

Evaluating the consultation by a Certified Nurse Specialist (CNS) in stroke rehabilitation nursing : Consultation on social behavior deficits in patients with higher cortical dysfunction

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Evaluating the consultation by a Certified Nurse Specialist (CNS) in stroke rehabilitation nursing : Consultation on social behavior deficits in patients with higher cortical dysfunction

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Abstract

The objective of this study is to utilize the consultation roles of the CNS that the author clarified in previous research to intervene with nurses regarding social behavior deficits in patients with higher cortical dysfunction and to evaluate the intervention.

The study participants were 10 patients with deficits in social behavior due to higher cortical dysfunction and 14 nurses, including five research team members, on a ward for recovery phase patients in a hospital specializing in the care of stroke patients. Action research was used as the research design. Reflection notes, study group meeting records, and a post-study questionnaire of research team members were used as qualitative data, and the autonomy scale of the 14 ward nurses and the stroke scale-emotional disturbance scale and FIM scores for the study patients were examined.

As a result, the research team members experienced the following changes: (1) Feeling that they insufficiently understood the communication characteristics of higher cortical dysfunction and could not properly assess the patients' psychiatric symptoms; (2) Noticing that their emotions affected the mental state of the patients; (3) Sharing of information and patient handling tips among the nursing teams; (4) Recognizing the applicability of the guidelines to patients with reduced cognitive function; (5) Understanding the timing for calling for a psychiatrist and shifting to active engagement; and (6) Calling conferences early and working out solutions together. Scores for the 9 ward nurses not on the research team improved on the autonomy scale but a significant difference was observed only in practical skills after the study ($p < 0.05$). Scores for the 10 patients on the depression scale and emotional disturbance scale decreased significantly after intervention ($p < 0.05$).

These results suggest that the CNS consultation helped nurses become proactive in focusing on the causes of problematic behavior in patients and contributed to bringing stability to the mental condition of the patients. The consultation also empowered the nurses and influenced their autonomy.

Key words

stroke rehabilitation nursing, CNS, consultation, higher cortical dysfunction, action research

Introduction

In 2004, the Ministry of Health, Labour and Welfare identified higher cortical dysfunction as a dysfunction that makes it difficult for patients to adapt to daily living and social life, mainly due to

cognitive disorders such as impaired memory, attentional deficit, executive dysfunction, and social behavior deficits.¹⁾

Up to this point, conventional diagnoses of higher cortical dysfunction have largely involved

carrying out functional localization and evaluation separately for each symptom. Where the responsible focus is clearly in the cerebral cortex as with focal symptoms such as aphasia, apraxia, and agnosia, treating only these elemental higher cortical dysfunctions may be a valid methodology, but in actual living situations it is often the case that patients exhibit a variety of neuropsychological disorders. Nurses are specialists in providing medical care assistance and living support as part of medical treatment. When providing assistance to patients with higher cortical dysfunction in their daily living routines, nurses seek ways to handle various kinds of problematic behavior that may arise with unspecified focus or focal symptoms, and feel that basing their assistance on localized brain functions gives them no hope of providing proper care.

The researcher has to date, in the sphere of stroke rehabilitation, provided consultation as a certified nurse specialist (CNS) for nurses who require advice about particularly difficult cases²⁾. Through this consultation, it became clear that the most frequent problematic situations faced in nursing care for which consultation was requested involved the behavioral and emotional difficulties of patients with higher cortical dysfunction, described as “social behavior deficits.” According to the Fiscal 1999 Metropolitan Tokyo Survey of Patients with Higher Cortical Dysfunction, the major cause of higher cortical dysfunction was cerebrovascular disease (79.8%), and one in seven (14.7%) of these patients presented symptoms of behavioral and emotional deficits³⁾. When patients undergo complicated therapies during stroke rehabilitation, they are highly likely to experience emotional and psychological problems and to show psychiatric symptoms. To better manage consequent difficulties, it is desirable to utilize human resources such as a CNS in this field who is able to give advice on methods regarding how to support patients with a focus on problematic behavior in daily life⁴⁾.

The purpose of this study, therefore, was to conduct action research involving patients with higher cortical dysfunction who exhibit social

behavior deficits while being taken care of in stroke rehabilitation nursing, where the researcher intervenes and employs the consultation activities identified by her preceding study so that the nurses may become capable of solving the problems themselves, and to the intervention by examining the resulting changes in nurses and patients.

