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ORIGINAL

The role of the nurse in the care of a post-operative cesarean patient with HELLP syndrome in the gynecology and obstetrics service of a National Hospital, 2022

Rol de la enfermera en paciente post operada por cesárea con síndrome de hellp en el servicio de ginecoobstetricia de un Hospital Nacional, 2022

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ABSTRACT

Pregnancy with hellp syndrome is life-threatening, it appears in 5-9 out of every 1000 pregnancies and in 10-20% of cases with severe preeclampsia, it causes the breakdown of red blood cells, causing liver problems , bleeding and blood pressure. The objective of this study is to manage nursing care for a patient with síndrome of hellp and hemoperitoneum with pelvic hematoma in the obstetrics-gynecology service. The present study is a research with a qualitative approach, clinical case type, study subject female, 21 years old. The nursing care process was used as a method, the assessment guide of Marjorie Gordon's 11 functional patterns was applied, by which altered patterns were found, formulating the nursing diagnoses: Decreased cardiac output, Acute Pain and CP: Shock hypovolemic. The activities were executed in a timely manner, the evaluation was through the difference in baseline and final scores of the indicators. We can conclude that hellp syndrome is a hypertensive disorder of pregnancy, however, the complication of this post-cesarean patient is hemoperitoneum with pelvic hematoma, timely nursing care against this was the main axis in the patient's restoration. It is concluded that, according to the problems identified in the patient, the nursing care process was managed in its five stages, improving the patient's health status, but the survival and success of the treatment provided depends on the timely identification of the problems and appropriate choice of treatment.

Keywords: Role; nurse; cesarean section; Hellp syndrome.

RESUMEN

El embarazo con síndrome de hellp pone en riesgo la vida, aparece en el 5-9 de cada 1000 gestaciones y en el 10-20% de los casos con preclampsia severa, provoca la descomposición de los glóbulos rojos de

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la sangre, causar problemas hepáticos, de sangrado y de presión arterial. El objetivo del presente estudio es gestionar el cuidado de enfermería a un paciente con síndrome
de hellp y hemoperitoneo con hematoma pélvico en el servicio de ginecoobstetricia. El presente estudio es una investigación con enfoque cualitativo, tipo caso clínico, sujeto de estudio mujer de 21 años de edad. Se utilizó como método el proceso de atención de enfermería, se aplicó la guía de valoración de los 11 patrones funcionales de Marjorie Gordon, por el cual se encontraron patrones alterados formulándose los diagnósticos de enfermería: Disminución del gasto cardiaco, Dolor Agudo y CP: Shock hipovolémico. Se ejecutaron las actividades oportunamente, la evaluación fue mediante la diferencia de puntuaciones basales y finales de los indicadores.
Podemos concluir que el síndrome de hellp, es un trastorno hipertensivo del embarazo, sin embargo, la complicación de este paciente poscesareada es el hemoperitoneo con hematoma pélvico, los cuidados de enfermería oportunos frente a ello fueron el eje principal en la restauración del paciente. Se concluye que, de acuerdo a los problemas identificados en la paciente, se gestionó el proceso de atención de enfermería en sus cinco etapas, mejorando el estado de salud de la paciente, pero la sobrevida y el éxito del tratamiento proporcionado depende de la identificación oportuna de los problemas y adecuada elección del tratamiento.

Palabras clave: Rol, enfermera; cesárea; síndrome de Hellp.

INTRODUCTION

Worldwide, hypertensive disorders of pregnancy affect 10% of all pregnancies, with 0.1% - 0.9% affected by HELLP syndrome (HS). This complication has a high maternal mortality rate of 1-24% and a fetal mortality rate of 7-34%. In Latin America, 27.6% of women with preeclampsia present with HELLP syndrome, with a mortality rate of 14% (Bracamonte, 2018).

