

ICNP® reference terminology for selected diagnoses and interventions in midwifery care on the example of a postpartum woman after hemorrhage with impending preeclampsia

Terminologia referencyjna ICNP® dla wybranych diagnoz i interwencji w opiece położniczej na przykładzie położnicy po przebyłym krwotoku z zagrażającym stanem przedrzucawkowym

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A – Development of the concept and methodology of the study/Opracowanie koncepcji i metodologii badań; B – Query - a review and analysis of the literature/Kwerenda – przegląd i analiza literatury przedmiotu; C – Submission of the application to the appropriate Bioethics Committee/Złożenie wniosku do właściwej Komisji Biotycznej; D – Collection of research material/Gromadzenie materiału badawczego; E – Analysis of the research material/Analiza materiału badawczego; F – Preparation of draft version of manuscript/Przygotowanie roboczej wersji artykułu; G – Critical analysis of manuscript draft version/Analiza krytyczna roboczej wersji artykułu; H – Statistical analysis of the research material/Analiza statystyczna materiału badawczego; I – Interpretation of the performed statistical analysis/Interpretacja dokonanej analizy statystycznej; K – Technical preparation of manuscript in accordance with the journal regulations/Opracowanie techniczne artykułu zgodnie z regulaminem czasopisma; L – Supervision of the research and preparation of the manuscript/Nadzór nad przebiegiem badań i przygotowaniem artykułu

STRESZCZENIE

TERMINOLOGIA REFERENCYJNA ICNP® DLA WYBRANYCH DIAGNOZ I INTERWENCJI W OPIECE POŁOŻNICZEJ NA PRZYKŁADZIE POŁOŻNICZY PO PRZEBYTYM KRWOTOKU Z ZAGRAŻAJĄCYM STANEM PRZEDRZUCAWKOWYM

Cel pracy. Celem pracy jest wskazanie zasadności implementowania terminologii ICNP® w sprawowanej opiece położniczej na przykładzie pacjentki po przebyłym krwotoku poporodowym z podejrzeniem stanu przedrzucawkowego. W oparciu o katalog pojęć wyodrębniono problemy podmiotu i interwencje położnej przedstawione w zaproponowanym zindywidualizowanym planie opieki.

Materiał i metody. Metodę badawczą zastosowaną w pracy stanowi studium indywidualnego przypadku, case study. Podstawą dla zaprezentowanego planu opieki było zastosowanie technik: wywiadu, obserwacji, analizy dokumentacji medycznej oraz zasadnych dla celów terapeutycznych pomiarów. Niniejszy manuskrypt opracowano w oparciu o protokół CARE dla opisów przypadków.

Wyniki. Przedstawiony model opieki pozwolił na wdrożenie zindywidualizowanych interwencji, skutkujących poprawie jakości życia i lepszym rokowaniem w procesie rekonwalescencji podmiotu. Zadania położnej w opiece nad pacjentką z ww. jednostkami chorobowymi wskazują na nieodzowną przynależność do zespołu interdyscyplinarnego, jednocześnie ustanawiając zawód samodzielny i niezależny.

Wnioski. Zastosowanie klasyfikacji ICNP® sprzyja rozwojowi pielęgniarstwa jako dziedziny nauki. Wskazana metoda pozwala trafnie interpretować problemy w sprawowanej nad podmiotem opiece położniczej, ujednoliciając tym samym system komunikacji w oparciu o bazy danych i obecnie funkcjonujące katalogi pojęć.

Słowa kluczowe: położna, studium przypadku, stan przedrzucawkowy, krwotok poporodowy, planowanie opieki nad pacjentem

ABSTRACT

ICNP® REFERENCE TERMINOLOGY FOR SELECTED DIAGNOSES AND INTERVENTIONS IN MIDWIFERY CARE ON THE EXAMPLE OF A POSTPARTUM WOMAN AFTER HEMORRHAGE WITH IMPENDING PREECLAMPSIA

Aim. The aim is to indicate the validity of implementing the ICNP® terminology in obstetric care on the example of a patient after postpartum hemorrhage with suspected preeclampsia. Based on the catalog of concepts, the entity's problems and the midwife's interventions were identified in the proposed individualized care plan.