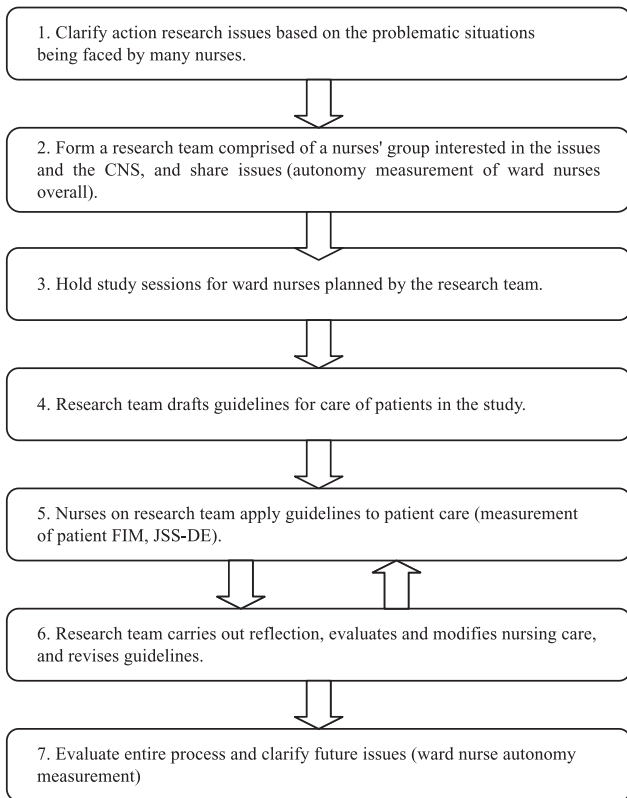
Definition of terms

The definition of higher cortical dysfunction, as used in this research, is based on the Criteria and Guidelines for Diagnosing Higher Cortical Dysfunction issued by Japan’s Ministry of Health, Labour and Welfare: “A dysfunction caused by an organic lesion in the brain that constrains a person’s functioning in daily life or social life, rooted primarily in cognitive disorders such as impaired memory, attentional deficit, executive dysfunction, and social behavior deficits.” Also, social behavior deficits, a major symptom of higher cortical dysfunction, is defined as: “Behavioral and emotional difficulties that indicate symptoms of reduced desire or drive, difficulty in controlling emotions, difficulty in relating to others, dependent behavior, and fixation.”

Methods

1. Design

Action research is a collaborative intervention that seeks to bring to light problems that arise in actual sites of practice and to explore possible solutions⁵⁾. During consultation, the CNS and nurses work in partnership to mutually resolve the problems that arise during nursing and to bring about change. Action research was chosen for this study because it involves mutually evaluating the process and results. The form of action research used for the current study is the mutual collaborative approach described by Holter and Schwartz-Barcott.⁶⁾ Through dialogue with practitioners in a mutually dependent relationship, the researcher identifies underlying problems in the practice, comes to a mutual understanding of the causes of those problems, seeks effective methods of intervention, elaborates a plan of action to bring



(Arrows show the direction to which research goes)

Figure 1. Summary of action research process for this study

about change, and moves toward implementing this plan⁷⁾. Figure 1 summarizes steps taken in the current study following this approach, with a challenge to find “effective, consistent ways of approaching difficulties that nurses were having in coping with the social behavior deficits of patients

who have communication difficulties owing to higher cortical dysfunction” derived from previously identified situations (Figure 1). Throughout the process, the CNS attended every conference of the research team and, as well as facilitating discussion, intervened using the five CNS roles (Table 1).

2. Participants

On a ward for recovery phase patients in a hospital specializing in the care of stroke patients, the stroke patients in this study were those who were diagnosed by a neurologist or rehabilitation doctor with higher cortical dysfunction, and because they show symptoms of social behavior deficits, nurses have difficulty handling them. There are 10 stroke patients in the study and 14 ward nurses, including five who had volunteered to be on the research team (originally six at the start of the research). The average age of the nurses on the research team is 36.8; their average length of clinical experience is 13 years, a degree of experience that places them all in leadership positions.

3. Setting

The ward has forty beds and accepts patients who had had a stroke one to three months earlier but who were now in a stable phase and were mainly undergoing a regimen of active rehabilitation. Long-term team nursing was carried out by two regular nursing groups. In the year prior to

Table 1. Roles for CNS in consultation with stroke rehabilitation nurses

Consultation role	Description
1. Promote understanding of communication characteristics associated with higher cortical dysfunction	1. Help nurses to find out how to deal appropriately with communication difficulties involving patients with higher cortical dysfunction.
2. Help to clarify patients’ own goals	2. Help nurses to discover the goals of their patients undergoing rehabilitation through dialog with them and become able to assist with daily tasks while reflecting this understanding.
3. Assessing neurological symptoms	3. Help nurses to acquire a broader perspective of the symptoms caused by brain disorders and understand the root causes of the symptoms in order to develop strategies for patient care.
4. Proposing care that is closely involved in the patient’s recovery process	4. Help nurses gain the ability to provide care that is closely involved in the patient’s recovery process and is responsive to changes in the patient.
5. Empowerment of nurses	5. Make environment and nursing care suggestions according to patient’s dysfunction and level of wakefulness to help nurses provide evidence-based care with confidence.