Gestational hypertensive syndromes represent one of the leading causes of maternal deaths worldwide; among these is HSS, which is a condition that can occur in some women towards the end of pregnancy, generally when they present preeclampsia or eclampsia. However, it can also occur after childbirth. (Galarza 2020).

In Peru's gynecology services in public hospitals from 2021 to 2022, maternal mortality increased by 45% and 65% compared to 2019, with hypertensive disorders accounting for 30% and 21% due to hemorrhage, ranking first and second among direct causes, with hemolysis, thrombocytopenia, increased liver enzymes

liver enzymes and low platelet count (Office of Epidemiology and Environmental Health, 2022).

Help syndrome (HS) is a multisystemic complication of pregnancy where hemolysis (breakdown of red blood cells), elevated liver enzymes (causing damage to liver cells), thrombocytopenia (low platelet count), as well as proteinuria, edema, nausea, vomiting, headache, pain in the right upper quadrant of the abdomen, blurred vision, bleeding, convulsions. Of unknown etiology, it has been affected by genetic, immunological, and environmental factors. It is considered a complication of severe preeclampsia, eclampsia (Bracamonte, 2018).

Multiple and varied severe complications have been identified, including hemorrhages, bleeding, anemia and hypotension, where more than 50% have required blood transfusion and blood products, increasing the risk of acute renal failure (8%), disseminated intravascular coagulation (21%), placental abruption (16%), cortical blindness, retinal detachment (1%), liver rupture (1%), associated with postpartum hemorrhage, pulmonary edema (6%), cerebral edema and subarachnoid hemorrhage and death; data based on a study of 437 women with HS (Zapata Díaz, 2020).

Retroperitoneal hematoma is the accumulation of blood in the virtual space between the posterior parietal peritoneum and the elements of the posterior abdominal wall. It can accumulate up to 3000ml

of blood, triggering hypovolemic shock that must be treated immediately. Although rare, it has a high mortality rate after a cesarean section if it is not recognized and treated in time (Calderón León, 2021).

About the clinic, there may be an initial lack of symptoms until the sudden appearance of intense abdominal pain (in the epigastrium and right hypochondrium, sometimes radiating to the back and flanks), signs of hypoperfusion or acute anemia, hypovolemic shock, palpable lumbar mass, fever, hematuria, nausea, vomiting, and acute fetal distress. Computed axial tomography informs us of the degree of compression of adjacent structures in the presence of hemoperitoneum, allowing the etiological diagnosis to be established. Treatment is based on the patient's hemodynamic status in case of instability, volume replacement, and correction of coagulation disorders, with emergency surgery being indicated even without a diagnosis (Pacheco Romero, 2016).

Surgical management in an exploratory laparotomy ranges from hematoma evacuation, compression with pads, embolization, and the application of hemostatic material (Godoy, 2020).

Preventive measures are enabling Peru and the Americas to address the most frequent causes of maternal morbidity and mortality; these measures include good prenatal care and the specialization of nursing professionals from primary care, identifying and referring cases in time to avoid severe complications, to specialized care (Pacheco Romero, 2016).

In nursing care, it is essential to recognize the need for the help of the person dependent on care through monitoring, identification of complications for their timely care, and preventing further complications until the patient's recovery. (Milián García, 2023)

The nursing care process is the fundamental scientific tool of the nurse. Therefore, their actions have a scientific theoretical basis in the science that underpins nursing and cannot be empirical care. This process guarantees the quality of nursing care (Cayetano Fernández-Sola, 2020).

The purpose of this paper is to report on the care of a patient with HS and its complications in the specific case of our patient in whom the pregnancy had to be terminated with an emergency cesarean section due to HS, with gestational liver disease, altered coagulation profile, cholestatic syndrome. She went to the PICU and once stabilized, she went to gynecology and obstetrics; on the eleventh day of her hospitalization, she presented hypovolemic shock as a result of active bleeding, being managed by the nursing professional, going up to emergency SOP for presenting hemoperitoneum, in this situation is when the patient is addressed for specialized care in harmony with the interdisciplinary health team.

