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ORIGINAL

Nursing care of a post-partum patient with severe preeclampsia in the obstetrics service of a national hospital

Cuidado de enfermería a paciente poscesareada por preeclampsia severa del servicio de obstetricia de un hospital nacional

Carmen V. Corahua-Torres[1], Cinthia A. Solis-Quispe[1], Sofía D. Vivanco-Hilario[1], María T Cabanillas-Chávez[1], Wilter C. Morales-García[1]

[1]Unidad de Posgrado de Ciencias de la Salud, Universidad Peruana Unión. Escuela de Posgrado, Lima, Perú.

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Corresponding Author
Wilter C. Morales-García

ABSTRACT

Preeclampsia is a multisystem disease with hypertensive symptoms above 140/90 mm Hg which can occur during pregnancy after 0 weeks or in the postpartum period affecting the mother as well as the fetus accompanied by altered proteinuria. The objective was to manage the nursing care process in a pregnant woman with severe preeclampsia. Study with a qualitative approach single case type and as a scientific method of the nursing care process (PAE). The subject of the study was a 31-year-old pregnant woman to whom the 5 stages were applied: the assessment stage using the guide of Marjory Gordon's 11 functional patterns three altered patterns were prioritized: health perception self-perception - self-concept and perceptual - cognitive; With taxonomy II of NANDA-I nursing diagnoses were developed and identified: CP gestational hypertension CR malignant hypertension acute pain and anxiety according to the SSPFR format (signs and symptoms problem related factor/risk factor/associated) . The activities were planned based on the interventions and results of the NOC and NIC classification. In the execution phase the care plan was put into practice continuing with the collection and assessment of data aimed at resolving problems and needs; The evaluation of the activities was given by the difference between the baseline scores and the final score; As results a change score (+1) (+1) (+1) was obtained. In conclusion it was possible to manage the nursing care process by providing specialty and quality care to the patient.

Keywords: Nursing Care; Cesarean Section; Preeclampsia.

RESUMEN

La Preeclampsia es una enfermedad multisistémica con cuadros hipertensivos a más de 140/90 mm Hg que puede ocurrir durante el embarazo después de las 0 semanas o en el periodo del posparto afecta a la madre como al feto acompañada de una proteinuria alterada. El objetivo fue gestionar el proceso de atención de enfermería en una gestante con preeclampsia severa. Estudio con enfoque cualitativo tipo caso único y como método científico del proceso de atención de enfermería (PAE). El sujeto del estudio fue una gestante de 31años a quién se aplicó las 5 etapas: la etapa de valoración utilizando la guía de los 11 patrones funcionales de Marjory Gordon se priorizaron tres patrones alterados: percepción de la salud autopercepción – autoconcepto y perceptivo -cognitivo; con la taxonomía II de NANDA-I se elaboró los diagnósticos de enfermería y se identificaron: PC hipertensión gestacional RC hipertensión maligna dolor agudo y ansiedad según el formato SSPFR (signos y síntomas problema factor relacionado/factor de riesgo/asociado). Se planificaron las actividades en base a las intervenciones y resultados de la clasificación NOC y NIC. En la fase de ejecución se puso en práctica el plan de cuidados continuando con la recogida y valoración de datos dirigida a resolver los problemas y necesidades; la evaluación de las actividades se dio por la diferencia de las puntuaciones basal y el puntaje final; como resultados se obtuvo una puntuación de cambio (+1) (+1) (+1). En conclusión se logró gestionar el proceso de atención de enfermería brindando cuidados de especialidad y de calidad en la paciente.

Palabras clave: Cuidados de Enfermería; Cesareada; Preeclampsia.

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INTRODUCCIÓN

Preeclampsia is a public health problem and one of the leading causes of maternal death. According to World Health Organization statistics, every 3 minutes a woman dies from preeclampsia, approximately 50 000 women die annually. It affects between 3 and 10 % of pregnancies (Velumani et al., 2021).

Hypertensive disorders account for 26 % of maternal deaths in the United States.

Latin America and the Caribbean, in Africa and Asia, 9 %, maternal mortality in developed countries is much lower than in developing countries; however, 16 % of maternal deaths are related to hypertensive disorders (Lopez et al., 2020). On the other hand (Condo-Baque et al. (2018) state that preeclampsia and eclampsia are among the four leading causes of maternal-fetal death.

In addition, in Peru, the National Maternal Perinatal Institute counted 97 maternal deaths between 2007 and 2018, with preeclampsia being the leading cause of death, accounting for 44,3 %. On the other hand, between 2012 and 2018, it attended a total of 1870 cases of maternal illnesses, mainly due to hypertensive disorders of pregnancy, of which 56,6 % (164 cases) included preeclampsia, HELLP syndrome, and eclampsia (Guevara, 2019). According to statistics from the Ministry of Health, 56,7 % of maternal deaths occurred after delivery, 32,5 % during pregnancy, hypertensive disorders (52,8 %), and other hypertensive disorders in pregnancy were associated with 28,6 % (Ministry of Health, 2019).