Source: Shimomura, A.: Expert nurse consultation tasks in stroke rehabilitation nursing (in Japanese), Journal of Japanese Society for Chronic Illness and Conditions Nursing.:4(1): pp 2-9, 2010

starting this research, approximately 40% of the patients in the ward in question had social behavior deficits due to higher cortical dysfunction.

4. Qualifications of the researcher

The study was carried out by a CNS with specialist certification in chronic care nursing acquired in 2007 who had 15 years of clinical experience in neurological nursing. For the two years before receiving CNS qualification, the researcher was in charge of nurse education and performed consultation during ward visits at the subject institution. Consequently, at the time of writing, she had four years of experience in nursing consultation.

5. Study period

Data was collected between November 2007 and April 2009.

6. Data collection

To evaluate changes in the nurses on the research team, records were kept of conferences and study group meetings, and participants kept their own reflection notes. At the end of the research period, they filled out a self-evaluation questionnaire. To evaluate general changes in the ward as a whole, before the study and 18 months after, behavior was scored using the Professional Autonomy in Nursing scale⁸⁾. This scale divides nursing care situations into three areas – cognition, judgment, and implementation – and is used to measure autonomy in the nursing profession. The scale is comprised of five categories – Cognitive skills (14 items), Practical skills (14 items), Concrete judgment (7 items), Abstract judgment (7 items), and Independent judgment (5 items). Higher scores indicate greater autonomy. Each nurse evaluated her own nursing care for each item on a scale of one to five. To assess changes in the patients who were subjects in the study, scores were taken on the Japan Stroke Scale – Depression and Emotional Disturbance Scales (JSS-DE)⁹⁾ and Functional Independence Measure (FIM), looking at patient medical records and comparing them using the scales prior to application of the guidelines and at the end of their application or at the time of discharge from the hospital. The JSS-DE used a scale for depression (7 items) and for

emotional disturbance (8 items). Total scores are in the range of +0.73 to +23.22 on the depression scale and –0.55 to +33.42 on the emotional disturbance scale. Higher scores indicate more serious emotional disturbance. The JSS-DE and FIM scales were evaluated by research team members who understood the patients' condition. The reliability and validity of the scales was tested.¹⁰⁾¹¹⁾

7. Analysis

Content was extracted from the qualitative data, including records and the nurses' self-evaluation questionnaire, and arranged chronologically – related to the CNS's approach to the research team nurses, to changes that occurred in the awareness and behavior of the research team nurses, and to changes in the patients' physical and mental condition – and the turning points in the nurses' awareness and behavior were classified into phases. Using the Wilcoxon signed-rank test for the ward nurse autonomy scale and the t-test for the JSS-DE and FIM scales, a comparison of pre-intervention and post-intervention was done using SPSS (Ver.16). Supervision was carried out periodically by the academic supervisors throughout the entire analysis process.

8. Ethical considerations

At the start of the study, the objectives of the study, the methods to be used, ethical considerations, etc., were explained both verbally and in writing to the nurses, the patients, and/or the patients' families, and written consent was obtained. Participation was entirely voluntary, and even if patients declined to participate they were informed that it would not adversely affect their treatment. They were also informed that the information obtained would be kept anonymous and would not be used for any purpose other than for the study. For patients with a speech impairment, nursing care was carried out by carefully reading the face of the patient to understand their intention. Approval for the research was given by the Medical Ethics Committee of University A and the nursing ethics review board of an institution cooperating with the research.

Table 2-1. Background of nurses in the study

	Research team nurses (n=5) Average ± SD	Ward nurses (n=9) Average ± SD
Gender	All female	All female
Age	37.4 ± 8.0	34.6 ± 8.7
Years of clinical experience	13.4 ± 8.7	9.6 ± 9.5
Years of psychiatric experience	1.0 ± 2.2	0.0 ± 0.0
Years of rehabilitation nursing experience	6.6 ± 2.7	3.9 ± 3.1

Results

1. Background of the participants

There were 20 nurses in all on the ward being studied at the beginning of the study, including five on the research team, but due to resignations or transfers during the period of research, only 14 nurses were able to continue to the end. The total number of patients recruited was 10, with an average age of 74.5. In terms of area of deficit, five had right cerebral hemisphere impairment. Exhibiting symptoms of social behavior deficit, three had reduced desire/drive and six had problems with emotional control; and exhibiting other symptoms of higher cortical dysfunction, six had attentional deficit and five had memory impairment. (Table 2-1, 2-2)

2. Qualitative assessment in research processes

Phase 1: Nurses felt that they did not sufficiently understand the communication characteristics of patients with higher cortical dysfunction and were not sufficiently able to assess the patients' psychiatric symptoms.