We emphasize the importance of specialization where the highly trained licensed nurse has the knowledge, skill, and attitude to demonstrate knowledge, know-how, and how to do things with a humanistic and comprehensive approach in response to the demand for quality care in gynecological and obstetric nursing (Paz-Pascual, 2020).

METHODS

The present study had a qualitative approach, a single clinical case type; the methodology was the nursing care process, which is the method that allows us to provide care in a rational, logical, and systematic way to a patient through a comprehensive analysis. The subject of the study is a 21-year-old patient who has undergone surgery for HELLP syndrome, severe anemia, a coagulation disorder, hemoperitoneum with pelvic hematoma, hypokalemia, and liver failure, selected at the convenience of the researchers. The assessment used observation, interviews, and a documented review (clinical history). An instrument based on Marjorie Gordon's 11 functional patterns was used as an assessment guide. The nursing diagnoses were formulated after critically analyzing the significant data, considering NANDA I taxonomy II. The NOC and NIC taxonomies were used for the planning stage. After the nursing care delivery stage, the process was completed with the evaluation stage, which was carried out by comparing the final and baseline scores.

Nursing Care Process Assessment

General Data. Name: M.N.F. Sex: Female Age: 21 years

Nursing care days: 6 hours.

Assessment date: 03/14/2022 (11th day of hospitalization)

Reason for admission: Young adult patient, 21 years old, Primigravida at 38.5 weeks of gestation by ultrasound; she comes in as an emergency, reporting nausea and vomiting, general malaise, and chills; she says that a few days before, she had been very thirsty, that no matter how much water she drank she was not satisfied, she urinated little about what she drank and the swelling of her feet increased. Icteric skin and mucous membranes are observed, edema of the lower limbs, BP 130/80 mmHg, T 37.8 C°, being hospitalized with Dx: doctor 38-week gestation by ultrasound, Febrile Sind of EAD, Jaundice of EAD, Coagulation Disorder. Assessed by different specialists who decide to terminate the pregnancy. She goes into emergency OPS with a diagnosis of Hellp Syndrome, Gestational Hepatopathy, and Altered Coagulation Profile, then goes to the Intensive Care Unit, stabilized and referred to the obstetrics and gynecology department for continued monitoring and evolution.

Assessment according to Functional Health Patterns.

Functional Pattern I: Perception - Health Control.

A 21-year-old patient, Primigravida, was operated on 11 days ago for Hellp Syndrome at 38.5 weeks of gestation by ultrasound. Presented cholestatic syndrome on emergency admission and presented severe anemia in pregnancy, coagulation disorder, hypokalemia, and liver failure.

Functional Pattern II: Sexuality/Reproduction.

A female patient presented with slight bleeding at the change of shift; during the shift of care, she presented active hemorrhage.

Functional Pattern III: Metabolic Nutrition.

A female patient with decreased appetite, at times, reports feeling thirsty and nauseous. A distended, globular abdomen is observed with the presence of a mass. The surgical area is clean with minor bleeding; however, there is pain on contact.

Functional Pattern IV: Activity - Exercise.

Patient presents generalized edema in lower and upper limbs, blood pressure altered in the last shifts, currently presents 90/80 mmhg, hematocrit levels are decreased (Hg 3.8mg/dl) according to shift results, controlled for previous hemorrhage, presents medical indication for the day of 9% sodium chloride 500cc by jet then at 60 drops per minute, 3.5% polygeline 01 vial by jet, transfusion of 2 blood packs, transfusion of 2 packs of fresh frozen plasma, appears very weak, has two patent peripheral lines in the upper limbs (right and left). NIV is ventilating her at 23 per minute; at times, she reports difficulty breathing. Saturation: 93% without ventilatory support, 97% with ventilatory support.

Temperature: 36°. Capillary filling <2.

Functional Pattern V: Relationships - Role.

