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ORIGINAL

Nursing care of a patient with twin gestation and preeclampsia in the Gynecology Department of a Lima clinic

Cuidados de enfermería a paciente con gestación gemelar y preeclampsia del Servicio de Ginecología de una clínica de Lima

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ABSTRACT

Preeclampsia is a public health problem and one of the main causes of maternal and perinatal morbidity and mortality, manifested by hypertensive disorders in pregnancy, early diagnosis is essential to reduce complications. With the objective of describing the nursing care in a patient with twin pregnancy and preeclampsia from the gynecology service of a clinic in Lima. The study was carried out with a qualitative approach, single case type, applying the nursing care process (PAE), the assessment guide of the 11 functional patterns of Marjory Gordon in a 33-year-old patient with a 30-year-old twin gestation was used as an instrument. weeks and with preeclampsia. In the results, eight altered functional patterns were identified, prioritizing the sexuality/reproduction pattern: risk of alteration of the maternal-fetal dyad as evidenced by inadequate prenatal care associated with pregnancy complications. The applied interventions were effective, appreciating the decrease in the risks of preeclampsia; however, faced with the problem of complication of the prenatal period: risk of malignant hypertension related to pregnancy, the clinical manifestations were stabilized. In conclusion, it was possible to identify the clinical characteristics of the patient with a twin pregnancy with preeclampsia, as well as the identification and description of the risk factors, which allowed highlighting the importance of nursing care, through the development of a care plan. individualized nursing care to reduce complications in the maternal-fetal dyad, framed in the nursing process that identified problems and risks of complications, and at the same time, allowed timely and quality care to be provided.

Keywords: Nursing Care; Twin Gestation; Preeclampsia.

RESUMEN

La preeclampsia es un problema de salud pública y una de las principales causas de morbimortalidad materno y perinatal, manifestada por trastornos hipertensivos en el embarazo, es elemental el diagnóstico precoz, para disminuir las complicaciones. El objetivo es describir los cuidados de enfermería en paciente con gestación gemelar y preeclampsia del servicio de ginecología de una clínica de Lima. El estudio se realizó con enfoque cualitativo, tipo caso único, aplicando el proceso de atención de enfermería (PAE), utilizándose como instrumento la guía de valoración de los 11 patrones funcionales de Marjory Gordon en paciente de 33 años, con gestación gemelar de 30 semanas y con preeclampsia. En los resultados se identificaron ocho patrones funcionales alterados, priorizándose el patrón sexualidad/reproducción: riesgo de alteración de la díada materno-fetal como se evidencia con los cuidados prenatales inadecuados asociado a complicaciones del embarazo. Las intervenciones aplicadas fueron efectivas, apreciando la disminución de riesgos de la preeclampsia; sin embargo, frente al problema de complicación del periodo prenatal: riesgo de hipertensión maligna relacionado con el embarazo, se lograron estabilizar las manifestaciones clínicas. En conclusion

se logró identificar las características clínicas de la paciente con gestación gemelar con preeclampsia y se identificaron y describieron los factores de riesgo, lo que permitió resaltar la importancia de la atención de enfermería, a través de la elaboración de un plan de cuidados individualizado para reducir complicaciones en la díada materno-fetal, enmarcado en el proceso enfermero que identificó problemas y riesgos de complicación, y, permitió brindar cuidados oportunos y de calidad.

Palabras clave: Cuidado de Enfermería; Gestación Gemelar; Preeclampsia.

INTRODUCTION

Currently, hypertensive disorders in pregnancy present a high risk of morbimortality for the mother and fetus, so it is necessary to diagnose early in order achieve better control and limitation of complications (Salas et al., 2020).

In Peru, preeclampsia accounts for 3 % to 22 % of maternal and perinatal deaths, which makes it the second leading cause of maternal death nationally with 32 %, and it is the first cause at the National Maternal Perinatal Institute of Lima with 43 %. Likewise, between 2012 to 2018, said health institution reported as the first cause of maternal morbidity hypertensive disorders of pregnancy, including preeclamsia with severity criteria, HELLP syndrome and eclampsia, with 56,6 % (Guevara Ríos, 2019).

The Delgado Clinic reports 14682 outpatients seen from 2014 to 2019 with a diagnosis of essential (primary) hypertension (Delgado Clinic, 2019).

In the context of the background of this pathology, Bravo et al. (2021) conducted a study entitled "Nursing care plan in preeclampsia. A case report," concluding that preeclampsia continues to be one of the main causes of maternal morbidity, which can be detected with good prenatal care, blood pressure control, and pregnancy control as prevention.

De La Puente Vaca (2021), in her publication "Importance of nursing care in preeclampsia," concluded that nursing professionals should provide care that includes psychological, social, and physical aspects, encouraging dialogue and active listening to capture each woman's perceptions and needs during her disease process.