In a ward meeting on the study ward the CNS explained the theme of this study. Six nurses offered to cooperate voluntarily, and a research team was formed. An overview of the entire process of the subsequent CNS intervention and reflections of the research team are shown in Figure 2. (Figure 2)

In the first research team meeting, several problems were identified. Some comments: "When a patient shows signs of agitation, we only try to calm them down for the moment. We don't have a big picture. I think we need to talk to the patient to try to figure out what triggered the agitation,"

Table 2-2. Background of patients in the study (n=10)

Item		Number of patients (%) Average ± SD (multiple answers)
Gender	Male	6 (60)
	Female	4 (40)
Age		74.5 ± 6.2
Diagnosis	Cerebral infarction	6 (60)
	Cerebral hemorrhage	2 (20)
	Traumatic brain contusion	1 (10)
	Lumbar tumor/CVST*	1 (10)
Area of damage	Right cerebral hemisphere	5 (50)
	Both cerebral hemispheres	2 (20)
	Left cerebral hemisphere	3 (30)
Onset/recurrence	Onset	8 (80)
	Recurrence	0 (0%)
	History of cerebral condition	1 (20)
Symptoms of social behavior deficits	Reduced desire/drive	3 (25)
	Difficulty in controlling emotions	6 (50)
	Difficulty in relating to others	2 (17)
	Fixation	1 (8)
Other symptoms of higher cortical dysfunction	Attentional deficit (including hemispatial neglect)	6 (38)
	Impaired memory	5 (31)
	Executive dysfunction	2 (13)
	Aphasia	2 (13)
	Articulation disorder	1 (6)
Internal medication	Antidepressants	3 (19)
	Antipsychotic drugs	8 (47)
	Sleeping pills	5 (29)
	Dementia medication	1 (6)
Psychiatric consultation history	Yes	5 (50)
	No	5 (50)

*CVST : Cerebral Venous Sinus Thrombosis

"I don't think it is good to handle nighttime delirium always by immediately giving the patient medication to put them to sleep," and "We don't know the circumstances of the other teams' patients, so it is difficult to know how to deal with them." The CNS then proposed to hold study group meetings on assessing psychiatric symptoms and the ways in which patients with higher cortical dysfunction tend to communicate, to be followed by a meeting where the nurses would examine the way they interact with the patients, and obtained the agreement of the research team.

Phase 2: Nurses noticed that their emotions affected the mental state of the patients

Study group meetings were held a total of five times, once a month, for ward nurses, led by the participation of the research team. The content focused on five areas: the communication characteristics of patients with higher cortical dysfunction, assessing psychiatric symptoms,

	November 2007	May 2008	July 2008	Apr. 2009		
Phase	1. Feeling that nurses were insufficiently able to assess psychiatric symptoms	2. Nurses noticed that their emotions affected the mental state of the patients	3. Team sharing of information and patient handling tips is established (Guidelines drawn up)	4. Guidelines also applied to patients with reduced cognitive functioning	5. Timing for calling for a psychiatrist is understood and shift to active engagement takes place	6. Calling of conferences early, working out together
Dealings between CNS and research team members	Research team members					
	Nurses have no effective approach to dealing with patients who have mental problems due to higher cortical dysfunction and there is no consistent team approach.	Study group participation Nurses reflect on their own patient care practices.	Drawing up guidelines in light of patient characteristics Owing to felt need for information sharing, members begin holding and leading Team A-B joint conferences.	Attempting to assess patients' psychiatric symptoms using guidelines The possibility of extending application of the guidelines beyond patients with higher cortical dysfunction to patients with reduced cognitive functioning was evaluated and judged appropriate.	Nurses become able to notice/feel changes in patients and grasp the right timing to call in a psychiatrist. Advise other staff on how to relate to the patients based on the guidelines.	Even without the involvement of the CNS, conferences are called at an early stage and solutions are worked out together.
	↑ ↓ Info. exchange*	↑ ↓ Info. exchange	↑ ↓ Info. exchange	↑ ↓ Info. exchange	↑ ↓ Info. exchange	
	CNS					
	Take on board the thoughts of the members. Clarify the topics of research.	Planning and facilitation of study group Listen attentively to and endorse what the team members realized when applying what they learned in practice, and facilitate the sharing of those realizations among the members.	Support for creation and drafting of guidelines Acknowledge the need for information sharing felt by the members.	Jointly assess patient applicability with the members, identify problems, and examine whether or not intervention is appropriate. Endorse members' proposal to expand scope of patient applicability.	Talk about patient changes with the team members and other staff, and endorse their way of dealing with the patients as appropriate. Propose that nurses keep narrative notes to become aware of changes in themselves.	

*Info. exchange: Information exchange with CNS and research team members

Figure 2. Action research implementation process

coaching, cognitive assessment using FIM, and a narrative approach. The instructors were the CNS, a psychiatrist, and an occupational therapist.

