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Shaping Nursing Professional Skills with the use of the Method of Nursing Process as well as Diagnoses and Nursing Interventions According to ICNP Oriented on the Female Patient with Multiple Sclerosis

Kształtowanie pielęgniarskich umiejętności zawodowych z wykorzystaniem metody procesu pielęgnowania oraz diagnoz i interwencji pielęgniarskich według ICNP zorientowanych na pacjentkę ze stwardnieniem rozsianym

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Abstract

Introduction. In order to achieve a learning success by a nurse during the pre- and post-graduate education, it is useful to apply the method of case studies using the International Classification for Nursing Practice (ICNP) or the traditional model of the nursing process.

Case Report. The patient in good general condition, with overweight. Nourished orally, the patient shows a standard swallowing reflex. There are appetite disorders. Periodically, there occur constipation and urine retention. The patient shows increased risk of urinary tract infections due to self catheterization. Physical fitness limited because of the paresis of the right lower limb. Body balance impaired. The patient moves with the assistance from one person. She uses auxiliary means to move. On the Barthel Scale the patient scored 50 points, which indicates that she needs assistance in the performance of daily activities.

Discussion. In the patient with multiple sclerosis there occurred nursing problems, in particular: reduction of capacity in terms of self-care and self-nursing, difficulty in performing daily activities, difficulty with communicating, urine residual in the bladder, constipation, the possibility of contractures, the possibility of eating disorders, discomfort caused by increased sweating, depressed mood, pain in bones and joints.

Conclusions. Referring to diagnoses and ICNP interventions in the process of nursing it has been confirmed that the nursing care of the patient with MS is based on a holistic approach to the patient. All spheres of patient's life regarding biological, psychological, social, cultural and spiritual aspects were included in it. **(JNNN 2015;4(2): 76–84)**

Key Words: ICNP, nursing process, individual case, MS

Streszczenie

Wstęp. W osiąganiu efektów kształcenia przez pielęgniarkę, w trakcie kształcenia przed- i podyplomowego, przydatne jest stosowanie metody analizy przypadków z wykorzystaniem Międzynarodowej Klasyfikacji Praktyki Pielęgniarskiej (ICNP — International Classification for Nursing Practice) lub tradycyjnego modelu procesu pielęgnowania.

Opis przypadku. Pacjentka w stanie ogólnym dobrym, z nadwagą. Odżywiana drogą doustną, wykazuje prawidłowy odruch połykania. Występują zaburzenia łaknienia. Okresowo występują zaparcia oraz zaleganie moczu. Pacjentka wykazuje zwiększone ryzyko zakażenia dróg moczowych ze względu na samocewnikowanie. Sprawność fizyczna ograniczona z powodu niedowładu kończyny dolnej prawej. Równowaga ciała zaburzona. Pacjentka porusza się z pomocą jednej osoby. Korzysta ze środków pomocniczych w celu przemieszczania się. W skali Barthel pacjentka uzyskała 50 pkt. co wykazuje, że potrzebuje pomocy w wykonywaniu codziennych czynności.

Dyskusja. U pacjentki ze stwardnieniem rozsianym wystąpiły problemy pielęgnacyjne, a w szczególności: ograniczenie wydolności w zakresie samoopieki i samopielęgnacji, trudności w wykonywaniu codziennych czynności, trudności w komunikowaniu się, zaleganie moczu w pęcherzu moczowym, zaparcia, możliwość wystąpienia przykurczów, możliwość wystąpienia zaburzeń odżywiania, dyskomfort spowodowany wzmożoną potliwością, obniżony nastrój, bóle kostno-stawowe.
Wnioski. Wskazując diagnozy i interwencje ICNP w procesie pielęgnowania potwierdzono, że opieka pielęgniarska nad pacjentką z SM opiera się na holistycznym podejściu do chorej. Zostały nią objęte wszystkie sfery życiowe pacjentki, tj. biologiczne, psychiczne, społeczne i kulturalno-duchowe. **(PNN 2015;4(2):76–84)**
Słowa kluczowe: ICNP, proces pielęgnowania, indywidualny przypadek, SM

Introduction

Nursing proceedings in the case of a patient with multiple sclerosis depends on the phase of the disease, severity of symptoms, disability level and pharmacological treatment. Nursing care focuses on strengthening the periods of remission, relief of the symptoms and consequences of disability as well as the improvement of the quality of life [1–14].