Preeclampsia is a pregnancy-induced hypertensive pathology with multisystem involvement that usually occurs after 20 weeks of pregnancy (T. Dulay, 2020).

The pathophysiology is still unknown, however, they state that during pregnancy the spiral arteries, responsible for placental perfusion suffer alterations, resulting low vascular resistance and high tension, altering the endothelial tissue, followed by vascular dysfunction and consequently multiorgan damage, thus originating arterial hypertension, consequently, proteinuria, edema, headache, risk of seizures, visual disturbances, epigastralgia and intrauterine growth (Pereira et al., 2020).

At present, termination/culmination of pregnancy by the most appropriate route is the ideal and conclusive treatment for preeclampsia. However, as long as the clinical criteria of severity indicating the termination of pregnancy are not met, preeclampsia will be managed with expectant management (Guevara Ríos, 2019).

Nursing care in the care of the patient with preeclampsia is based on the execution of the scientific method that allows the nursing professional to address potential and actual problems in a comprehensive, logical and structured manner, comprising the 5 phases: assessment, diagnosis, planning, execution and evaluation (Salas et al., 2020).

The performance of the nursing activities is based on the scientific methodology of the nursing care process because it allows us to execute the interventions to achieve the proposed objectives, to preserve the hemodynamic stability of the patient in her critical health situation. The prioritization of activities determined the corrective management of hypertension episodes and the prevention of maternal-fetal complication risks promptly, with quality and efficacy (Blanco et al,. 2021).

It is important to highlight the link between the research and the present case study because it allows the development of an individualized care plan for the care of the patient with twin gestation of 30 weeks with a diagnosis of preeclampsia, hospitalized in the gynecology department. The application of the prioritized care was effective, achieving stabilization of maternal-fetal hemodynamic function, and avoiding complications that could put her life at risk. Overall, the aim is to strengthen the nursing intervention at through effective care, with quality standards for the satisfaction of the identified needs and rescuing the human, spiritual and transpersonal aspect.

Objectives

Overall objective

To describe the nursing care in patients with twin gestation and preeclampsia.

Specific objectives

To identify the clinical characteristics of the patient with twin gestation and preeclampsia.

To identify and describe the risk factors of the patient with twin gestation and preeclampsia.

To highlight the importance of nursing care in twin gestation and preeclampsia and to reduce complications.

Develop a nursing care plan in twin gestation and preeclampsia, using NANDA taxonomy, NOC, NIC and Lynda Juall Carpenito's collaborative problem manual.

Theoretical framework

Preeclampsia

Preeclampsia is new-onset hypertension or worsening of pre-existing hypertension with proteinuria after 20 weeks of gestation (T.Dulay, 2020). It is a hypertensive disorder that can occur during pregnancy and postpartum and has repercussions on both the mother and the fetus (PAHO, 2019). It becomes a serious condition of pregnancy and represents a major danger as many of its signs are often not evident (Preeclampsia Foundation, 2021).

Causes and risk factors

There is a wide range of conditions that reflect the complexity of the pathological process, classifying them according to:

- Family factors: women with maternal and/or paternal history of hypertension or diabetes, age, race (Villarreal et al,.2020).
- Body mass index and height: elevated BMI is an important risk factor for preeclampsia Guevara Ríos, 2019).
- Pre-existing medical conditions: diabetes before gestation, or other.
- Number of gestations: women who have never gestated have a higher risk of developing preeclampsia.
- Intergene intervaĺ sico: women with prolonged intergene intervaĺ sico can be causative for the development of preeclampsia (Rojas et al., 2019).

History of preeclampsia, use of assisted reproductive technology, infections during pregnancy, paternal factors and maternal habits are also part of the classification of risk factors (Mayo Clinic, 2022).

Pathophysiology of preeclampsia

Preeclampsia is a disease that occurs only during or after pregnancy and caused by activation of the vascular endothelium, probably due to placental ischemia, caused by a defect in trophoblast invasion of the uterine spiral arteries. Genetic, immunological and biochemical causes are mentioned to explain this defect in trophoblast implantation with associated placental ischemia. Due to the activation of the endothelium, various chemical mediators are released, which affect the functioning of all organs and systems, causing syndromes associated with preeclampsia (Velumani Et. at., 2022).

Several factors are involved, the most important of which is the establishment of placental insufficiency, which is responsible for the induction of an antiangiogenic state in the pregnant woman and the development of endothelial dysfunction in various organs that triggers the clinical manifestations of the disease (Guevara Ríos, 2019).

Classification of preeclampsia

Preeclampsia without severity criteria: this is one that has only hypertension greater than or equal to 140/90 mmHg but less than 160/110 mmHg, without hematologic, renal, hepatic, pulmonary or neurologic dysfunction, and without evidence of fetal damage (Velumani et al., 2022).