One participant related this story during the research team session: "I had the chance to sit and listen to one patient who was depressed. Every now and then when I saw him, I would say hello. After doing that again and again, when I took the time to sit and listen to him, I learned that he felt anxiety because of his difficulty talking due to another intracerebral hemorrhage he had suffered. From that point on I have been trying as much as possible to provide care based on sensing what patients are thinking."

From the research team's reflections following the study group meeting, it was noted that the nurse was able to actively create the chance to listen to the patient who was in a depressed state, and get the patient to talk about symptoms that he was worried or concerned about. Another used her coaching skills to acknowledge the positive things that a patient had accomplished and was

surprised when the patient unexpectedly reacted with delight. In the study group meeting with the psychiatrist, the nurses learned that two to three months after a stroke is a period in which all patients experience chaotic feelings, regardless of whether or not they are feeling depressed, and changes in the environment or the busy involvement of medical caregivers in varied ways affects the patients' mental condition. The research team members seemed to realize the necessity of controlling their own emotions, saying, "We are the ones who turn the patient's switch of emotional turbulence on or off." They also appeared to grasp the necessity of working together as a nursing team instead of alone, with such comments as, "We should share information with the other team and gain their support," and "It would be good to create an atmosphere of taking good care all together."

Phase 3: Sharing of information and patient handling tips among the nursing teams (Creation of guidelines)

After the end of five study group meetings, the

Table 3. Summary of nursing care guidelines drafted by the research team for patients with deficits in social behavior

Item	Description
Symptoms of deficits in social behavior	Reduced drive and motivation, impaired control over emotions, impaired relationships with other people, dependent behavior, etc.
Earmarks of communication impairment	Characteristic of right hemisphere impairment and damage to prefrontal cortex
Assessment perspective	Location of brain damage, psychiatric symptoms, difficulty in speaking, score on emotional disturbance scale, ADL
Tips on handling patients	<ul style="list-style-type: none"> ● Basic: Nurses control their emotions, improve the environment, encourage wakefulness in the daytime, give hope for recovery, encourage sleep at night, attention-getting communication techniques, develop consistency in handling patients as a team, communicate condition of patients to their families ● Advanced: Methods for controlling disinhibition, responding to weakened drive and motivation

CNS collected viewpoints expressed up to that point and gave to the research team a preliminary draft of “guidelines for communicating with patients who have deficits in social behavior due to higher cortical dysfunction.” The CNS took a leadership role in revising the draft with input from the research team and several staff members who were not on the research team, and finalized it for actual use with the patients. (Table 3)

In the first case, Patient A (age in 60s, male, right lobe traumatic brain injury 4 years ago, left hemiplegia, disinhibition) appeared distracted when he had something on his mind, and had no patience to wait. He didn’t cause trouble on the ward, but when sleeping at home, he would demonstrate irritability toward his wife, a situation in which the wife was in need of support. Through discussion among research team members, the idea was proposed to give the wife emotional support by encouraging her to recognize that these symptoms were coming from the dysfunction, and to give her methods for dealing with it, similar to guidelines.

In addition, around this time, a research team member expressed the opinion that because it was difficult to understand the other team’s information

the teams should start sharing information between them. Twice a month, a joint conference started to be held between the two teams led by the members themselves. The CNS told the nurses that the joint conferences were very meaningful and proposed sharing information on patients to whom the guidelines applied. Right away, a research team member called for a joint conference on the handling of the second case, Patient B (age in 70s, male, right-handed, initial right frontal lobe subcortical hemorrhage, left hemiplegia, attentional deficit, HDS-R23/30), and the conference was held.

Some things voiced at the joint conference: “The patient was taking two kinds of sleeping pills as well as antipsychotic drugs, and yesterday became shaky on his feet and fell,” “The nurse (at the ward he was in previously) got angry at him for his frequent incontinence and frequent calling for the nurse, causing what appears to be emotional trauma. That is probably because he was formerly a company board member with a high sense of pride. His wife advised that he was determined not to wet his pants again,” “It would be possible to place a portable toilet by his bed and establish nighttime toileting habits using a sensor mat,” “We need to think of a way that will not injure his pride,” and “When evening comes, Patient B wants a tranquilizer and cannot relax. He also seems anxious that I might not bring him the medicine.”

After the conference mentioned above, the nursing team reduced the amount of sleeping pills for Patient B, and switched to a portable toilet for nighttime elimination so as not to injure the patient’s pride. The result was that Patient B relaxed mentally with only a tranquilizer, and was able to establish toileting habits at night without the need for shaky walking. Also, his family began to try to understand higher cortical dysfunction.