The young adult patient is Primigravida, a third-year law student financially dependent on her parents. The father of her baby is absent, so she says she will be a single mother. Her primary source of support is her family.

Functional Pattern VI: Perceptual - Cognitive.

The patient reports abdominal pain that has been gradually increasing; on the VAS scale assessment, she refers to 7/10; she is restless and tearful; she says: One moment, I feel like I am going to faint, she says she feels weak.

Functional Pattern VII: Elimination.

The patient has irregular bowel movements (once every two days), diuresis is decreased according to the previous shift report and presented negative BH on the previous shift. The patient has a bladder catheter.

Functional Pattern VIII: Rest - Sleep.

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The patient presents irregular sleep during the night (sleeps 3 to 4 hours at night) and reports: "I cannot sleep straight because I worry about how my baby is. I have been hospitalized for so many days, and they tell me I have to keep staying. So many things have happened to me and keep happening to me. I feel tired when I wake up."

Pattern IX: Values and Beliefs.

She says she believes in God and asks for help to pray for her recovery.

Functional Pattern X: Self-Perception - Self-Concept.

The patient expresses uncertainty about what has happened and what is still happening to her. I am swollen. I need to ask for help with my needs. I do not want to bother anyone, but I would if I could take care of myself. I have a drip and this tube. She looks sad and cries.

Functional Pattern XI: Adaptation - Tolerance to the situation and to stress.

The patient reports that I feel worried about my health and my baby even when I am hospitalized.

Prioritized nursing diagnoses

First Diagnosis.

Diagnostic label: (00029) Decreased cardiac output

Defining characteristics: tachycardia, hypotension, edema, fatigue, cold, clammy skin, dyspnea, oliguria, capillary refill >2', psychomotor agitation.

Related factors: changes in preload and afterload.

Diagnostic statement: Decreased cardiac output r/c changes in preload and afterload and/p tachycardia, hypotension, edema, fatigue, cold, clammy and moist skin, dyspnea, oliguria, capillary refill >2', psychomotor agitation.

Secondary diagnosis.

Diagnostic label: (00132) Acute pain

Defining characteristics: Verbalization of pain VAS: 7 in the abdomen and around the surgical wound, the facial expression of pain, antalgic position, tears.

Related factors: Biological harmful agents

Diagnostic statement: (00132) Acute pain r/c biological injurious agents and/or verbalization of pain VAS: 7 in the abdomen and around the surgical wound, the facial expression of pain, antalgic position, tears.

Third diagnosis.

Diagnostic label: PC: hypovolemic shock.

Definition: This is the leading cause of death, producing hemodynamic instability, decreased tissue perfusion, organ damage, and death (Rubio & Esquerra, 2022).

Defining characteristics: history of bleeding, hemoglobin results: 3.6 mg/dl, generalized weakness, pallor.

Planning

First diagnosis.

Decreased cardiac output (00029)

Nursing outcomes.

NOC [0402] Effectiveness of the heart pump.

Indicators:

040001 Systolic blood pressure 040019 Diastolic blood pressure 040002 Heart rate

040006 Peripheral pulses

040013 Peripheral edema 040023 Dyspnea at rest. Nursing interventions.

NIC [4150] Hemodynamic regulation. Activities:

415001 Perform a comprehensive assessment of the hemodynamic status (blood pressure, heart rate, peripheral pulses, as appropriate).

415002 Determine the volume status (if the patient is hypovolemic due to hemorrhage).

415003 Determine the perfusion state (if the patient is cold, warm, or hot).

415004 Monitor the effects of medication (administer inotropics according to medical indication).

415005 Monitor the patient's intake and output, diuresis, and weight. 415006 Evaluate the effects of fluid therapy.

Second diagnosis. Acute pain (00132) Nursing outcomes. NOC [2102] Pain level Indicators:

210201 Referred pain

210204 Duration of pain episodes 210206 Facial expressions of pain

210225 Tears

Nursing interventions.