Preeclampsia with severity criteria: preeclampsia evolves into severe complications such as acute pulmonary edema, renal failure, hypertensive encephalopathy with cerebral hemorrhage, retinal detachment, premature placental abruption, hepatic subcapsular hematoma or hepatic rupture, HELLP syndrome, and death in the pregnant woman, fetus or newborn (Guevara Ríos, 2019).

Clinical manifestations of preeclampsia

Preeclampsia Foundation (2021) presents the following clinical manifestations:

- Arterial hypertension is one of the main clinical manifestations. Proteinuria occurs when proteins leave the blood and are poured into the urine. Edema, which is the accumulation of excess fluids, sudden weight gain of 900 grams or more in one week, nausea and/or vomiting, and abdominal (stomach area) and/or shoulder pain are also mentioned.
- Likewise, other literature mentions back pain, headache, visual disturbances, hyperreflexia, increased heart rate, confusion, increased anxiety, shortness of breath or chest pain, when any of these abnormal symptoms appear for the first time, it may indicate blood pressure or in extreme cases accumulation of fluid in the lungs (pulmonary edema) Velumani et al., 2022).

Management of preeclampsia

The management of preeclampsia begins with the evaluation of the health status of the pregnant woman and the fetus, performing a clinical evaluation of the neurological, respiratory, cardiovascular, hematological, biochemical and renal functions, as well as an evaluation of fetal well-being with electronic fetal monitoring, biophysical profile and Doppler study of theand uterine arteries. Pregnant women with preeclampsia in most cases require hospitalization for adequate treatment of hypertension, prevention of seizures, optimization of intravascular volume, maintenance of adequate arterial oxygenation, early detection and/or treatment of complications (Department of ObstetricsUC of Chile, 2020).

Management of preeclampsia without severity criteria.

Relative rest, normocaloric, normoproteic and normosodic diet are recommended.

Do not use antihypertensive drugs. The definitive treatment for preeclampsia is termination of pregnancy. If the pregnant woman is 37 weeks or more, the pregnancy should be terminated by vaginal delivery or cesarean section. If the woman is less than 37 weeks old and there is no maternal or fetal compromise, management over time is possible. Continue with general measures and closely monitor the mother and fetus. If, despite treatment, arterial hypertension is not controlled or if the disease progresses to severe preeclampsia, or if there is preeclampsia or signs of fetal, hematologic, or renal distress, hepatic, pulmonary, or neurologic dysfunction, the pregnancy will be terminated immediately, regardless of gestational age (Guzman et al., 2018).

Management of preeclampsia with severity criteria

Preeclampsia with severe criteria will progress to severe complications such as acute pulmonary edema, renal failure, hypertensive encephalopathy with cerebral hemorrhage, retinal detachment, placental abruption, subcapsular hematoma, or rupture of the liver, HELLP syndrome, which can lead to death of the pregnant woman, fetus or baby.

Therefore, management should be timely, multidisciplinary, and effective. A pregnant woman who presents vaginal bleeding and signs of placental abruption always suspects preeclampsia as a background condition (Velumani et at., 2022).

In preeclampsia there is a contraction of intravascular contents, unlike the usual hypervolemia of the pregnant woman; there is a tendency to oliguria due to lack of fluids, despite edema (Tacuri et al., 2022).

Adequate intravascular expansion with 0,9 % saline should be ensured, in case oliguria persists, initiate, followed by a diuretic such as furosemide in order to achieve blood pressure normalization more rapidly and reduce the need for antihypertensive therapy (Rojas et al., 2019).

Strict water balance and monitoring of vital functions should be performed every 15 minutes. Initiate a venous infusion of magnesium sulfate for the prevention of convulsions; this solution should be given with an initial attack dose, and it is suggested to maintain the infusion for 24 hours after delivery. The administration of magnesium sulfate should be suspended if tendon areflexia or depression of consciousness is detected, and calcium gluconate should be administered in this case. Antihypertensive treatment should only be used if the systolic blood pressure is≥ 160 mmHg or if the diastolic blood pressure is≥ 110 mmHg, in which case the following drugs are recommended: Labetalol, Hydralazine, Methyldopa, Nifedipine (Calderon et al., 2023).

Nursing role

Primary nursing care includes continuous assessment and early identification of signs of worsening disease. Adhering to the medical guideline: adequate expansion of the endovascular line with 0,9 % saline, 50-60 drops/min for the first liter should be ensured; and, if oliguria persists, the attending physician will prescribe 500 ml of colloid solution on a rapid drip, followed by 10 mg of furosemide intravenously. The diuresis should be monitored with a bladder catheter connected to a Blood pressure, heart rate, respiratory rate, and oxygen saturation should be monitored every 15 minutes (Gaona, 2021).