Phase 4: Nurses recognized the applicability of the guidelines to patients with reduced cognitive function

The joint conferences continued. After applying the guidelines to the two cases, and considering the drop in the number of patients with higher cortical dysfunction to whom the guidelines were

applicable, there was no more chance to discuss application of the guidelines at the research team conference. At this time, though, the opportunity to provide emotional assistance to patients with dementia was increasing, and the nurses got the feeling that the guidelines in part would be applicable to patients with reduced cognitive function. The opinion of the team congealed around the idea that the guidelines were applicable and could be used in cases where the psychiatric symptoms of reduced cognitive function were observed – due to organic dysfunction of the brain even if higher cortical dysfunction was not diagnosed. The CNS upheld this opinion.

Phase 5: Nurses come to understand the timing for calling for a psychiatrist and shift to active engagement

Upon expanding the scope for applying the guidelines, and with the rise in the number of applicable cases, the research team became actively engaged, expressing such things as: “I think the timing of calling a psychiatrist worked out very well this time,” “I thought it was depression so I tried applying the scales.”

In the case of Patient C (age in 70s, male, right-handed, initial right middle cerebral arterial infarction, left hemiplegia, memory impairment, MMSE-19/30, unemployed), the patient was feeling unsure and overanxious about his slow recovery progress and was showing signs of having lost a degree of self-respect. The research team member who was the attendant nurse began actively listening to Patient C, who said, “Why did this happen to me? Other people can do everything for themselves but I need help from the nurses for everything.” Because Patient C’s JSS-DE score was high, the research team members relied on the psychiatric diagnosis, and the psychiatrist had prescribed antidepressants. The research team together with the CNS decided to interact with Patient C by not trying to cheer him up, but by recognizing whatever tiny achievements he made, showing him that they care, and getting him to promise not to take his own life. After two weeks, Patient C began to gradually regain his vitality and he started to interact with the other patients.

Looking back on this case, a research team member said, “By telling the doctors that the family was feeling down and explaining how hard it was for both the family and the patient himself, we were able to call in a psychiatrist at just the right time.”

Also, around this time, as other staff who were not on the research team occasionally joined our meetings, it became possible to exchange information on the patients that the nurses were responsible for. To enable the research team members to remember what they were thinking or took notice of during their duties, the CNS suggested that they write their reflections in a daily journal (known as “narrative notes”).

Phase 6: Nurses call conferences early and work out solutions together

When the number of cases of applicable patients exceeded 10, it was decided at one research team meeting to end further meetings, as the team recognized that the action research challenges of this study had been largely accomplished. They felt that they themselves had actively intervened and were able to produce positive results in the patients by treating them in a consistent manner as a team. Some comments by research team members after the study had ended in regard to engaging with patients were: “We saw changes such as the patient becoming calmer by treating them in a consistent manner as a team” and “We have conferences about emotionally turbulent patients at an earlier stage than before, or call upon a psychiatrist earlier. Changes can also be seen in the way we handle patients.” Also, the comment, “We got effective advice based on analyzing and re-evaluating from various angles,” reflected how the nurses felt about the intervention of the CNS throughout the process of the study. (Table 4)

3. Changes in the Autonomy of the Ward Nurses

The average autonomy scale scores for the five research team nurses had improved after the research for four categories, except for independent judgment, but no significant difference was observed ($p < 0.05$). Also, the average autonomy

Table 4. Changes in research team nurse awareness after end of the study

Item	Opinion
Changes in Oneself	<ul style="list-style-type: none"> • Have greater awareness in my contact with patients than before. • Share acquired knowledge and skills at conferences, etc., and take care to handle patients in a consistent way with others. • Have even greater awareness than before in dealing with patients.
Changes in the Patients	<ul style="list-style-type: none"> • There were even cases that took time but in which the patient's mental condition became stable. • Consistency in handling patients was achieved by everyone talking together and developing a strategy. • One could see changes such as a disturbed patient becoming settled by applying a consistent way of handling them as a team.
Changes in the Ward Staff	<ul style="list-style-type: none"> • When having problems with difficult patients, everyone put their heads together and became able to handle them with patience. • Everyone started handling patients together instead of alone. • Conferences about disturbed patients came to be held earlier and a psychiatrist was called in earlier. Changes could also be seen in how the patients were treated.
Regarding the Advice of the CNS	<ul style="list-style-type: none"> • Greater awareness was brought to the handling of patients, the patients changed when the advice was put into practice, and a strategy for treatment and nursing was outlined. • Even with cases, for example, in which the situation was stagnant, I felt relieved by talking about it regularly. The meetings made me aware of small changes in the patients. • We received effective advice based on analysis and re-evaluation from various angles.