In the achievement of learning success by a nurse during the pre- and post-graduate education, it is useful to apply the method of case studies using the International Classification for Nursing Practice (ICNP) or the traditional model of the nursing process. Alternative use of one of the methods allows to provide comprehensive care, increases the efficiency of nurse's work, allows to monitor the scope of implemented health benefits due to their clear determination, defining the level of costs generated by those benefits as well as carrying on scientific research on nursing [4,5].

The aim of the study is to present alternative proposals, selected diagnoses and nursing interventions formulated on the basis of on the International Classification for Nursing Practice and based on the traditional nursing process oriented on the patient with multiple sclerosis. The following methods were used in the study: case description as well as literature analysis.

Case Report

Place the care provision — primary health care — the patient's home environment; gender — female, age — 45 years.

The patient in good general condition, with overweight. Nourished orally, the patient shows a standard swallowing reflex. There are appetite disorders. Periodically, there occur constipation and urine retention. The patient shows increased risk of urinary tract infections due to self catheterization. Physical fitness limited because of the paresis of the right lower limb. Body balance impaired. The patient moves with the assistance from one person. She uses auxiliary means to move. On the Barthel Scale the patient scored 50 points, which indicates that she needs assistance in the performance of daily activities (Table 1).

Table 1. Case Report

Family status	
Threats to family	family history of disease: no [x] yes [ ] addictions: no [x] yes [ ] eccological threats: no [ ] yes [x] the garbage dump in the neighbourhood
Ambient hygiene	ambient hygiene: dishes, flat — neat: no [ ] yes [x] hygiene: personal, underwear, clothing — clean: no [ ] yes [x]
Family ties	good: yes [x] no [ ] conflict with whom: .....
Caring capacity of the family	Full yes [ ], no [x] the number of deficit hours: 2–4 hours
Contact with aid centers	Social Welfare Center [ ], PRC [ ], CARITAS [ ], other: [x]
Sociological condition	
Marital status	single [ ], married (woman) [x], married (man) [ ], widower/widow [ ]
Education	uncompleted primary [ ], primary [ ], vocational [x], secondary [ ], higher [ ]
Profession	learned [x] farmer, occupation farmer
Employment	Manual work [x], intellectual work [ ], studies [ ] shifts: no [x], yes [ ] retired [ ], pensioner [x] — sickness pension