In Arequipa, an analytical study was carried out in the Gynecology-Obstetrics service of the Goyeneche Hospital in 2018 and 2019. In this study, 103 medical records of pregnant women with the diagnosis of preeclampsia and 103 medical records of pregnant women without the diagnosis of preeclampsia were reviewed.

The maternal age at which it occurred most frequently was between 22 and 27 years (Torres, 2020).

Likewise, in 2022, 151 patients were treated for hypertensive diseases, of which 111 patients were treated for severe preeclampsia, 29 patients had unspecified preeclampsia, and one patient had chronic hypertension (MINSA, 2022).

Preeclampsia is a disorder of pregnancy associated with the appearance of high blood pressure after 20 weeks, with or without protein in the urine; it is an irreversible disease that affects multiple organs, damaging the mother and the fetus; it can occur during pregnancy childbirth and the puerperium (Guevara, 2019). On the other hand, Vaca et (2021) mentioned that preeclampsia is a multisystemic disease of pregnancy characterized by pictures of arterial hypertension ≥ 140/90 mm Hg every 4 hours and proteinuria levels (>300 mg of protein in a 24-hour urine sample) or a proteinuria/creatinine ratio of 0,3 mg/dL.

The exact cause of preeclampsia is unknown, but it is believed that the condition begins with

In the placenta, the organ that nourishes the fetus during pregnancy, new blood vessels form and develop in the first weeks of pregnancy to supply oxygen and nutrients to the placenta. However, when a woman has preeclampsia, these blood vessels do not seem to develop and function properly (Mayo Clinic, 2022).

The pathophysiology of preeclampsia is an enigma. Several theories have been proposed, such as angiogenic imbalance caused by altered remodeling of spiral arteries in the placental basement membrane, which is inadequate and incomplete, oxidative stress, hypoxia, and placental ischemia caused by trophoblastic invasion, which also causes vasoconstriction and damage.

Endothelial failure leads to hepatic or renal failure, which affects the function of all organs (Godoy-Villamil et al., 2023).

Symptoms include Persistent and/or severe headache, blood pressure greater than 140/ 90 mmHg, proteinuria greater than 300 mg/24 hours, elevated transaminases, epigastric pain, nausea, vomiting, plateletopenia, hemolysis, disseminated intravascular coagulation (DIC), creatinine > 1,1mg. /dl, oliguria, psychomotor hyperactivity, sensory disturbance, blurred vision (scotomas), tinnitus, edema of the upper and lower extremities (edema of the face and hands), rapid weight gain may be signs of preeclampsia (Dulay, 2022). Likewise, Lezcano et al. (2019) mention thrombocytopenia, elevated liver enzyme levels, temporary loss of vision, fluid in the lungs, and renal problems.

Factors for preeclampsia are a history of a previous pregnancy with preeclampsia, multiple pregnancies, chronic hypertension, type I or type II diabetes, renal disease, autoimmune disorders, conditions associated with a moderate risk of preeclampsia also include first pregnancy with current partner, obesity, family history of preeclampsia, maternal age 35 years or older, complications in a previous pregnancy, inter gestational period of more than 10 years since the last pregnancy (Herrera, 2018).

For this reason, the most appropriate treatment is the interruption of pregnancy by cesarean section as well as the use of oral and parenteral hypotensive drugs, such as alpha methyldopa, nifedipine, magnesium sulfate, labetalol, hydralazine in case of hypertensive crisis, also in terms of fetal lung maturation is based on corticosteroids (betamethasone) (Carbajal, 2023).

The blue key is a rapid response system to the threat of organ failure or dysfunction, death caused by hypertensive disorders of pregnancy, childbirth, or puerperium (Caisedo, 2022).

Among the complications of preeclampsia are: a) Fetal growth restriction; b) Birth before 37 weeks (IUGR), with developmental delay and cerebral palsy; c) Placental abruption; d) HELLP syndrome; e) Eclampsia, consisting of the appearance of seizures, can occur before, during and after delivery; with damage to target organs (kidney, liver, lungs, heart and brain) (Araujo et al., 2022).

The nursing care process allows comprehensive care to be provided. It is a primary work tool because it generates knowledge to improve patient care and achieve the best quality standards with efficiency, attending to their biopsychosocial needs. The process uses NANDA-I, NIC, and NOC taxonomies to diagnose, plan, and evaluate actions aimed at humanized patient care (Miranda-Limachi et al., 2020).

Finally, the role of the nurse specialist in Obstetrics and Gynecology is essential in the preservation of life, providing humanized and quality care to the patient with severe preeclampsia during pregnancy, delivery, and postpartum through nursing actions based on scientific knowledge to provide dignified, effective and care to obtain a favorable outcome and reduce the risk of maternal and fetal death (Gaona and Mesa-Cano, 2021).

METHOD

The research used a qualitative approach, the type of study was a single case study and the scientific method was the Nursing Care Process (PAE). Naranjo-Hernández et al. (2018) refers that it is the beginning of professional maturity based on a broad theoretical framework that serves as the basis for professional practice to guide patients, families, and communities in human care in a systematic, structured, and logical manner.