NIC [1410] Pain management: acute Activities:

141001 Carry out a comprehensive assessment of the pain, including location, onset, duration, frequency, and intensity, as well as the factors that alleviate or exacerbate it.

141002 Monitor the pain using a viable and reliable measurement tool. 141003 Notify the doctor that the pain does not respond to the prescribed analgesic treatment,

worsening during the shift.

141004 Prepare the patient for diagnostic imaging.

141005 Prepare the patient for admission to the operating room for exploratory laparotomy, abdominal cavity lavage, retroperitoneal hematoma drainage, and hysterotrophy.

141006 Provide accurate information to the family about the patient's pain and the surgical procedure the patient will undergo.

Third diagnosis.

CP: Hypovolemic shock

Nursing outcomes.

NOC [0402] Severity of blood loss.

Indicators:

0401306 Abdominal distension

041307 Postoperative hemorrhage

041308 Decrease in systolic blood pressure. 041309 Decrease in diastolic blood pressure. 041311 Increase in apical heart rate.

041316 Decrease in hemoglobin.

Nursing interventions.

NIC [4030] Administration of blood products

403001 Verify doctor's orders: 500cc of 9% sodium chloride, 60 drops per minute, 01 vial of 3.5% polygeline or by drip, two packed red blood cells, and two fresh frozen plasma.

403002 Verify that the patient, blood group, Rh group, unit number, and date are correct, and record according to protocol.

403003 Perform two peripheral IV lines. 403004 Monitor vital signs during transfusion. 403004 Record the volume transfused.

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Table 1. Execution of the intervention hemodynamic regulation for the diagnosis Decrease in cardiac output.

Intervention: Hemodynamic regulation .		
Date	**Time**	**Activities**
18/02/2023	7:30 am	A thorough assessment of the hemodynamic state was carried out (blood pressure, heart rate, peripheral pulses, as appropriate).
		The volume status was determined (whether the patient is hypovolemic due to hemorrhage).
	7:40 am	The perfusion status was determined (whether the patient is cold, lukewarm or hot).
		The effects of the medication were monitored.
	7:40 am	
		The patient's intake and output, urine output and weight were monitored.
	7:50 am	
	8:00am-12:00pm	
		The effects of fluid therapy were evaluated.
	12:00 pm	

Source: Prepared by the authors.

Table 2. Implementation of the acute pain management intervention for the diagnosis Acute Pain.

Intervention: Acute pain management.		
Date	**Time**	**Activities**
18/02/2023	**7:30 am**	An exhaustive assessment of the pain was carried out, including its location, onset, duration, frequency and intensity, as well as the factors that alleviate or exacerbate it.
		The pain was monitored using a viable and reliable measurement tool.
		The doctor was notified that the pain did not respond to the prescribed analgesic treatment and was getting worse during the shift.
	7:30 am	The patient was prepared for diagnostic imaging.
	8:00 am	
		The patient was prepared for admission to the operating room for exploratory laparotomy, abdominal cavity lavage, retroperitoneal hematoma drainage and hysterotrophy.
	10:00 am	
		Accurate information was provided to the family about the patient's pain and the surgical procedure to be performed on the patient.
	12:00 pm	
	12:pm am	

Source: Author's own creation.

Table 3. Execution of the blood product administration intervention for the CP: Hypovolemic Shock.

Intervention: Administration of blood products		
Date	**Time**	**Activities**
18/02/2023	9:00 am	The doctor's orders were verified: 9% sodium chloride 500cc by jet then at 60 drops per minute, 3.5% polygeline 01 vial or by jet, transfusion of 2 packed red blood cells, transfusion of 2 units of fresh frozen plasma.
	9:00 am	The patient, blood group, Rh group, unit number and date were verified as correct and recorded according to protocol. Two peripheral IV lines were established.
	9:00 am	Vital functions were monitored during the transfusion. The volume transfused was recorded.
	9:00 am	
	12:00 pm	

Source: Author's own creation.