Income	permanent [x], temporary [ ], no income [ ] financial status: good [ ], average [x], bad [ ]
Appropriate fulfillment of functions	yes [ ], no [x] problems with implementation of daily tasks
Psychological condition	
Understanding and remembering the content of the message	correct: yes [x], no [ ]
Orientation regarding: place, time, possibilities, health status	correct: yes [x], no [ ]
Attitude to the physical appearance	correct: yes [ ], no [x] does not accept Her overweight
Reaction to difficult situations	correct: yes [ ], no [x] increased stress and emotional tension
Other:	
Health condition	
Mensuration	body weight: 78 kg, height 162 cm, BMI 29.7 RR 124/86 mmHg, pulse 67 bits/min proper tension without evidence of loss, breath 16 breaths/min, temperature 36.7°C
Diseases	defects: no [x], yes [ ] ..... diseases: no [ ], yes [x] multiple sclerosis
Surgeries	no [ ], yes [x] cholecystectomy 2007
Allergies	no [x], yes [ ] .....
Vaccinations, serums	WZW: no [ ], yes [x]: 7.07.2003, 8.08.2003, 7.02.2004 other important: .....
Addictions	stimulants: no [x], yes [ ] ..... addictions: no [x], yes [ ] .....
Rehabilitation measures	glasses: no [x], yes [ ], other: no [ ], yes [x] walker
Physical fitness	unlimited [ ], limited [x] 50 points, dependent [ ] ..... points (assessment acc. to the Barthel Scale)
Patient's knowledge	on health lifestyle: full [ ], partial [x], none [ ] on the disease: full [ ], partial [x], none [ ] on self-control: full [ ], partial [x], none [ ]
Abilities	in self-control: full [ ], partial [x], none [ ] in self-care: full [ ], partial [x], none [ ]
Rest, sleep	correct: yes [ ], no [x] steep disorders related to emotional tension
System functioning disorders:	
Nervous	no [ ], tak [x] right lower limb paresis, tremor and weakness in the lower limbs
Respiratory	no [x], yes [ ]
Circulatory	no [x], yes [ ]
Digestive	no [ ], yes [x] constipation, appetite disorders
Urinary	no [ ], yes [x] urine retention
Reproductive	no [ ], yes [x] incidence of sexual dysfunctions
Musculo-skeletal	no [ ], yes [x] increased muscle tone, spasticity
Senses	no [x], yes [ ]
Symptoms resulting from immobilization	no [x], yes [ ] bedsores to be assessed according to the Norton Scale
Environmental-family status	
Living conditions: single-family house [x], area 98 m², number of rooms 6, number of people living together 4, relationship: husband and two daughters. The house: dry [x], bright [x], sunny [x], water supply [x], central heating [x], gas (electric) cooker [x], WC in the house [x], bathroom [x], amenities (washing machine, fridge, telephone [x]. Notes: The amenities should be applied in the bathroom and at home so that the patient could move around the apartment freely and use the toilet or bathroom without assistance.	

Table 2. Problem 1/diagnosis: Risk of falling, difficulty in moving around [1–14]

Nursing diagnosis negative acc. to ICNP	Proposals regarding nursing intervention acc. to ICNP	Nursing diagnosis expected positive acc. to ICNP
Risk of falling [10015122]	Assessing the risk of falling [10023520] Demonstrating prevention of falling [10040248] Delivery of safety devices [10024527] Teaching prevention of falling [10040253] Teaching the family about the prevention of falls [10040269] Prevention of falling [10040211] Assessment of abiding by recommendations [10024185] Assessment of coping in life [10002723] Strengthening following recommendations [10024562]	Absence of fall [10034704]

Nursing diagnosis (the problem, condition, need)	Aim of acting	Nursing interventions planned	Justification of the choice of intervention
Difficulties in moving (risk of falling) caused by neurological symptoms.	Enabling the patient to move freely and eliminating the risk of falls.	1. Using equipment for easy walking such as the walker, crutches trivet: — assistance in moving and using toilet, — providing psychological comfort and physical safety by removing objects that may cause the fall.	1. The use of auxiliary equipment makes it easier to maintain balance and helps in the performance of exercises at home.
		2. Making attempts to walk on one's own with the assistance of a family nurse, physiotherapist or family members.	2. Attempts to walk with the assistance reduce patient's fear and eliminate the risk of falling.
		3. Motivating the patient to do regular improvement exercise in order to improve and to active participation in the exercises, informing about appropriate preparation to exercising, i.e.: — airy clothes, — airing the room before exercise commencement, — provided access to water.	3. Appropriate motivation leads to the improvement of patient's independence. The patient should take part in a stationary rehabilitation treatment as rehabilitation has a significant effect on the inhibition of progression of the disease. Preparation to exercise prevents overheating of the body.