The subject of the study was a 31-year-old pregnant woman with the initials L. M. P. L. Hospitalized in the obstetrics service of a national hospital in Arequipa with a medical diagnosis: immediate postoperative severe preeclampsia plus bilateral tubal blockage with a 32-week-old newborn. Care was provided in a 12-hour shift. The information was collected through interviews, observation, documented review of the clinical history, and physical examination during the 3-hour postoperative period. Then, the information obtained was organized using Marjory Gordon's assessment guide by functional patterns, finding altered patterns from which (09) diagnoses were selected, prioritizing 3 of them according to the NANDA - I manual for the nursing intervention chart, and the planning was based on the NOC and NIC taxonomy. The planned activities were carried out, and the fulfillment of the objectives was evaluated according to the indicators, considering the difference between the final score and the baseline score.

Nursing Care Process

Valuation

- General Information: Name: L. M. P. L. Age: 31 years old.
- Service: Obstetrics.
- Medical diagnosis: Immediate postoperative for severe preeclampsia plus bilateral tubal blockage.
- Days of hospitalization: 5 days. Date of assessment: 5/10/2022 Nursing care: 12 hours.
- Reason for admission: Admitted to the obstetrics department for presenting: blood pressure 160/110 mm Hg and edema in lower limbs (++), tinnitus two days ago, headache and epigastric pain.

Assessment According to Functional Patterns

Functional Pattern I: Perception - Health Management. History of illness: With hypertensive symptoms that she presented in the emergency room with a P.A: 160/110 mm Hg, she denies diabetes mellitus, mentions that she has gastritis, presented urinary tract infection at 3 months of pregnancy, and did not receive treatment, refers to having all her vaccinations, surgical interventions: cesarean section, has food allergies (tuna), in a regular state of hygiene, performs physical activity sporadically, ingests purified water and sometimes consumes junk food, does not consume alcoholic beverages or tobacco, had a previous hospitalization; for abortion (3-month pregnancy). She is currently suffering from hypertensive symptoms regulated with medication alfamethyldopa 1 gram every 8 hours and nifedipine 10 mg every 8 hours.

Functional Pattern II: Nutritional Metabolic. Female adult patient, the female body temperature of 36,5 °C, anthropometric measurements report weight of 63 kg, height of 1,53 cm, with a body mass index (BMI) of 26,9 kg/m2 with overweight, laboratory tests report a hemoglobin of 10,9 g/dl, RH factor+, warm turgid skin, in a regular state of hydration with the presence of edema: (++), oral cavity with adequate implantation without momentary lesions. Currently, she is not taking anything by mouth because she is in 3era hour post-segmental cesarean section, with a soft, depressible abdomen, painful on palpation with the presence of hydro-aerial noises; there is evidence of an operative wound with dry dressings, without drainage.

Functional Pattern III: Elimination. Intestinal elimination. Patient with stools present every 2 days, characteristic (brown stools), dry consistency, with tendency to constipation.

Bladder elimination: No problems to urinate, yellow urine, cloudy appearance, carrier of bladder catheter No. 14 with date of placement 4/10/22, she is under strict control of hourly diuresis, diuresis: 1500 cc / 12 hours, urine is collected for 24-hour proteinuria test, water balance is performed.

Functional Pattern IV: Activity - Exercise. Respiratory activity: Cesarean patient with spontaneous ventilation and oscillating respiratory rate of 24 per minute; on auscultation: She presents uniform and symmetrical vesicular murmur in both lung fields, without cough, saturation 95 percent, with oxygen by nasal cannula at 2 liters per minute.

Circulatory activity: Heart rate 98 per minute, blood pressure 160/110 mmHg, capillary filling 4'', two peripheral lines in the right upper limb with both N°18 for treatment. Fluid therapy with ClNa 9 % 01000cc plus 20 IUI of oxytocin at 30 drops per minute by another peripheral line perfusing ClNa 9 % 01000cc plus five ampoules of magnesium sulfate by infusion pump at 90 cc/hour.

Self-care capacity activity: Patient with a degree of dependence II, with decreased muscle strength in lower limbs and fatigue when moving due to the effects of spinal anesthesia (mobilization in bed with assistance).

Functional pattern V: Rest - sleep. Post cesarean patient, normally sleeps 8 hours, has trouble sleeping, is anxious and restless due to stressors and the babies' crying. She says "I am worried about baby's health, my feet are swollen and I have a headache", she does not take drugs to sleep.

Functional pattern VI: Perceptive - Cognitive. Patient-oriented in time, space, and person (LOTEP), in regular general condition (REG), with a Glasgow scale of 15, no hearing or language problems, uses glasses, no psychological problems, refers to have a good memory, presents headache, diaphoresis, and pain in the operative wound, VAS numerical scale is performed presenting a score of 7 / 10 (severe pain).

Functional Pattern VII: Self-perception - Self-concept. Emotional state: She is anxious and worried about her baby's health and fearful; she describes herself as not very nagging and says, "I have to recover soon, comply with the treatment to be with my baby" she expresses positive feelings, presents high self-esteem, verbalizes words adequately during the interview, fixes her gaze which

shows attention, she also mentions that her baby gives her strength to face anything, she cooperates with the procedures performed by the health personnel.