Material and methods. The research method in this work is an individual case study. The basis for the presented care plan was the use of techniques: interview, observation, analysis of medical documentation and measurements relevant for therapeutic purposes. This manuscript was developed based on the CARE protocol for case reports.

Results. The presented care model allowed for the implementation of individualized interventions, resulting in the improved quality of life and a better prognosis in the subject's recovery process. The role of a midwife in the care of a patient with the previously mentioned diseases indicates the indispensable affiliation to an interdisciplinary team, at the same time establishing an independent and autonomous profession.

Conclusions. The use of the ICNP® classification promotes the development of nursing as a field of science. The indicated method allows for accurate interpretation of problems in the obstetric care, thus unifying the communication system based on databases and currently functioning catalogs of concepts.

Key words: midwife, case study, postpartum hemorrhage, preeclampsia, patient care planning

INTRODUCTION

Postpartum hemorrhage (PPH) and preeclampsia (PE) are dangerous diseases occurring during pregnancy, childbirth or the postpartum period. Despite modern standards of treatment, screening, and an increased number of highly specialized centers being implemented around the world, both diseases still occupy leading positions as causes of perinatal mortality. Hemorrhage or preeclampsia may result in a cascade of complications, often irreversible for the mother and/or fetus. PPH is defined as excessive blood loss or the presence of symptoms consistent with hypovolemia occurring within 12 weeks after labor. The World Health Organization (WHO) defines hemorrhage as a loss of more than 500 ml of blood in the case of vaginal labor and more than 1,000 ml in the case of a cesarean section. The complication can be specified taking into account the time frame, distinguishing primary hemorrhage (24 hours after labor) and late hemorrhage (after 24 hours after labor to 6 weeks) [1-3].

Etiology is classified according to the „4 T” algorithm, where each letter is an acronym of the English words: tonus, trauma, tissue and thrombin. The causes include: atony, i.e. limited ability of the uterine muscle to contract, trauma resulting from perinatal complications, involution disorder resulting from fetal remains in the uterus, and abnormalities in the coagulation system [4].

Preeclampsia is a disorder whose primary predisposing factor is pregnancy, and only then PE can be diagnosed. Preeclampsia is defined as a set of symptoms acquired after the 20th week of pregnancy, during labor or the postpartum period, and includes: arterial hypertension ($\geq 140/90$ mm Hg) and at least one feature of organ dysfunction, including: proteinuria, kidney damage, liver dysfunction, hematological or neurological complications, as well as situations of threat to the well-being of the fetus. Due to the wide range of complications, preeclampsia often requires an immediate intervention in the method of delivery, which results in premature labor with a high risk of prematurity [5-8].

The first stage of preeclampsia is associated with improper implantation of the placenta, thus causing no subjective symptoms. The second stage is characterized by an immunological reaction on the mother's side, leading to a disturbance of the angiogenic balance [5,8].

Insufficient proficiency in using electronic documentation with differences in the computerization of individual facilities and individual services in the care of nurses and midwives not priced by the payer, significantly slow down the process of implementing the ICNP® catalog into everyday practice. However, pilot studies, periodic updating of the Polish version of the dictionary and teaching classification have been advisable in education standards since 2012– they bode positively for the future of midwifery care. ICNP® terminology enables practice to be conducted using a unified language system both nationally and internationally. The mentioned uniformity allows for advanced statistics correlating with the development of individual areas of nursing. In addition, the tool could provide a basis for documenting and financing individual services. A unified professional terminology would make the work of nurses and midwives more visible and it would emphasize the autonomy of both professions. The described specificity is

certainly demonstrated by the International Classification of Nursing Practice [9-14].

AIM

The primary aim of the study was to demonstrate the possibility of using the ICNP® terminology in everyday midwifery practice. The medical case described in the dissertation allowed the profession of a midwife to be authorized as obligatory in the health care system.

MATERIALS AND METHODS

In this work, the research method is an individual case study. The interview, careful observation, analysis of medical documentation and measurements collected for therapeutic purposes were the basis for making the correct diagnosis in the midwifery care [15].