Table 3. Problem 2/diagnosis: Constipation [1–14]

Nursing diagnosis negative acc. to ICNP	Proposals for nursing intervention acc. to ICNP	Expected nursing diagnosis positive acc. to ICNP
Constipation [10000567]	Assessment of eating and drinking behavior [10002747] Assessing the mobility standard [10030641] Teaching about diet regime [10026525] Serving fluids [10039330] Managing diet regime [10023861] Managing bowel emptying [10041427] Assessment of abiding by recommendations [10024185] Assessment of coping with life [10002723] Strengthening abiding by recommendations [10024562]	An improving situation of constipation occurrence [10027891]

Nursing diagnosis (the problem, condition, need)	Purpose of acting	Nursing interventions planned	Justification of the choice of intervention
Constipation in the course of neurogenic colon.	Eliminating constipation, facilitation of bowel movement.	1. Determination of high-fibre diet, rich in fibre: — cereal, wholemeal bread, dried fruit, oatmeal, — having regular meals in smaller portions but more often, — drinking larger quantities of liquids 2–3 l/day.	1. Increased amount of fibre in the diet (20–30 g) softens the stool and increases peristalsis. Fibre absorbs water, increasing the fecal masses and causing muscle contractions.

	2. Massaging the abdominal surfaces.	2. Massage performed with patting movement around the navel, according to a clockwise direction, several times a day for about 3–5 minutes causes contractions of intestines and muscles.
	3. Application of alternating hot and cold compresses on the abdomen.	3. Apply for about 10–20 minutes alternately squeezed towels soaked in hot and cold water, a few minutes each. This stimulates peristalsis, thereby facilitates evacuation.
	4. Application of oral laxatives (lactulose, liquid paraffin).	4. Laxative oral agents will begin their action in the intestine strengthening its movement, loosening stool and facilitating bowel movement.

Tabela 4. Problem 3/diagnosis: Limitation of self-care, self-nursing deficit [1–14]

Nursing diagnosis negative acc. to ICNP	Proposals of nursing interventions acc. to ICNP	The expected nursing diagnosis positive acc. to ICNP
Self-care deficit [10023410]	Evaluation of the condition of the house before the commencement of home care [10041038] Evaluation of the care plan [10031252] Self-care evaluation [10021844] Establishing agreement [10023738] Instructing the patient [10010382] Supporting the caregiver [10024570] Teaching the caregiver [10033086] Assessment of abiding by the recommendations [10024185] Assessment of coping with life [10002723] Strengthening abiding by recommendations [10024562] Strengthening independence [10022537] Social support supply [10027046]	Positive ability to self-care [10025714]

Nursing diagnosis (the problem, condition, need)	Aim of acting	Nursing interventions planned	Justification of the choice of intervention (detailed mechanism of the effect on the body)
Limitation regarding self-care and self-nursing resulting from intensification of neurological symptoms, right lower limb paresis.	Increase of patient's independence; reducing deficits of self-care and self-nursing.	1. Assessment of patient's capacity according to the Barthel Scale.	1. The Barthel Scale assesses patient's capacity and their need for care in three point divisons: — 0–20 points — complete dependence 'very serious' condition), — 20–80 points — the patient to some extend needs assistance ('medium serious condition), — 80–100 points — the patient with a little help can function independently ('light' condition). The patient scored 70 points., which means 'medium serious' condition.
		2. Mobilising the patient to perform the activities of self-care: — assistance in carrying out the toilets of the body and during the change of bed linen and personal underwear.	2. Mobilisation and assisting the patient significantly affects the increase of her independence.
		3. The use of facilities for independent eating and drinking liquids: — assistance in the preparation of meals, — placing the bedside table near the patient, — instructing the patient to adopt a comfortable, high seating position.	3. Preparation of meals and assistance in their eating guarantees required nutrition and improves patient's quality of life. The adoption of correct posture makes it easier to swallow.