Functional pattern IX: Sexuality/Reproduction. Young adult patient, began menarche at age 13, sexual relations at age 19, refers that she had a sexual partner, gestations (3), abortion (1), live births (2), vaginal deliveries (1), cesarean section (1), had a sexual partner, used the quarterly injectable, She is currently in immediate cesarean section with uterine height of 20 cm, at supra pubic palpation she has a pregnant uterus, contracted with good uterine involution and with hematic lochia in regular quantity.

Functional pattern X: Adaptation - Stress tolerance. Patient shows facies of worry, anxiety, fear and nostalgia for her and her baby's state of health, she refers to "I want to I am afraid that my baby's health condition will become more complicated".

Prioritized Nursing Diagnoses

First Diagnosis

- Diagnostic label: Collaborative problem gestational hypertension.
- A disorder whereby the blood vessels have persistently elevated blood pressure; the higher the blood pressure, the more difficulty the heart has in pumping, and its value is above or equal to BP:140/90 mm Hg. (WHO, Hypertension, 2023)
- Causes: Advanced age, genetic causes, overweight, obesity, lack of physical activity, high salt intake, drinking too much alcohol, vascular pathologies (stenosis of the arteries, etc. renal artery), hyperthyroidism, and hypothyroidism.
- Signs and symptoms: severe headache, chest pain, tinnitus, dizziness, shortness of breath, nausea, vomiting, blurred vision or vision changes, anxiety, confusion, ringing in the ears, nosebleeds, changes in heart rhythm, elevated heart rate, localized lower limb edema (++).
- Diagnostic statement: CP. Malignant hypertension.

Second Diagnosis

- Diagnostic label: (00132) Acute pain.
- Defining characteristics: Diaphoresis, expressive behavior, facial expression of pain and verbalizes about intensity using standardized pain scales (7/10).
- Related factor: Injury by physical agent.
- Diagnostic Statement: (00132) Acute pain related to physical agent injury manifested by diaphoresis, expressive behavior, facial expression of pain and verbalizes about intensity using standardized pain scales (7/10).

Third Diagnosis

- Diagnostic label: (00146) Anxiety.
- Defining characteristics: expresses distress, expresses muscle weakness, confusion and expresses concern.
- Related factor: Unknown situation associated with postoperative period.
- Diagnostic Statement: - (00146) Anxiety related to unknown situation associated with postoperative period manifested by expression of distress, expression of muscle weakness, confusion and expression of worry.

Planning

First Diagnosis

Collaborative problem gestational hypertension.

Expected results

NOC [2112]. Severity of hypertension (Moorhead et.al., 2018a). Indicators.

- Headache.
- Tinnitus.
- Increased systolic blood pressure.
- Increased diastolic blood pressure.

NIC [4162] Management of hypertension (Butcher et.al., 2018).

Activities.

- Measure blood pressure to determine the presence of hypertension.
- Provide nursing care according to the type of hypertension obtained.
- Monitor vital signs such as heart rate, respiratory rate, oxygen saturation, temperature and blood tests to identify complications.
- Antihypertensive drugs such as alpha methyldopa 1g orally every 12 hours and nifedipine 10 mg orally every 8 hours were administered.
- Monitor the patient for signs and symptoms of hypertension or hypotension after administration of prescribed medication.
- Instruct the patient to have a healthy dietary pattern.

Second Diagnosis

Acute pain (00132).

Nursing Outcomes

NOC [2102] Pain level Moorhead, et.al;2018b). Indicators

- Referred pain
- Facial expressions of pain.
- Concern.
- Diaphoresis.

Nursing Interventions

NIC [1410] Pain management: acute (Butcher, et.al; 2018). Activities

Assess the characteristics of pain in the patient: location, onset, duration, frequency (7/10) and intensity, factors that relieve and aggravate it.

- Assess the pain scale of the patient according to a numerical scale VAS 1 to 10, exclusive for her age and communication capacity.
- Advise the patient to adopt an antalgic posture.
- Administer subcutaneous analgesic tramadol 100mg every 12 hours according to medical indication.
- Assess analgesic efficacy after each administration.

Third Diagnosis

Anxiety (00146), according to Herdman et al. (2021).

Expected results

NOC [1402] Self-management of anxiety (Moorhead, et.al; 2018c). Indicators

- Monitors the intensity of anxiety
- Identifies anxiety triggers
- Obtains information to reduce anxiety.
- Use relaxation techniques to reduce anxiety.
- Share concerns with others.

Nursing Interventions

NIC [0180] Decreased Anxiety (Butcher, et.al; 2018). Activities

- Try to understand the patient's perspective on stressful situations.
- Create an environment that trust.
- Listen carefully to what the patient expresses.
- Help the patient to identify situations that generate anxiety.
- Instruct the patient on the use of relaxation techniques.