RESULTS

Result: Cardiac pump effectiveness.

Table 4. Baseline and final scores for the cardiac pump effectiveness indicators.

Indicators	Baseline score	Final score
Systolic blood pressure	**2**	**3**
Diastolic blood pressure	**2**	**3**
Heart rate	**2**	**3**
Peripheral pulses	**3**	**3**
Peripheral edema	**3**	**3**

Source: Author's own creation.

Table 4 shows that the mode of the heart pump effectiveness outcome indicators selected for the diagnosis of decreased cardiac output before nursing interventions was 2 (substantial deviation from the

normal range), after the interventions the mode was 3 (moderate deviation from the normal range), corroborated by the improvement in vital signs. The change score was +1.

Table 5. Baseline and final scores for the outcome indicators Pain level.

Indicators	Baseline score	Final score
Referred pain	**2**	**2**
Duration of episodes of pain	**2**	**2**
Facial expression of pain	**2**	**2**
Tears	**2**	**2**

Source: Author's own creation.

Table 5 shows that the mode of the outcome indicators Level of pain selected for the diagnosis Acute Pain before nursing interventions was 2 (substantial), after interventions on the shift, the mode remained at 2 (substantial), it is for the same reason that the patient is admitted to the operating room when a retroperitoneal hematoma is detected as the cause of the health condition. The change score was 0.

Result: Severity of blood loss.

Table 6. Baseline and final scores for the outcome indicators Severity of blood loss.

Indicators	Baseline score	Final score
Abdominal distension	**2**	**2**
Postoperative hemorrhage	**2**	**2**
Decrease in systolic blood pressure.	**2**	**3**
Decrease in diastolic blood pressure.	**3**	**3**
Increase in apical heart rate.	**3**	**3**
Decrease in hemoglobin.	**1**	**2**

Source: Author's own creation.

Table 6 shows that the mode of the outcome indicators Severity of blood loss selected for the PC: Hypovolemic shock before nursing interventions was 2 (substantial), after the same, the mode was 3 (moderate), corroborated by the slight improvement in hemodynamic values, it is referred to an emergency intervention. The change score was +1.

In the assessment phase, data collection was obtained from the main source: the patient, as well as from the medical record. Likewise, the physical examination technique of information gathering was used. The information was organized using the Assessment Guide based on Marjory Gordon's eleven Functional Health Patterns. The difficulty in this part was related to the pain, taking into account that she had undergone a caesarean section and the patient reported abdominal pain, the exact point of the pain was not identified.

In the diagnostic phase, the significant data was analyzed according to the NANDA classification, arriving at six nursing diagnoses, of which three were prioritized: Decreased cardiac output, Acute pain and CP: Hypovolemic shock. At this stage there was no difficulty in prioritization.

The planning phase was carried out taking into account the NOC and NIC taxonomies. An analysis was carried out to determine the nursing outcomes (NOC) that best respond to the objective to be achieved with the nursing diagnoses and interventions (NIC). The difficulty in this phase lay in determining the score of the indicators.

In the execution phase, there were no major difficulties due to the expertise in carrying out the activities.

Finally, the evaluation phase made it possible to assess the current status and reorganize the actions.

CONCLUSIONS

The Nursing Care Process is a comprehensive method consisting of 5 stages, whose methodology for providing care to patients is systematic, logical and orderly, helping the professional to provide quality care.

It is important to carry out a correct nursing assessment, which must be complete, objective and precise; taking into account that this will generate the formulation of nursing diagnoses which will guide the planning and fulfillment of objectives for the good of the patient.

The NANDA-NOC-NIC interrelation allows the use of a unified nursing language.

The nursing care provided in the study contributed to timely action to avoid long-term complications in a patient recently diagnosed with hemoperitoneum with pelvic hematoma during the shift of care.

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FINANCING

None.

CONFLICT OF INTEREST

None.

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