Difficulties in performing daily activities due to fatigue syndrome.	Improvement of patient's well-being and functioning.	1. Educating the patient and eliminating the factors which intensify fatigue, i.e.: — physical effort, — adverse environment conditions, — too long exposure to the sun, — increased body temperature, — too warm bath, — lack of rest, — lack of adequate number of hours of sleep, — smoking.	1. By eliminating the factors which intensify fatigue, patient's well-being can be considerably improved.
		2. Motivation and assistance in analyzing the factors which increase and decrease fatigue: — assistance in the development of fatigue diary, which allows to record and analyse activities performed during the day, — motivating to entering systematic records in the diary.	2. Accurate record of all daily activities in the diary and marking on the fatigue scale from 1 to 10 will allow to define the factors mitigating or worsening the symptoms of fatigue.
		3. Planning the performance of exercises that require increased physical activity.	3. Gradual physical activity of the patient makes her body get used to the effort and improves it in a safe way.
		4. Informing the patient about the necessity to interrupt exercises in the period of big fatigue.	4. Increased effort intensifies fatigue, and thereby worsens the quality of life.

Table 5. Problem 4/diagnosis: Difficulties in communication [1–14]

Nursing diagnosis negative acc. to ICNP	Proposals of nursing interventions acc. to ICNP	The expected nursing diagnosis positive acc. to ICNP
Slurred speech [10018304]	Identifying communication barriers [10009683] Assessing the family coping with problems [10026600] Evaluating one's own image [10027080] Establishing agreement [10023738] Instructing the patient [10010382] Supporting the caregiver [10024570] Teaching the caregiver [10033086] Strengthening independence [10022537] Social support supply [10027046]	Communication barrier [10022332]

Nursing diagnosis (the problem, condition, need)	Aim of acting	Nursing interventions planned	Justification of the choice of intervention
Difficulty in communicating due to dysarthria.	Improvement of communicating.	1. Establishing contact with the patient in order to encourage her to talk. 2. Providing the patient and her family with information concerning the substance of the disorder, the possibility of supporting speech. 3. Giving the patient a lot of time to answer, avoiding impatience. 4. Encouraging the patient to perform simple exercises improving articulation: — respiratory gymnastics, reading aloud, — exercising the tongue blowing air through a straw into the cup filled with water. 5. Informing about the factors hindering articulation: — dry mouth, — insufficient supply of liquids,	Communicates with the environment, performs exercises to improve articulation; her speech is slow but understandable.

		— nervousness, fatigue, — upper respiratory tract infection, — low humidity of the air. 6. Recommending the patient to speak slowly and take breaks between words. 7. Enabling the contact with a speech therapist.	

Table 6. Problem 5/diagnosis: The possibility of contractures due to increased muscle tone [1–14]

Nursing diagnosis negative acc. to ICNP	Proposals of nursing interventions acc. to ICNP	The expected nursing diagnosis positive acc. to ICNP
Musculoskeletal process disorder [10022642]	Providing devices supporting the therapy [10039158] Evaluation of musculoskeletal disorders [10034030] Teaching about the safety gauges [10024687] Teaching about rehabilitation [10033017] Evaluating the ability to start movements [10030527] Preventing falling over [10040211] Application of a safe device [10002472] Assessment of abiding by recommendations [10024185] Assessment of coping with life [10002723] Strengthening abiding by recommendations [10024562] Strengthening independence [10022537] Social support supply [10027046]	Correct musculoskeletal process [10033807]

Nursing diagnosis (the problem, condition, need)	Aim of acting	Nursing interventions planned	Justification of the choice of intervention (detailed mechanism of the effect on the body)
The possibility of contractures due to increased muscle tone.	Preventing the formation of contractures.	1. Informing the patient about the factors enhancing spasticity: — residual urine in the bladder, — urinary tract infections, — incorrect posture of the body, — improper footwear. 2. Providing the patient with information about the mechanism of spasticity formation. 3. Informing the patient about the necessity to take anti-spastic medication according to medical recommendations (Baclofen 10 mg 3/day). 4. Cooperation with a physiotherapist, drawing up the plan for exercising. 5. Learning to maintain proper body posture. 6. Appropriate placement of limbs in a comfortable position. 7. Application of massage and ice packs. 8. Informing the patient about the necessity to avoid sudden movements. 9. Encouraging the patient to perform regular muscle stretching exercises, weight training and coordinating exercises.	Low muscle tone remains. Appropriate actions should be continued.