The information collected for the purposes of the study allowed for the identification of nursing problems and the creation of an individualized care plan using the International Classification of Nursing Practice – ICNP. To specify the evaluation of patient care at work, C-HOBIC indicators were used. The appropriateness of implementing specific medical interventions was determined based on the analysis of the literature.

Description of an individual case

The patient, 39 years old, pregnancy – 2, childbirth – 2, week of pregnancy – 40+1, reported to the Obstetrics and Gynecology Emergency Department due to persistently high blood pressure values. During pregnancy, the woman was diagnosed with: hypothyroidism during pregnancy, type I gestational diabetes and pregnancy-induced hypertension (PIH). Blood pressure was measured twice, and as a result, it was decided to admit the pregnant woman to the antenatal unit with suspicion of preeclampsia. In order to further diagnose and assess the well-being of the fetus, a number of tests were carried out, the evaluation of which was intended to identify possible factors determining the need for immediate choice of the method of delivery or to provide an indication of the solution.

On the second day of hospitalization, labor began and a healthy male infant was born. The first, second and third stages of labor were uneventful, the total blood loss was estimated at 300 ml, but during the fourth stage, during skin-to-skin contact between mother and child, the patient reported a deterioration in her well-being. Blood pressure was measured and was 50/31 mmHg. A large amount of blood clots was found emerging from the birth canal, estimated at 400 ml. A monitor was connected to measure vital parameters (BP, HR, SpO₂), infusion fluids, hemostatic and uterotonic drugs were administered. Blood was drawn for laboratory tests and blood products were ordered. The postpartum woman was transported to the operating theatre and an instrumental revision of the birth canal was performed. The newborn was handed over to the care of the staff of the neonatal unit. No damage to the reproductive organs was found during the procedure. The patient underwent curettage with no improvement and the uterine muscle was still in diastole, so a decision was made to repeat curettage and the bleeding temporarily stopped. 2 units of RBC (Red Blood Cells) were transfused and a Bakri balloon

was inserted into the uterine cavity. Blood loss during the procedure was estimated at 1500 ml. The postpartum woman was transferred to the intensive midwifery supervision unit, where 1 unit of FFP (Fresh Frozen Plasma) was transfused, followed by 1 unit of RBC. On the next day of hospitalization, a decision was made to again transfuse 1 unit of RBC and 1 unit of FFP. 30 minutes after the end of the procedure, the patient reported persistent itching and a rash; due to the suspicion of a post-transfusion reaction, appropriate treatment was implemented. Then it was decided to remove the Bakri balloon, with positive results – the uterine muscle contracted and the bleeding was assessed as physiological during the postpartum period. After six days of observation and assessment of the patient's condition, both the ability to self-care and the ability to care for the newborn appeared. Woman's general condition was good and she was qualified for discharge.

Due to postpartum hemorrhage, total blood loss was 2200 ml. During hospitalization, a total of 4 units of RBC and 2 units of FFP were transfused.

Care plan

To isolate the patient's problems, the following were used: pain assessment according to C-HOBIC, terminology for the area of continuous comprehensive care and long-term care (Tab. 1), assessment of functional status (ADL scale) according to C-HOBIC, terminology for acute care (Tab. 2) and fatigue assessment according to C-HOBIC, terminology for all areas of care (Tab. 3). Based on the interview, observations, measurements collected for therapeutic purposes and analysis of medical documentation, an individualized care plan was created (Tab. 4) based on the ICNP® classification.

■ Tab. 1. Pain assessment according to C-HOBIC, terminology for the area of continuous comprehensive care and long-term care

C-HOBIC	Assessment obtained by the patient	Diagnosis according to ICNP®
Pain – Frequency: Rating over the last 7 days	2 – pain every day	Pain [10023130]
Pain – Intensity:	1 – mild pain	Pain [10023130]

[16]

■ Tab. 2. Assessment of functional status (ADL scale) according to C-HOBIC, terminology for acute care

C-HOBIC	Assessment obtained by the patient	Diagnosis according to ICNP®
Bathing	4 – assisting in a wide range	Impaired ability to bath [10000956]
Personal hygiene	3 – limited assisting	Impaired ability to perform hygiene [10000987]
Walk in the room	5 – assisting to the maximum scope	Impaired walking [10001046]
Transfer toilet	4 – assisting in a wide range	Impaired ability to transfer [10001005]
Toilet use	1 – only initial help	Impaired self-toileting [10000994]
Bed mobility	1 – only initial help	Impaired mobility in bed [10001067]
Eating	0 – independent	Able to feed self [10028253]