Start an intravenous infusion of magnesium sulfate. The infusion solution is prepared by combining five ampoules of 20 % magnesium sulfate (10 ml ampoules) with 50 ml 0,9 % saline. This solution provides 1 g of magnesium sulfate per 10 ml, and it is recommended to administer 4 grams (40 ml) for 15-20 days as an initial loading dose; continuous infusion of 1 g every hour (10 ml per hour) and maintenance infusion for 24 hours after delivery. When using magnesium sulfate, the knee reflex, respiratory rate, which should be at least 14 breaths per minute, and urine output, no less than 25-30 ml/hour, should be monitored (Gaona, 2021).

It is also recommended that O2 saturation be monitored with pulse oximetry. The administration of magnesium sulfate should be suspended if tendon hyporeflexia is detected, if there is an alteration of consciousness, or if there is a tendency for superficial or slow ventilation. In this case, the treating physician will prescribe calcium gluconate, 1 to 2 grams intravenously. Antihypertensive treatment should only be used if the systolic blood pressure is≥ 160 mmHg or if the diastolic blood pressure is≥ 110 mmHg (Gaona, 2021).

Risk of alteration of the maternal-fetal dyad

Vulnerable to disruption of the symbiotic relationship between mother and fetus due to pregnancy-related comorbidities or conditions that may affect health (Heather Herdman et al., 2021).

Risk factors for the risk of maternal-fetal dyad disruption

Some of the risk factors are pregnancy complications such as multiple pregnancy, threatened miscarriage, oligohydramnios, hemorrhage in the second and third half of pregnancy. Other risk factors that can be mentioned are the drug dependence, non-compliance with medical indications, inadequate prenatal care, physical abuse, diabetes, among others (Chesya et al,. 2019).

Another source mentions fetal oxygen transport compromise (oligohydramnios, preeclampsia/eclampsia) as another important risk factor (Sacks et al., 2020).

Gestational hypertension

Gestational hypertension is high blood pressure during pregnancy. It occurs in approximately 3 out of every 50 pregnancies. This condition is different from chronic hypertension, preeclampsia and eclampsia. It is a blood pressure problem during pregnancy that begins in the second half of pregnancy and usually disappears after birth (Perez et al., 2019).

Pathophysiology of gestational hypertension

It is caused by the rapid and severe elevation of blood pressure that produces two Events: systemic endothelial dysfunction that causes decreased synthesis of vasodilator agents (nitric oxide and prostacyclins) and increased synthesis of cytokines and cell adhesion molecules. Microcirculation further increases blood pressure and damages the vascular endothelium, causing fibrinoid necrosis and endothelial proliferation. It also causes peripheral tissue ischemia in target organs. The second affects the renin-angiotensin-aldosterone system by salt concentration and plasma osmolarity, which increases sodium excretion by the kidney, causing intravascular volume deficit (hypovolemia) that affects blood flow and originating terminal organ dysfunction (Perez et al., 2019).

Risk of gestational hypertension

Risks for gestational hypertension include: high blood pressure before or during a previous pregnancy, kidney disease, diabetes, younger than 20 or older than 40, multiple pregnancy (Mayo Clinic, 2022).

Symptoms of gestational hypertension.

The most frequently reported symptoms are: High blood pressure during the second half of pregnancy, headache, edema, weight gain, blurred or double vision, nausea or vomiting, abdominal pain, pollakiurea, as also symptoms with less prevalence are dizziness, conjunctival hemorrhage, tinnitus and epistaxis (Stanford medicine children's health, 2022).

Complications gestational hypertension

The constant assessment of the pregnant patient with hypertensive disorders should be taken into account in order to avoid complications such as: Compromised blood vessels, liver failure, renal failure, seizures, placental abruption, insufficient fetal growth, stillbirth, maternal death (Velumani Et. at., 2022).

Treatment of gestational hypertension

The objective is to lower blood pressure without compromising perfusion of target organs, hemodynamic monitoring of the pregnant woman and rapid venous access for the administration of antihypertensive drugs (alfamethyldopa, hydralazine and labetalol); considering a systolic blood pressure of 160 and a diastolic blood pressure of≥ 110 mm Hg with the aim of stabilizing maternal-fetal health (Stanford medicine children's health, 2022).

Prevention of gestational hypertension

Early diagnosis and treatment, periodic prenatal checkups.

Nursing care for pregnant women with hypertension

Nursing care are the processes that are applied to reduce the complications of maternal and fetal gestational hypertension, in order to preserve gestation. Among the care for gestational hypertension, we can mention: Relative rest, periodic monitoring of BP and fetal well-being, normocaloric, normoproteic and normosodic diet, pharmacological treatment with labetalol, hydralazine and alpha-methyldopa, termination of gestation, in cases more 37 weeks. If the gestational age is less 34 weeks the lungs will be matured with corticosteroids, do not stop the treatment just after delivery but reduce it gradually (Garcia Lopez, 2020).