Table 1. Implementation of nursing intervention for the management of hypertension (4162)

Intervention: Management of hypertension		
Date	**Time**	**Activities**
05/10/2022	7:00 am	Blood pressure was measured to determine presence of hypertension.
	7:30 am	Nursing care was provided according to the type of patient hypertension obtained.
	10:30	Vital signs such as heart rate, respiratory rate, oxygen saturation, temperature, and blood, to identify complications.
	11:00 am	Antihypertensives were administered as alpha methyldopa 1g orally. every 12 hours and nifedipine 10 mg orally every 8 hours.
	2:00 pm	The patient was monitored for signs and symptoms of hypertension or hypotension after administration of the prescribed medication.
	5:00 pm	The patient was instructed to have a healthy dietary pattern.

Table 2. Implementation of nursing intervention in the management acute pain (1410)

Intervention: Pain management: Acute		
Date	**Time**	**Activities**
05/10/2022	8:00 am	The characteristics of the patient's pain were assessed: location, onset, duration, frequency (7/10) and intensity, factors that alleviate and aggravate it.

	8:10 am	The pain scale (VAS numerical scale) 1 to 10 was used exclusively for their age and communication .
	10:00 am	The patient was advised adopt an antalgic posture.
	3:00 pm	Analgesic subcutaneously administered tramadol 100mg every 12 hours according to medical indication.
	5:00 pm	Analgesic efficacy was assessed after each administration.

Table 3. Implementation of nursing intervention in anxiety reduction (5820)

Intervention: Reduction of anxiety		
Date	**Time**	**Activities**
05/10/2022	2:30 pm	The patient's perspective on stressful situations was understood.
	3:00 pm	An environment that facilitates trust was provided.
	3:20 pm	We listened attentively to what the patient expressed.
	4:00 pm	The patient was helped to identify situations that generate anxiety.
	5:00 pm	The patient was instructed in the use of relaxation techniques.

Evaluation

Result: Severity of Hypertension

Table 4. Baseline and final score of the outcome indicators severity of hypertension

Indicators	Baseline score	Final score
Headache	3	4
Tinnitus	3	4
Increased systolic blood pressure	3	4
Increased diastolic blood pressure	3	4

Table 4 shows the mode of the outcome indicators of hypertension severity selected for the diagnosis: PC hypertension and CR; before the nursing intervention, the baseline score was 3 (moderate); executing the activities, the mode was 4 (mild), followed by monitoring of vital functions, watching the patient for signs and symptoms of hypertension or hypotension, after administration of medications, assessment of medication side effects, a change score of +1 was achieved.

Result: Pain Level

Table 5. Baseline and final score of outcome indicators pain level

Indicators	Baseline score	Final score
Referred pain.	2	4
Facial expressions of pain	3	5
Concern.	2	4
Diaphoresis	3	~~4~~

Table 5 shows that the mode of the selected pain level outcome indicators for the diagnosis of acute pain before the nursing intervention was 3 (moderate), after performing the activities, the mode was 4 (mild), after the administration the interventions in pain assessment, analgesia administration, postural recommendation, VAS scale assessment and assessment of analgesia efficacy, a change score of +1 was achieved.

Result: Anxiety Self-Management indicators

Table 6 shows that the mode of the selected anxiety self-management outcome indicators for the anxiety diagnosis before the nursing intervention was 3 (sometimes demonstrated); after performing the activities, the mode was 4 (frequently demonstrated), and the mode was 4 (sometimes demonstrated), after administration of interventions in understanding the stressful situation, creating a trusting environment, listening attentively, and teaching relaxation techniques, a change score of +1 was achieved.

Table 6. Baseline and final scores for anxiety self-management outcome indicators

Indicators	Baseline score	Final score
Monitors the intensity of anxiety	2	5
Identifies anxiety triggers	3	4
Obtains information to reduce anxiety.	2	5
Use relaxation techniques to reduce anxiety.	3	4
Share concerns with others.	3	4

RESULTS

For the results in the assessment phase of the PAE, data were collected from the patient as the main source. Interviews, observation, physical examination, and documented review of the medical history were also used as methods of data collection. An assessment guide based on Marjory Gordon's 11 functional patterns of health was used.

During the diagnostic phase, significant analysis of the data according to NANDA - I (2021-2023) was performed, obtaining nine nursing diagnoses, of which three were prioritized: collaborative problem gestational hypertension RC malignant hypertension, acute pain, and anxiety. There was a need to use the problem diagnoses established by Linda Juall Carpenito in her 15th edition because they require multidisciplinary care (Carpenito, 2017).

In addition, in the planning phase, the NOC and NIC taxonomy was considered, and the analysis was performed to determine the nursing outcomes that best relate to the Nursing diagnoses were established, indicators were chosen for each outcome, and then nursing interventions were determined in response to the established outcomes to be evaluated through the scores achieved in each indicator. The difficulty in this phase was determining the outcome's score both in the baseline score and in the final evaluation.

Likewise, in the phase of executing the nursing activities, we put into practice the care plan developed, continued with the collection and evaluation of data, made nursing notes and verbal reports, and updated the care plans, assuming our responsibility in the process for the patient, family, and the health team. There were no major difficulties due to our experience in carrying out the nursing intervention activities.