Table 5. Changes in autonomy in research team nurses and ward nurses

		Average value prior to study	SD	Average value 1.5years later	SD	Significance probability
Research team (n=5)	Cognitive skills	54.8	3.3	55.8	5.9	1.000
	Practical skills	51.6	3.8	54.2	5.2	0.416
	Concrete judgment	26.6	1.95	28.8	2.95	0.144
	Abstract judgment	25.0	2.5	26.0	4.0	0.581
	Independent judgment	20.2	1.9	19.6	5.9	0.854
Other nurses (n=9)	Cognitive skills	45.9	8.9	48.6	9.8	0.079
	Practical skills	43.0	11.2	48.3	10.5	0.018
	Concrete judgment	23.0	5.2	25.0	6.0	0.089
	Abstract judgment	22.1	3.7	23.6	4.9	0.351
	Independent judgment	17.4	4.4	18.3	4.9	0.29

Wilcoxon signed-rank test

Table 6. Changes in the mental state of patients in the study

	Average value before intervention	SD	Average value after intervention	SD	Significance probability
JSS-D (depression)	8.8	3.8	5.7	4.6	0.009
JSS-E (emotional disturbance)	14.8	7.1	8.6	5.0	0.030
FIM (cognitive)	13.5	3.9	14.9	3.4	0.100
FIM (physical)	32.3	22.1	40.8	18.1	0.078

(N=10) Paired t-test

scale scores for the remaining nine ward nurses not on the research team had improved after the research for all categories, with a significant difference observed for practical skills ($p < 0.05$). (Table 5)

4. Changes in the Patients

The depression scale (JSS-D) scores for the 10 patients in the study decreased significantly after intervention as opposed to before ($p < 0.01$). The emotional disturbance scale (JSS-E) scores also

decreased significantly after intervention ($p < 0.05$). The average scores for the FIM cognitive and physical items increased after intervention, but no significant difference was observed. (Table 6)

Discussion

1. Changes in the Nurses

In this study, action research was carried out, centered around a research team. At the beginning, the research team members dealt with problems passively, expressing such things as, "Delirium is always handled immediately with medication to put the patient to sleep," and "We don't know the other teams' patients, so it is difficult." But after gaining knowledge and building experience through practical application, their attitude changed to a more active one. They said things like, "We should share information with the other team and gain their support," and "I am more aware than before when interacting with patients." It is said that in adult education, rather than imparting knowledge and skills, the instructor supports the learners using their own experience to proactively try to find solutions for issues and problems presently being faced and develop more actual-situation-oriented practices and values.¹²⁾ In the process of this study, the research team members felt that they "got effective advice based on analysis and re-evaluation from various angles" from the CNS, and by learning actual methods of providing care through experience with the assistance of the CNS in addition to acquiring knowledge at study group meetings, their attitude changed to one of decisively seeking solutions on their own.

As the study progressed, the research team displayed a transformation. Team members began to bring other nurses into the fold to handle patients together rather than feeling burdened alone. This resulted in joint conferences and the participation of other nurses in the research team meetings, strengthening the nursing teams' cooperative system. In fact, the autonomy scale scores for the ward nurses not on the research team improved after the study. This means that the nurses overall autonomously utilized the

specialized knowledge and skills of the research team members and demonstrated advancement in their professional skills. These results suggest that the research team's efforts had an influence not only on the team members but also on other floor nurses, generating an awareness of the teamwork-based approach to solving problems throughout the ward, thus improving the effectiveness of the teamwork. Researchers say that consultations improve the organizational system of the consultees' institution, such as promoting cooperation among staff and changing the work environment, which is supported by the present study.¹³⁾

2. Changes in the Patients

The JSS-DE scores for the study patients improved significantly after the study. Contributing factors that explain this change are: that it became easier for the nurses to assess the condition of the patients because they learned the characteristics of higher cortical dysfunction, and by understanding the root cause of the problem they were able to provide care that elicited the strengths possessed by the patients; the nurses were able set the patients at ease to receive care by treating them in a consistent manner as a team; and they called in a psychiatrist early to provide appropriate treatment.

The basic process for handling patients who had deficits in social behavior due to higher cortical dysfunction was first to identify the undesirable behavior, then to seek out what triggered the behavior or worsened the symptoms, and once the causes were understood, to set up a plan for eliminating those causes and implement the plan¹⁴⁾. To accomplish this, it was necessary for those around the patient to understand the symptoms and look for triggers, which necessitated an approach of getting close to the patient. The case of Patient B in this study was a situation in which the nurse recognized that the patient's incontinence caused him anxiety, which led to dangerous behavior, and took measures that stabilized Patient B's mental condition. In this way, the actions taken during this study helped the nurses to understand their patients' symptoms and take an approach that addressed the cause of the problematic behavior, thereby improving the

patients' symptoms.