Theoretical basis of nursing care patients with preeclampsia

It is believed that Hildegard E. Peplau's theoretical proposal aims to highlight the psychological tasks that are developed in the nurse-patient relationship, which depends on the nurse's ability to perceive and identify the difficulties in her relationship with the patient and her ability to help them to solve problems. Peplau analyzes the four stages of the nurse-patient relationship, and these have been applied to the care of our patients with preeclampsia: Orientation, identification, exploitation, and resolution (Machado et al., 2021).

On the other hand, Jean Watson argues that it is necessary to rescue the human, spiritual, and transpersonal aspects of clinical nursing practice, elaborating her theory "Of human care" based on seven basic assumptions. First, care must be effective and interpersonal. Second, caring involves factors that result from meeting human needs. Third, effective care promotes health and personal growth. Fourth, the responses derived from caregiving accept the person not only as he or she is but as the person can become. Fifth, a caring environment offers the development of potential and allows the person to choose the best action at any given time. Sixth, caring is more "health-gené tic" than healing, and seventh, the practice of caring is fundamental for nursing (Gaona Castillo, 2021).

METHOD

Study design

The methodological approach of this study is a qualitative analysis, the type of study is a single clinical case, applying the nursing care process (PAE) to respond to objectives set out in the research on the risk factors of the patient with twin gestation, preeclampsia and collaborative problem Gestational hypertension.

Subject of study

A 33-year-old female patient, with twin gestation of 30 weeks at her last menstrual period, with a medical diagnosis of preeclampsia, presenting fever, headache, pelvic pain, swollen legs, foul-smelling vaginal discharge and presence of blood without clots, vulnerable to present maternal-fetal complications.

Scope and period of the study

The study period was performed in the gynecology service, attended from September 9 to 16, 2022.

Data collection procedure

Source of information

The following was used as a data collection instrument:

Reception of verbal information from the patient with initials F.E.H.M., 33 years old. Direct observation of the patient.

Personal interview with the immediate family member (spouse).

Relevant data from the patient's medical history: Medical progress record data, nursing notes record data, diagnostic media results.

Performance of the physical examination and comparison of data with the assessment tables. Nursing assessment according to Marjory Gordon's 11 functional patterns.

Bibliographic review of scientific evidence by other authors from the following sources: Science, Direct, Scielo, Scielo, Elsevier, Google academic, NANDA International 2021-2023, videos through the keywords such as: nursing care, twin gestation, preeclampsia.

Information procedure

In order to proceed with the data collection, prior authorization was required from the patient and the personnel responsible for the gynecology service of the clinic, guaranteeing the process of protection and confidentiality of the data provided for study.

Collection of information

It was carried out in 4 phases:

- First phase: reviewing the patient's clinical history to extract clinical data such as: personal history, family history, reason for consultation, results of auxiliary examinations, main medical diagnosis, medical evolution, nursing diagnoses and the evolution nursing care.
- Second phase: The nursing assessment is carried out through a personal interview, following Marjory Gordon's 11 functional patterns assessment guide, using the identification and recognition of the main nursing diagnosis for the development of an individualized nursing care plan for the case under study.
- Third phase: The patient was followed up twice on her first day of hospitalization in the gynecology department to assess the evolution of the pregnant woman.
- Fourth and last phase: an exhaustive review of the scientific evidence was carried out, setting limits according to date criteria and limiting the search for information from 2019 to the present. Databases

were used: Science, Direct, Scielo, Elsevier, Google Scholar, NANDA International 2021-2023, and videos through keywords such as Nursing, twin gestation, and preeclampsia.

Data processing

Data processing and analysis was carried out in three stages: First moment: based on the assessment guide of the 11 functional patterns of Marjory Gordon, we proceeded to the realization of a reasoning network based on the "AREA Model". Developed by Pesut and Herdman, for the selection of the main nursing diagnosis according to the NANDA-I taxonomy 2021-2023.

Second moment: after the choice of the DxEP, we proceeded to the establishment of the outcome criteria (NOC) and interventions (NIC) and the selection and prioritization of the nursing activities.

Third moment: after the execution of the programmed nursing activities, we proceeded to the evaluation of the PAE, with the objective of verifying the effectiveness of the interventions carried out in the nursing care plan for a patient with twin gestation, preeclampsia and a collaborative problem of gestational hypertension.