Finally, the evaluation phase allowed us to make a planned and systematized comparison between the patient's state of health and the expected results. It allowed us to provide feedback at each stage during care provided to the patient in this study. Evaluate allowed us to make a judgment on the results achieved in the patient by comparing it with one or more indicators; for the diagnosis of the collaborative problem of hypertension, a change score of +1 was achieved, followed by acute pain, with a change score of +1, and finally, in the diagnosis of anxiety, a change score of +1 was achieved.

DISCUSSION

PC. Gestational Hypertension

Arterial hypertension is a factor characterized by increased blood pressure and sudden onset. Therefore, it is essential to monitor blood pressure, and the patient should be instructed to lead a healthy life (WHO, 2021). Likewise, hypertensive diseases of pregnancy are widespread complications that cause fetal morbidity and mortality. Cerebrovascular disorders and intrauterine growth retardation are considered a high risk of hypertension during pregnancy; current guidelines treat hypertension when blood pressure >160/110 mmHg is present to normalize blood pressure lower than 140/90 mmHg (Moncloa, 2018).

Malignant arterial hypertension, then, is a clinical picture characterized by rapidly progressive elevation of blood pressure (BP), accompanied by hemorrhages and exudates in the fundus (grade III or IV retinopathy), together with acute diffuse arteriolar injury, rarely accompanied by renal thrombotic microangiopathy (a group of diseases characterized by hemolytic anemia microangiopathy, thrombocytopenia and target organ involvement), caused by endothelial damage in the organism (De La Flor et al., 2022).

MedlinePlus (2019) reports that pregnant women with hypertension are at increased risk for seizures, severe signs and symptoms such as tinnitus, altered blood tests, severe headache, vision changes, abdominal pain, and fetal complications such as placental abruption, preterm labor, and stroke. The patient under study presents with the symptomatology of blood pressure of 160/110 mm Hg and her heart rate elevated at 98 per minute, headache, and epigastric pain.

Likewise, it is very important to know the causes and risk factors of hypertension, its symptomatology, avoid stressful situations, eat a balanced diet, maintain a normal weight, reduce the risk of suffering a stroke, and prevent other diseases (Recabar, 2022).

Moncloa (2018) mentions that hypertension is one of the most common complications of pregnancy and one of the leading causes of maternal and fetal morbidity and mortality. In this sense, nursing care activities aimed at avoiding and preventing this pathology play a vital role.

For the care plan, hypertension severity was considered the primary outcome, and an evaluation scale is presented: severe (1), substantial (2), moderate (3), mild (2), moderate (3), severe (2), moderate (2), moderate (3), and mild (4).

(4) and none (5). According to patient responses, the following indicators were considered: headache, tinnitus, increased systolic blood pressure, and increased diastolic blood pressure (Moorhead et al., 2018g).

The nursing interventions performed were:

Blood pressure (BP) was monitored to determine the presence of hypertension. *Blood* pressure monitoring is decisive and crucial for the diagnosis and management of hypertension. Blood pressure is one of the most important vital constants and refers to blood

pressure (International School of Dietetics Nutrition and Health, 2019a).

The patient was monitored for the risk of signs and symptoms of hypertensive crisis, given that it is a severe increase in blood pressure, which can lead to stroke, requiring immediate treatment to prevent damage to several organs, especially the kidneys, heart, and brain (Savia, 2019).

Vital signs such as heart rate, respiratory rate, oxygen saturation, temperature, and blood tests were monitored*; vital* functions give us information about our state of health, tell us if there is balance in our body, and also act as an alarm when they detect any health problem (Escuela Internacional de dietetic nutrition y Salud, 2019b). Likewise, nursing care was provided according to the type of hypertension obtained, taking blood pressure every 4 hours (current pressure is 140/100mmHg) and monitoring the patient for signs and symptoms of hypertension or hypotension after the administration of medications, which should be communicated to the Physician who will indicate to suspend, decrease or increase the dose.

Prophylaxis was administered with intravenous magnesium sulfate 5 amp in 1000 cc of sodium chloride by infusion pump A 90 cc/hour to prevent the development of eclampsia. The use of oral antihypertensives of first choice, such as methyldopa 1gr orally every 12 hours, a centrally acting adrenergic antagonist inhibiting vasoconstriction, therefore vasodilatation, and/or Nifedipine 10 mg orally every 8 hours, a calcium channel blocker, can generate hypotensive effect and prevent brain damage in the mother (Vargas, 2019).

The patient was monitored for signs and symptoms of hypertension or hypotension after the administration of the prescribed medication. *Care* for patients with hypertension is within the nursing field, and one must be alert to detect variables and determine the importance and effectiveness of actions related to this pathology. Finally, the patient was instructed to have a healthy dietary guideline so that the patient consumes a healthy diet that includes fruits, vegetables, and whole grains, limits foods high in saturated and total fats, limits alcohol, does not smoke, and follows a

In most adults, the low-salt diet should be less than 1500 mg (Bethesda, 2021).

Therefore, the participation of the nursing staff in the control of blood pressure was fundamental for the diagnosis and treatment of arterial hypertension, the monitoring of vital functions, the strict control of admissions and discharges, the assessment of edema in the lower limbs, and the control of hourly diuresis. All these nursing activities were carried out to detect early signs of Hellp syndrome and eclampsia in order to contribute to the reduction of maternal-fetal morbidity.

