 0.0000 | 0.0000 | 0.3690 |

| Group | Horror | Hostility | Psychosis | Paranoid |
|---|---|---|---|---|
| Observation group ($n$=40) | 1.25 ± 0.19 | 1.05 ± 0.33 | 1.35 ± 0.43 | 1.78 ± 0.33 |
| Control group ($n$=40) | 1.92 ± 0.42 | 1.62 ± 0.42 | 1.69 ± 0.68 | 1.95 ± 0.39 |
| $t$ | 9.1923 | 6.7492 | 2.6727 | 2.1045 |
| $P$ | 0.0000 | 0.0000 | 0.0092 | 0.0386 |

### 3.3. Complications in HICH patients

The complication rate of HICH in the observation group was lower than that in the control group ($P < 0.05$), as shown in **Table 4**.

**Table 4.** Comparison of complication rates in HICH (n,%)

| Group | Pulmonary infection | Electrolyte disturbance | Negative nitrogen balance | Incidence rate |
|---|---|---|---|---|
| Observation group ($n$=40) | 0(0.00) | 1(2.50) | 0(0.00) | 1(2.50) |
| Control group ($n$=40) | 1(2.50) | 4(10.00) | 1(2.50) | 6(15.00) |
| $X^2$ | - | - | - | 3.9139 |
| $P$ | - | - | - | 0.0479 |

## 4. Discussion

HICH refers to cerebral parenchymal hemorrhage lesions induced by abnormal elevations in blood pressure. Its pathological features include the rupture of intracranial small arteries, which is characterized by high risks of disability and fatality, and can induce physical dysfunction and psychological stress responses [3]. Additionally, the recovery process of HICH is slow, and nursing intervention is necessary to accelerate patients' rehabilitation. Conventional nursing focuses on the management and control of HICH symptoms within the hospital, with inadequate attention to out-of-hospital management, resulting in poor quality of out-of-hospital rehabilitation. The extended care model extends in-hospital HICH services to out-of-hospital settings, urging patients to engage in home-based rehabilitation exercises and correcting their maladaptive behaviors, which is beneficial for the prognosis of HICH [4]. During the actual extended care service, follow-up is conducted through various forms such as phone calls, home visits, and WeChat groups, covering multiple aspects including exercise, diet, and psychological adaptability, which can meet the needs of different HICH patients and is comprehensive and scientific [5].

Whether HICH patients have independent living abilities refers to their ability to take care of themselves. In this paper, the FIM scale is selected for evaluation, which can not only provide a detailed assessment of HICH patients' physical function but also comprehensively evaluate their cognitive function and social communication abilities, thereby accurately reflecting their recovery of social activity abilities. The focus of out-of-hospital care for HICH patients should include managing disease etiology and consolidating treatment effects. Implementing extended care strategies provides regular and continuous out-of-hospital services for HICH patients, utilizing phone calls and home visits to understand their psychological and physiological states, correct their maladaptive behaviors, cultivate their self-care skills, and urge them to engage in rehabilitation exercises, which can accelerate the recovery of their physiological functions [6]. Furthermore, the restoration of self-care abilities in HICH patients can positively impact their psychosocial adaptability. Based on the data analysis in this paper, the FIM scores of the observation group are higher than those of the control group, with $P < 0.05$. This suggests that extended care can alleviate the condition of HICH patients, optimize their independent living abilities outside the hospital, and facilitate their return to society.

Conventional HICH care focuses only on inpatient care, and rehabilitation services are discontinued after discharge, leading to some patients not properly monitoring their blood pressure or taking medications regularly, and even developing secondary HICH complications that require readmission for treatment. The extended

care model provides regular education services to HICH patients and their families, explaining in detail the precautions for outpatient care, which can urge patients to adhere to long-term treatment. Combined with follow-up information, it adjusts patients' medication and dietary therapy methods and develops exercise strategies, which can optimize patients' awareness of self-prevention and control of blood pressure fluctuations and stimulate their subjective initiative [7]. Based on the data analysis in this article, the SCL-90 score of the observation group was lower than that of the control group, with $P < 0.05$. The reason for this is that during the extended care service, patients' physiological status is comprehensively evaluated through telephone follow-ups, their unhealthy behaviors are corrected, and HICH knowledge is disseminated targeting patients' cognitive weaknesses. This allows patients to understand the risk factors and precautions related to cerebral hemorrhage, which can reduce the risk of HICH recurrence. Through home visits, patients are guided to correctly monitor their blood pressure and take medications reasonably. Education is provided on diet, cough prevention, unhealthy behavior management, and emotional counseling, which can enhance the quality of home care for patients. Answering patients' questions and sharing HICH-related knowledge through WeChat follow-ups can urge patients to actively fight against HICH [8].

In addition, extended care services can compensate for the deficiencies in community management of HICH patients in China, improve patients' own awareness of HICH, and have the advantage of initiative, which can continuously enhance patients' health care abilities and optimize their physical and mental states in practice. Therefore, patients' psychosocial adaptability improves. The final set of data shows that the complication rate of HICH in the observation group was lower than that in the control group, with $P < 0.05$. The reason for this is that extended care can meet the needs of modern HICH patients, allowing them to continue to enjoy nursing services after discharge, which can shorten their recovery period and avoid the deterioration of HICH condition due to insufficient nursing professionalism during outpatient rehabilitation [9].

Furthermore, nurses' deepened supervision and management of HICH patients can enhance the quality of care and meet the outpatient care needs of different HICH patients. Emphasizing patient education before discharge and follow-up education can ensure smooth continuity between inpatient and outpatient care, thereby correcting unreasonable behaviors of HICH patients and reducing complications [10]. However, this study includes a small sample of HICH patients, and there may be deviations in the impact of extended care on their independent living abilities and psychosocial adaptability. Further exploration of the value of extended care with a larger sample of HICH patients is needed in the future.

## 5. Conclusion

In summary, the application of extended care in the nursing of HICH patients can reduce HICH-related complications, optimize patients' psychosocial adaptability and independent living abilities after discharge, and is worthy of promotion.

## Disclosure statement

The author declares no conflict of interest.

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