RESULTS

Case description

A young adult patient with the initials HMFE, female, 33 years old, from the district of Miraflores, with higher university education, business administrator occupation, was admitted to the emergency area, accompanied by her husband for presenting a temperature of 38,7 °C, headache, tinnitus, abdominal pelvic pain, edema of the lower limbs, vaginal discharge without clots with bad odor and blood. On medical evaluation, she was diagnosed with a twin pregnancy of 30 weeks by the date of her last menstrual period and probable preeclampsia. Hospitalized in the gynecology department, she is in absolute rest, in an antalgic position, with permanent monitoring of vital functions and initiation of medical therapy.

Family history

Mother: Cervical cancer and hypertensive. Father: Diabetic and hypertensive.

Personal background

Drug allergies: NSAIDS
Food allergy: Lactose intolerant, shellfish allergy.
Metals: Denies
Allergic rhinitis: Denies Bronchial asthma: Denies

Toxic habits

Tobacco: Denies Alcohol: Denies Coffee: Denies
Other toxics: Denies

Pathological history

Arterial hypertension, diagnosed in her first pregnancy, with regular treatment of methyldopa 250 mg every 8 hours.

Hypothyroidism diagnosed 3 years ago, with usual treatment levothyroxine 75 mcg every 24 hours.

Gynecological history

Menarche at 12 years of age. FUR: 22.03.22
Gestations: 2
Use of contraceptive methods: Denies History of PCOS/EPI: Yes
Usual medication for her current pregnancy: Gestavit DHA, folic acid.

Epidemiological history of STD

Denied Contact TB: Denied
Vaccinations in the last year: Covid 19 Occupation: Administrator Physical activity: Denied

Surgical history

Uterine curettage (2020)
Colelap Surgery (2018)
Breast Augmentation Surgery (2012) PO Liposuction (2012)

Current situation: on evaluation, patient lucid, oriented in time, space and person, Glasgow 15 points, responds to all stimuli, is alert and vigilant, refers intense headache on a scale of EVA 10/8, ventilating spontaneously at a FIO2: 0. 21 %, with pale skin, hydrated skin and mucous membranes, normal sweating. 21

%, with pale skin, hydrated skin and mucous membranes, normal sweating, distended soft abdomen, pregnant uterus, refers pain in the abdominal-pelvic region in VAS 10/8 points, wanders with limitation due to some weakness in lower limbs, edema in lower limbs +++, spontaneous bladder and bowel elimination, vaginal discharge with bad odor and evidence of slight bleeding.

Medical diagnosis: Nulliparous second gestation of 30s x LMP, twin pregnancy, biamniotic, high risk of preterm delivery, risk of chorioamnionitis, preeclampsia.

Medical therapeutics

Soft, low sodium diet Absolute rest Strict water balance Bleeding control
Monitoring of vital signs every 2 hours Fetal monitoring every 4 hours
Parenteral hydration of sodium chloride 0,9 % Methyldopa 250 mg orally every 8 hours.
Nifedipine 30 mg/day orally PRN a Blood pressure greater than 160/100 mmHg,
Gentamicin 320 mg intravenous every 24 hours. Clindamycin 600 mg intravenous every 8 hours. Ceftriaxone 2 grams intravenous every 24 hours. Simeticone 180 mg orally after meals. Omeprazole 40 mg intravenous every 24 hours.
Paracetamol 1 gram intravenous PRN at temperature greater than or equal to 38 °C.

Laboratory tests

Leukocytes: 12,440 Cells/uL (Normal values: 4,500 - 11,000 Cells/uL)
Hematocrit: 33,2 % (Normal values: 36 - 43 %)
Platelets: 160,000,0 Cells/uL (Normal values: 150,000 - 475,000 Cells/uL)
Hemoglobin: 9,8 g/dl (Normal values: 12 -16 g/dl)
Creatinine: 1,5 mg/dl (Normal values: 0,5 - 0,9 mg/dl)
Urea: 52 mg/dl (Normal values: 17 - 49 mg/dl)
Protein: 8,3 g/dl (Normal values: 6,0 - 8,3 g/dl)
Glycemia: 85 mg/dl (Normal values: 70 - 100 mg/dl) SARS-CoV-2 ANTIGEN: Negative.
Hepatitis B Australian Antigen (HBsAg): Non reactive, HIV Ac (HIV 1-2 Antibodies): Non reactive.
Group and Factor: A negative

Case evaluation

After introducing my patient according to her clinical report I proceed to assess her according to Marjory Gordon's Eleven Functional Patterns of Health (PFS) (Gordon, 1999):

Perception pattern - Health management

Nulliparous second gestation patient with current twin gestation of 30 weeks, with a history of an abortion in 2020, with obstetric ultrasound result of placental accretism, altered laboratory results:

Leukocytes: 12,440 cells/uL
Hematocrit: 33,2 %.
Platelets: 160,000,0 Cells/Ul.
Hemoglobin: 11,8 g/dl.
Creatinine: 1,3 mg/dl.
Urea: 52 mg/dl.
Blood glucose: 83 mg/dl.
SARS-CoV-2 ANTIGEN: Negative.
Hepatitis B Australian Antigen (HBsAg): Non reactive.
HIV Ac (HIV 1-2 Antibodies): Non reactive.
Group and Factor: A negative.