Acute Pain

It is an irritating sensory and emotional experience that is associated with actual or potential tissue damage, has a sudden and slow onset, and can be mild to severe in intensity, with an early or predictable end and a duration of less than 3 months (Herdman et al., 2021). Likewise, according to Amatriain (2019), pain is a sensory perception, subjective, and with variable intensity.

Next, we mention what Vargas (2019) refers to: acute pain acts as a warning signal of real and upcoming damage, as a protective mechanism of the organism, which is why pain works within the maintenance and/or physical restoration of the person.

The following characteristics: diaphoresis, expressive behavior, facial expression of pain, and verbalization about the intensity using standardized pain scale (7/10) are related to acute pain. There are different causal factors, such as injuries by biological agents, inappropriate use of chemical agents, and injuries by physical agents (Herdman et al., 2021).

In the case of the patient under study, the acute pain is caused by an incision made during surgery, generating injury by a physical agent and being a lesion at the level of the nerve endings of the skin; signals are sent to the pain centers of the brain, which give a response that is expressed by the patient's verbal evidence (Pezantes, 2018a). Pain is not only a symptom but how it affects the quality of life of the puérpera and her activities should be taken into account, especially in the care of her newborn. Pain interferes with activities of daily living (Vicente-Vicente-Herrero et al., 2018a).

In the operative wound, acute pain is characteristic; it is related to the incision made during surgery, being a lesion at the level of the nerve endings of the skin; they send signals to the pain centers of the brain, they give a response that is expressed by the patient's verbal evidence (Pezantes, 2018b). Pain is not only a symptom but how it affects the quality of life of the puérpera, especially in the care of her newborn, should be considered. Pain interferes with activities of daily living (Vicente- Vicente-Herrero et al., 2018b).

López et al. (2020, cited by Allard et al., 2018) in the nursing care process applied to a patient cesarean section for severe preeclampsia associated with acute pain: acute pain occurs in patients undergoing surgery, preexisting disease, or a combination of both. This symptom has psychological and systemic repercussions on the patient, so it should have an analgesic treatment with adequate doses to minimize complications, such as a hospital stay.

The patient under study underwent a segmental cesarean section due to severe preeclampsia, generating a large, causing lesion at the level of the endings.

Nerves present acute pain, manifesting it through verbal expression (Pezantes, 2018c).

For the care plan, pain was considered the main outcome, which presents a double evaluation scale: the first one ranging from severe (1) to none (5) and the second one ranging from severe deviation from normal range (1) to no deviation from normal range (5). According to the patient's answers, the following indicators were considered: referred pain, facial expression of pain, restlessness, and pain grimaces (Moorhead et al., 2018h).

The nursing interventions were:

The characteristics of pain in the patient were assessed, location, appearance, duration, presented score on the VAS scale of (7/10) intense pain and intensity, and factors that relieve and aggravate it, where criteria of intensity and frequency of pain are evaluated, the assessment should be done through validated scales such as the numerical scale VAS, which is used in the adult patient (31years) to assess the pain, this instrument is used by the nursing professional and measures the intensity of pain that has presented

(7/10) (Vicente-Vicente-Herrero et al., 2018).

The patient was recommended to adopt an antalgic posture with the aim of relieving pain. These postures relieve pain and muscle tension, and when combined with respiratory training techniques, they can prevent disease, improve postural alignment, and help the patient recover (Ecomusculo, 2019).

Analgesic tramadol 100mg subcutaneously every 12 hours was administered according to medical indication, taking into account that the patient had undergone a segmental cesarean section where a cut was made in the lower part of the uterus, causing damage to muscle fibers causing acute pain, so tramadol opioid has been prioritized.

This acts on the central nervous system, exerting its analgesic action by a dual mechanism and inhibiting the reuse of noradrenaline and serotonin. Several studies have shown that it is a safe, effective analgesic and is indicated in the treatment of moderate to severe pain, acute or chronic postoperative origin (Arce and Arcos, 2019).

The analgesic efficacy was assessed after each administration to see the satisfaction as a result of analgesia; there is evidence that adequate pain relief decreases postoperative morbidity and reduces hospital stay, increasing the well-being and satisfaction of patients (Vargas, 2020). The nursing care provided was aimed at reducing pain in the patient.

Anxiety

It is the emotional response to a diffuse threat in which the individual anticipates a non-specific danger; it is a physiological defense mechanism to a threat and can generate unpleasant feelings such as worry, irritability, restlessness, or agitation (Herdman et al., 2021). Likewise, anxiety is a feeling of fear and uneasiness that can cause sweating, tension, and heart palpitations. This can be a normal stress response, but for other patients, it can be overwhelming (Bethesda, 2021).

Likewise, the Spanish Marcé Society (MARES, 2019) states that at the psychological level, preeclampsia can lead to an increase in worries and stress, a fact that predisposes to a greater vulnerability to anxiety. For his part, Gallego (2019) mentions that the nursing staff should try to understand the patient's perspective of stressful situations about her disease and that of her premature newborn, as well as the fact of being in a place outside her home.