[16]

■ Tab. 3. C-HOBIC fatigue assessment, terminology for all areas of care

C-HOBIC	Assessment obtained by the patient	Diagnosis according to ICNP®
Fatigue	3 severe – due to decreased energy, is unable to start daily activities	Fatigue [10000695]

[16]

■ Tab. 4. Care plan

DIAGNOSIS 1 – altered blood pressure [10022954]			
INTERVENTIONS (A/IC)	MEANS (M)	TIME (T)	
controlling [10005142] documenting [10006173] treating [10020133] measuring [10011813] preventing [10015620] administering prophylactic treatment [10001827] continuous surveillance [10005093] reporting status to interprofessional team [10042645] measuring blood pressure [10031996]	interprofessional team [10039400] cardiac monitor [10003873] monitoring device [10012177] medication [10011866]	perinatal period [10026038]	
OUTCOME: blood pressure within normal limits [10027647]			
DIAGNOSIS 2 – hypovolaemia [10042020]			
INTERVENTIONS (A/IC)	MEANS (M)	LOCATION (L)	TIME (T)
documenting [10006173] administering prophylactic treatment [10001827] continuous surveillance [10005093] blood therapy [10039311] monitoring blood oxygen saturation using pulse oximeter [10032047] assessing cardiac status using monitoring device [10002706] reporting status to interprofessional team [10042645] collaborating with interprofessional team [10039416] measuring blood pressure [10031996] measuring heart rate [10036826] medication handling [10040708] managing fluid therapy [10042096]	venous cannula [10020677] cardiac monitor [10003873] drip [10006295] first aid [10007944] blood product [10003357] pulse oximeter [10032551] haemostatic agent [10008983]	uterus [10020547] intrauterine route [10010779]	postpartum period [10025906]

■ cont. Tab. 4. Care plan

OUTCOME: effective electrolyte balance [10033709]		
DIAGNOSIS 3 – impaired circulatory system function [10047136]		
INTERVENTIONS (A/IC)	MEANS (M)	TIME (T)
documenting [10006173] controlling [10005142] treating [10020133] measuring [10011813] administering prophylactic treatment [10001827] continuous surveillance [10005093] monitoring blood pressure [10032052] monitoring blood oxygen saturation using pulse oximeter [10032047] assessing tissue perfusion [10030775] assessing cardiac status using monitoring device [10002706] reporting status to interprofessional team [10042645] collaborating with interprofessional team [10039416] measuring heart rate [10036826] measuring body temperature [10032006]	first aid [10007944] pulse oximeter [10032551] interprofessional team [10039400] cardiac monitor [10003873] monitoring device [10012177] medication [10011866]	postpartum period [10025906]
OUTCOME: effective circulatory system function [10028380]		
DIAGNOSIS 4 – lactation problem [10029943]		
INTERVENTIONS (A/IC)	MEANS (M)	
advocating for breastfeeding [10039542] collaborating with patient on breastfeeding plan [10039574] motivating [10012242] milking [10012079] stimulating [10018842] evaluating breastfeeding [10039561] evaluating breastfeeding plan [10039557] initiating breastfeeding [10039428] postpartum breastfeeding assessment [10039395] counselling about breastfeeding [10035229] promoting exclusive breastfeeding [10039437] supporting breastfeeding [10032816] reinforcing capabilities [10026436] teaching about feeding technique [10045411]	nurse [10013333] electric milk pump [10006662] instructional material [10010395] breastfeeding education [10039463] feeding technique [10007819] motivational interviewing technique [10038634]	
OUTCOME: effective breastfeeding [10001411]		
DIAGNOSIS 5 – self-care deficit [10023410]		
INTERVENTIONS (A/IC)	MEANS (M)	LOCATION (L)
mobilising [10012120] increasing activity tolerance [10024884] assisting with mobility [10036508] assisting with self-care [10035763] teaching about self-care [10045014] assessing needs [10033368] assessing coping [10002723] promoting self-care [10026347] promoting family support [10036078] ensuring continuity of care [10006966]	nurse [10013333] health aide service [10046166] care plan [10003970] assessment tool [10002832]	hospital [10009114]