3. The Consultative Role of the CNS

Consultation is the process of helping to consciously solve problems or bring about change in order to support the handling of problems faced by the consultees¹⁵⁾. This study involved the CNS consciously getting involved with nurses and employing five consultation roles to help solve the field issue of nurses' difficulty handling social behavior deficits in patients with higher cortical dysfunction. First, the CNS pointed out that higher cortical dysfunction is not usually immediately obvious and focused on the nurses' own feelings of needing to understand it. She planned a study group meeting to **promote understanding of the communication characteristics associated with higher cortical dysfunction (1)**, presented to the nurses methods that **help to clarify patients' own goals (2)**. She provided educational assistance by helping the nurses to realize that their own emotions had an effect on the mental state of their patients and providing them with specialized knowledge to help improve their assessment capabilities. When the research team members applied the guidelines in the field, the CNS presented effective practical methods to enable them to apply the knowledge they gained in a practical way, focusing on figuring out the trigger or cause of the patient's problematic behavior based on **assessing the neurological symptoms (3)** of the study patients, while **proposing care that is closely involved in the patient's recovery process (4)**.

In addition, by giving positive feedback to the research team members, the CNS carried out **nurse empowerment (5)**, enabling the nurses to provide care with confidence. One important precondition for autonomy and empowerment is to have confidence and pride in one's knowledge and to raise one's self-evaluation as one acquires knowledge and skills¹⁶⁾. For research team members, knowing that proper treatment was provided to a patient because the right timing to call in a psychiatrist was not missed thanks to information that they themselves had provided, along with the realization that there had been a

small change in a patient thanks to something they had done based on advice from the CNS boosted their self-assessment and enabled the shift to an attitude of solving problems themselves.

The goal of consultation is for the consultees to expand the skills that they learn, and as a result become able to solve problems on their own in the future¹⁷⁾. In this action research, issues in the field had been resolved, led by the research team, and the nurses became able to handle patients with social behavior deficits by themselves, which was a goal of the CNS consultation achieved, providing confirmation that the intervention was effective.

4. Limits of the Study and Future Challenges

In this study, patients with reduced cognitive functioning were targeted, so how they perceived changes in themselves was not investigated. Accordingly, how much the nurses' interaction with them affected their mental state was not clarified. It will be necessary from this point on to study changes in patient perceptions and data collection methods using a control group.

In addition, the consultation process for this study is not universally applicable to any and all situations. Rather, it is limited by such things as the backgrounds of the CNS and nurses, the consultation environment, resources employed, and other factors. This is also a limitation of action research, but at least the problems and perspectives raised through the implementation of this study will be of use to nursing practitioners in their practices in the field of stroke rehabilitation nursing.

Conclusion

This study focused on the social behavior deficits of patients with higher cortical dysfunction, which many nurses in the field of stroke rehabilitation nursing are having difficulty with. The CNS played a consultative role, providing consultation to the nurses. The nurses devised nursing care methods based on the communication characteristics of higher cortical dysfunction and focused on the causes of the problematic behavior in patients in order to deal with the problems. As a result, they were able to help bring stability to the

patients' mental condition. Also, the consultative role of the CNS empowered the nurses to be more autonomous, and their teamwork improved.

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脳卒中リハビリテーション看護における専門看護師（CNS）の コンサルテーションの効果 ～高次脳機能障害患者の社会的行動障害に対するコンサルテーション～

下村 晃子

要 旨

本研究の目的は、高次脳機能障害患者の社会的行動障害に対し、先行研究で明らかにしたCNSのコンサルテーション機能を用いて看護師へ介入し、その効果を明らかにすることである。対象は脳卒中専門病院の一回復期病棟において、高次脳機能障害の社会的行動障害がある患者10名と、研究チームメンバー5名を含む当該病棟看護師14名である。研究デザインはアクションリサーチを用い、振り返り記録、勉強会記録、研究メンバーの研究終了後アンケート等の質的データと、病棟看護師14名の自律性尺度、対象患者の脳卒中感情障害スケール、FIMの得点を調べた。結果、研究メンバーは次のような変化を遂げた：①高次脳機能障害のコミュニケーション特性の理解と、精神症状のアセスメント力が不足していると感じる②看護師の感情が患者の精神状態に影響することに気づく③看護チームで共通の情報・関わりをもつ④認知機能が低下した患者にもガイドラインが適用できることに気づく⑤精神科へかけるタイミングがつかめ積極的に関わる姿勢に変化する⑥早めにカンファレンスにかけみんなに対応を考える。研究チーム以外の病棟看護師9名の自律性尺度は、研究後に向上したが「実践能力」以外有意差はなかった ($p < 0.05$)。対象患者10名の脳卒中感情障害スケールは、介入後に有意に減少した ($P < 0.05$)。これらより、CNSのコンサルテーションは、看護師が能動的に患者の問題行動の原因に焦点化して対処できるよう導き、患者の精神状態の安定をもたらすことに貢献した。また、看護師をエンパワーし看護師の自律性に影響を与えた。