In the case of the patient under study, anxiety is presented by the situational crisis she is going through, which is evidenced by presenting facies of anguish, confusion, nervousness, worry, and muscle weakness. Generalized anxiety is characterized by excessive worry about various activities and events that are present for more days of the week (Barnhill, 2020). Therefore, when anxiety is not present, there is a lower probability of developing preeclampsia, while there is a higher risk of presenting preeclampsia in patients who develop depression (Santos, 2019).

For the care plan, anxiety self-management was considered the primary outcome, which presents an evaluation scale ranging from never demonstrated (1) to consistently demonstrated (5). According to the patient's responses, the following indicators were considered: monitoring anxiety intensity, identifying anxiety triggers, obtaining information to reduce anxiety, using relaxation techniques to reduce anxiety, and sharing concerns with others (Moorhead et al., 2018i).

The nursing interventions performed were:

The patient's perspective on stressful situations was understood during the interview that was conducted; it was understood that the situations that generate anxiety in the patient (due to her illness and that of her premature newborn), the fact of being in a place outside her home, it is significant to know what the patient's conflict is and the meaning of her symptomatology to make an adequate diagnosis and thus provide an appropriate nursing intervention (Gallego, 2019).

An environment that facilitates trust was provided. Gallego et (2019) refers that the dialogue with the patient took place in a quiet place, without noise with the to foster good communication between the sender and receiver and create a comfortable, private, and calm environment. Likewise, Vargas Celis (2020) indicates that it is important to achieve a degree of trust to be able to know their concerns and thus offer comprehensive care according to their conflict and provide security.

The patient's comments were listened to carefully. Gallego (2019) states that it is essential for the nursing staff to show empathy, warmth, and respect towards the patient. Listening can relieve tensions, allow the patient to share their feelings, and provide emotional support (Pedace, 2017).

The patient was helped to identify situations that generate anxiety; it is essential to assess the state and identify signs and symptoms of anxiety and predisposing factors by asking how she feels and creating a dialogue to act promptly. Finally, the patient was instructed on the use of relaxation techniques; these techniques have no adverse effects and decrease anxiety, as well as improve sleep and other symptoms associated with stress (Rodriguez, 2018). All nursing activities were aimed at reducing anxiety in the post-cessation patient.

CONCLUSIONS

It was possible to manage the PAE as a scientific, systematic, and humanistic method in nursing practice, focused on simultaneously evaluating the progress and changes in the improvement of the patient who underwent cesarean section due to severe preeclampsia in the obstetrics service based on the care provided by the specialist nurse; there were favorable changes in the patient's evolution.

Empowerment of the OB/GYN nurse specialist is important because it strengthens their ability to provide timely, ongoing, quality care, taking into account the conditions of the patient who requires continuous monitoring and active participation in care with the multidisciplinary health team.

The application of the scientific method to the nursing care process is scientifically based tool that allows the organization of the nurse's work in the 5 phases: assessment, planning, diagnosis, execution, and evaluation, which are interrelated using the NANDA--I taxonomy II, NOC and NIC, as well as Linda Juall Carpenito's classification of diagnoses, in order to structure the functions and

continuous care, ordering and structuring the nursing care guides with the activities that make possible the analysis and solution of the situations in which we intervene.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

AUTHORSHIP CONTRIBUTION

Conceptualization: Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofia D. Vivanco-Hilario, Maria T Cabanillas-Chavez, Wilter C. Morales-Garcia.

Data curation: Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofía D. Vivanco-Hilario, María T Cabanillas-Chávez, Wilter C. Morales-García.

Formal analysis: Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofía D. Vivanco-Hilario, María T Cabanillas-Chávez, Wilter C. Morales-García.

Research: Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofía D. Vivanco-Hilario, María T Cabanillas-Chávez, Wilter C. Morales-García.

Methodology: Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofía D. Vivanco-Hilario, María T Cabanillas-Chávez, Wilter C. Morales-García.

Project administration: Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofia D. Vivanco-Hilario, Maria T Cabanillas-Chavez, Wilter C. Morales-Garcia.

Resources: Francisco Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofia D. Vivanco-Hilario, Maria T Cabanillas-Chavez, Wilter C. Morales-Garcia.

Software: Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofia D. Vivanco-Hilario, Maria T Cabanillas-Chavez, Wilter C. Morales-Garcia.

Supervision: Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofia D. Vivanco-Hilario, Maria T Cabanillas-Chavez, Wilter C. Morales-Garcia.

Validation: Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofía D. Vivanco-Hilario, María T Cabanillas-Chávez, Wilter C. Morales-García.

Visualization: Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofía D. Vivanco-Hilario, María T Cabanillas-Chávez, Wilter C. Morales-García.

Editor - original draft: Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofía D. Vivanco-Hilario, María T Cabanillas-Chávez, Wilter C. Morales-García.

Writing - proofreading and editing: Carmen V. Corahua-Torres, Cinthia A. Solis-Quispe, Sofía D. Vivanco-Hilario, María T Cabanillas-Chávez, Wilter C. Morales-García.

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