Nutritional - metabolic pattern

Feverish patient (temperature 38,7), with warm skin, pain in the abdomen, weight: 75 kg, height: 168 cm, BMI: 26,6 (overweight), independent in her diet, eats 5 meals a day, has been gaining weight in the last two months in the last two months. He consumes liquids frequently, 2 ½ liters per day.

Additional supplements consumed during pregnancy: Gestavid DHA 1 tablet orally every 24 hours and folic acid 10 mg orally every 24 hours.

Allergies to shellfish, Lactose intolerant.
Good swallowing of food. No nausea or vomiting, nor has he presented them in the last few days.
Pale skin, mucous membranes hydrated.

Pattern elimination

No data is evident.

Activity - exercise pattern

Blood Pressure: 190/110 mmHg, Heart Rate: 105 beats per minute.

Respiratory rate: 22 breaths per minute, SpO2: 99 %. Rhythmic pulse, no heart murmur.

Eupneic at rest. Intolerant to physical activity due to his condition.

Remains in bed in an antalgic position, mobilized only for physiological elimination.

Patient with limited gestational ambulation and weakness in lower limbs due to edema and pain.

Edema in both lower limbs++ ranging from thighs to feet. Carrier of peripheral line N° 20 in dorsum of hand of left upper limb.

Rest - sleep pattern

No data is evident.

Cognitive-perceptual pattern

Lucid patient, oriented in time, space and person.

At the GLASGOW 15-point scale assessment, patient responds to all stimuli, is vigilant and alert.

No language, memory or hearing problems. cognitive impairment.

She refers headache and pelvic pain, to the assessment of VAS scale 10/8.

Self-perception - self-concept pattern

Patient presents signs of anxiety, anguish, fear, nervousness, headache.

She is aware of her current disease: hypertension, she is aware of the health risk she presents, so she frequently requests information about her health status and that of her babies.

She feels loved and supported by her husband.

Role pattern - relationships

Married, currently living with her husband. She receives support from both families.

Sexuality - reproduction pattern

Pregnant with twins at 30 weeks. She had a previous pregnancy 2 years ago, which culminated in a uterine curettage. Planned pregnancy with medical follow-up.

Congestive breasts. Genitalia with vulvar edema, vaginal bleeding without clots 8 hours ago without bad odor, no loss of amniotic fluid. Blood group and blood factor: A positive.

Adaptation pattern - stress

The patient and her husband, very distressed, report being very afraid of losing their babies. They are very cooperative with the treatment indicated by the gynecologist and the care plan required.

Values-beliefs pattern

Practicing Catholic.

Care plan

Diagnosis

Identification of nursing diagnoses

Nursing diagnoses were formulated using the NANDA taxonomy (Heather Herdman et al.,2021).

Pattern Perception - Health Management

(00126). Poor knowledge r/c anxiety m/p request for information on health.

Definition: Absence of cognitive information related to a specific subject, or its acquisition.

Domain 5: Perception/cognition

Class 4: Cognition.

Nutritional - Metabolic Pattern

(00007). Hyperthermia r/impaired health status m/p temperature 38. 7°C.

Definition: Core body temperature above the normal diurnal range due to failure of thermoregulation.

Domain 11: Safety/protection Class 6: Thermoregulation Activity-Exercise pattern

(00204) Ineffective peripheral tissue perfusion r/c hypertension m/p elevated blood pressures (BP: 160/98 mmHg)

Definition: Decreased blood flow to the periphery, which may compromise health.

Domain 4: Activity/rest

Class 4: Cardiovascular/pulmonary responses.

(00303). Risk of falls e/p decreased lower extremity strength due to edema and pain.

Definition: Adult susceptible to experiencing an event that results in inadvertently resting on the floor, ground or other lower level, which may compromise health.

Domain 11: Safety/protection. Class 2: Physical injury.

Cognitive - Perceptual Pattern

(00132). Acute pain r/c agents of biological damage m/p headache and abdominal pain. pelvic.

Definition: Unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage (International Association for the Study of Pain); sudden or slow onset of any intensity from mild to severe with an anticipated or predictable end, and lasting less than 3 months.

Domain 12: Physical comfort Class 1: Comfort

Pattern Self-perception - Self-concept

(00148). Fear r/unfamiliar situation m/p nervousness and fear

Definition: Basic and intense emotional response to the detection of an imminent threat, which implies an immediate alarm reaction.

Domain 9: Stress coping/tolerance.

Class 2: Coping response.