■ cont. Tab. 4. Care plan

OUTCOME: able to perform self-care [10025714]			
DIAGNOSIS 6 – pain [10023130]			
INTERVENTIONS (A/IC)	MEANS (M)	LOCATION (L)	
treating [10020133] relieving [10016716] administering pain medication [10023084] evaluating response to pain management [10034053] teaching about perinatal care [10045165] assessing pain [10026119] managing withdrawal symptom [10038718] applying cold pack [10036468]	analgesic [10002279] cold pack [10004519] medication [10011866] nurse [10013333]	perineum [10014340]	
OUTCOME: reduced pain [10027917]			
DIAGNOSIS 7 – risk for infection [10015133]			
INTERVENTIONS (A/IC)	MEANS (M)	LOCATION (L)	TIME (T)
monitoring signs and symptoms of infection [10012203] teaching family about preventing infection [10036928] assessing signs and symptoms of infection [10044182] preventing infection [10036916] disinfecting [10006044]	urinary catheter [10020373] aseptic technique [10002639]	urinary bladder [10020360] perineum [10014340]	postpartum period [10025906]
OUTCOME: no infection [10028945]			
DIAGNOSIS 8 – risk for impaired parent-child attachment [10027203]			
INTERVENTIONS (A/IC)	MEANS (M)	LOCATION (L)	TIME (T)
milking [10012079] initiating breastfeeding [10039428] collaborating with patient on breastfeeding plan [10039574] supporting breastfeeding [10032816]	electric milk pump [10006662] feeding device [10007803] food [10008089] skin to skin technique [10035357]	midwifery clinic [10012033]	postpartum period [10025906] new born period [10013194]
OUTCOME: effective caregiver child attachment [10028658]			
DIAGNOSIS 9 – difficulty performing breastfeeding [10001098]			
INTERVENTIONS (A/IC)	MEANS (M)	LOCATION (L)	TIME (T)
milking [10012079] initiating breastfeeding [10039428] collaborating with patient on breastfeeding plan [10039574] supporting breastfeeding [10032816] teaching about breast care during postpartum period [10032885]	supporting device [10019157] electric milk pump [10006662] breastfeeding education [10039463] feeding device [10007803] food [10008089]	midwifery clinic [10012033]	postpartum period [10025906]
OUTCOME: Impaired infant feeding behaviour [10001196]			

DISCUSSION AND CONCLUSIONS

1. The applied procedures based on the algorithm for postpartum hemorrhage management in force in Poland (Recommendations of the Polish Society of Gynecologists and Obstetricians) contributed to the stabilization of the patient's condition, and the completion of pregnancy along with the monitoring of vital parameters reduced the possibility of preeclampsia as much as possible.
2. Early identification of the risk among a wide range of predisposing factors is of fundamental importance in prevention, treatment and providing the patient with care in a highly specialized center with the 3rd level of reference.
3. Staff cooperation is based on immediate action to prevent loss of health or life to the mother and/or fetus, and the ability to work in the team has a positive impact on the therapeutic process.
4. Implementing the ICNP® classification for midwifery care is a pillar in building a unified nursing communication

system, which has an impact on emphasizing the essence of the nurse and midwife professions around the world. The terminology mentioned in this dissertation is only a proposal for the use of ICNP® for a specific care entity.

5. Currently, there are doubts among medical personnel regarding the appropriateness of implementing ICNP in everyday midwifery practice. The resistance of the community likely stems from fear of change and temporary reorganization. It is crucial to raise awareness not only among personnel but also among those shaping health policies and to emphasize that only by maintaining professional documentation can we prove the importance and measurable value of our work. Using a unified language elevates the profession, facilitates communication between departments and healthcare units. Then, it would only be necessary to conduct training on the use of the ICNP terminology. Perhaps the most significant challenge is the pricing of nursing and midwifery services, as this would require financial investment from both the service provider and the payer.

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Manuscript received: 15.07.2024

Manuscript accepted: 01.10.2024