Table 7. Problem 6/diagnosis: Decreased appetite [1–14]

Nursing diagnosis negative acc. to ICNP	Proposals for nursing intervention acc. to ICNP	Nursing diagnosis Expected Positive acc. to ICNP
Impaired nutritional status [10025746]	Assessing attitudes towards the status of eating [10032918] Evaluation of the status of the gastrointestinal tract [10034007] Teaching about taking food [10032918] Teaching about eating standards [10032939] [10033017] Evaluation of the ability to prepare food [10030536] Assessment of abiding by recommendations [10024185] Assessment of coping with life [10002723] Strengthening abiding by recommendations [10024562] Strengthening independence [10022537] Social support supply [10027046]	Correct musculoskeletal status [10033807]

Nursing diagnosis (the problem, condition, need)	Aim of acting	Nursing interventions planned	Justification of the choice of intervention (detailed mechanism of the effect on the body)
The possibility of eating disorders due to lowered appetite.	Preventing malnutrition.	1. Assessment of patient's body weight. 2. Recommendation to eat slowly, in small portions. 3. Assistance in heating food and drinking fluids. 4. Daily fluid supply 1.5 l–2 l. 5. Informing the patient about the necessity to apply diet with limited animal fats, sugar, salt and dairy products. 6. Recommending to the patient taking ingredients rich in vitamins A, B, C, E, zinc, magnesium, selenium and unsaturated fatty acids. 7. Providing information to the patient and her family about the effects of malnutrition.	Body weight decrease not reported.

Discussion

In the patient with MS there occurred complex bio-psycho-social problems requiring comprehensive nursing interventions [1–14].

1. In the patient with multiple sclerosis there occurred nursing problems, in particular: reduction of capacity in terms of self-care and self-nursing (Table 2 and 4), difficulty in performing daily activities, difficulty with communicating (Table 5), urine residual in the bladder, constipation (Table 3), the possibility of contractures (Table 6), the possibility of eating disorders (Table 7), discomfort resulting from increased sweating, depressed mood, pain in bones and joints.
2. In order to solve the bio-psycho-social problems occurring in the patient with multiple sclerosis, the following professional actions have been proposed:
   — educational — impact on the patient's personality by shaping correct healthy behavior, a sense of responsibility for her own health,
   — care — assistance in solving patient's individual problems in sickness and disability (assisting, supporting, accompanying the patient),
   — health promotion — strengthening and intensification of health, preparing the patient for self-nursing,
   — prevention — preventing complications of the disease,
   — therapeutic — diagnostic procedures resulting from nursing diagnosis and recommended by the doctor,
   — rehabilitation — physical, mental and social improvement.

One of the important tasks of the nurse is to keep the documentation, which consists of: medical records form, personal nursing sheet, observation sheet, fever records card, doctor's orders card, nursing reports book.

The documentation guarantees safety, continuity and quality of care. The records contained in it should be clear, precise, concise as well as comprehensive, reliable and legible.

3. For the diametrical reduction of complications in the patient with multiple sclerosis the following measures were undertaken:

— prevention of contractures (Table 6),
— improvement of communication (Table 5),
— enabling smooth movement (Table 2 and 4),
— improvement of patient's well-being and functioning,
— prevention of malnutrition (Table 7),
— ensuring effective emptying of the bladder,
— facilitating bowel movement (Table 3).

Conclusions

Nursing care of a patient with multiple sclerosis is based on a holistic (comprehensive) approach to the patient. It includes all spheres of patient's life such as: biological, psychological, social, cultural and spiritual ones.

In the implementation of care of the patient with multiple sclerosis cooperation included: doctors, the physiotherapist, psychologist, speech therapist, chaplain of the hospital, nurses on duty and patient's family.

In the nursing care of the patient with multiple sclerosis with a deficit regarding self-care and self-nursing, physiotherapy equipment was applied (bowls, tripod, walker) for the purpose of helping the patient to move, facilitating movement as well as reducing the risk of falls. Monitored Vital parameters (pulse, blood pressure, body temperature, oxygen saturation) were monitored.

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