Sexuality - Reproduction Pattern

(00209). Risk of alteration of the maternal-fetal dyad and / or complications in pregnancy.

Definition: Vulnerable to disruption of the symbiotic relationship between mother and fetus due to comorbidities or pregnancy-related conditions that may affect health. NANDA-I Taxonomy, (Heather Herdman et al.,2021)

Domain 8: Sexuality

Class 3: Reproduction

(00206). Risk of bleeding and / or pregnancy complications (Vaginal bleeding)

Definition: Susceptible to a decrease in blood volume, which may compromise health.

Domain 11: Safety/Protection Class 2: Physical Injury

Adaptation Pattern - Stress Tolerance

(00146). Anxiety r/ stressors m/p changes in health status.

Definition: An emotional response to a diffuse threat in which the individual anticipates an unspecified imminent danger, catastrophe or misfortune.

Domain 9: Coping/stress tolerance. Class 2: Coping response.

Prioritized nursing diagnoses

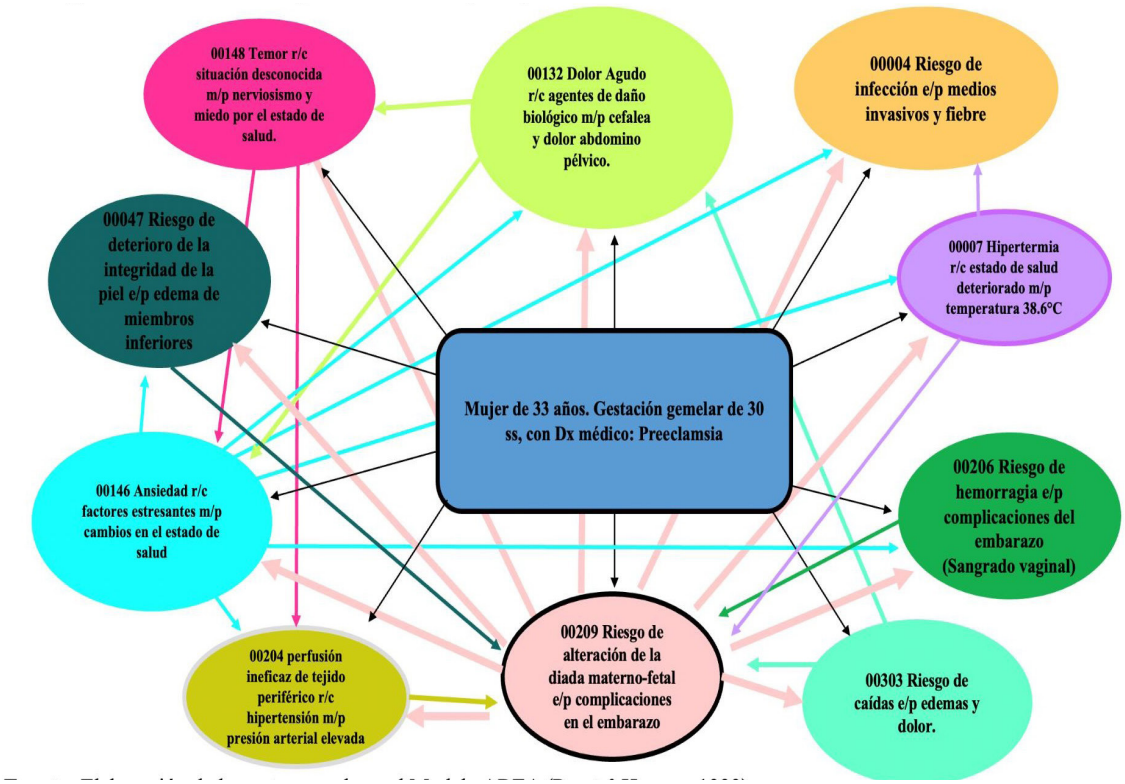

Figure 1. DxE network

After exposing the different nursing diagnoses that my patient has, I am going to prioritize the main Nursing Diagnosis (DxEp) by means of a clinical reasoning network based on the AREA Model (Pesut & Herman, 1999). The model establishes clinical reasoning networks, based on the relationships that are established between a number of The high number of diagnoses resulting in the most accurate and appropriate diagnosis for each clinical case.

Primary Nursing Diagnosis (DxEp)

After making the interrelation of the diagnoses proposed for the case, we can see in Figure N°1 the choice of the main nursing diagnosis:

(00209). Risk of alteration of the maternal-fetal dyad evidenced by complications in pregnancy due to multiple gestation.

Definition: Vulnerable to disruption of the symbiotic relationship between mother and fetus due to comorbidities or pregnancy-related conditions that may affect health. NANDA-I Taxonomy, (Heather Herdman et al.,2021).

Domain 8: Sexuality

Class 3: Reproduction

Justification of the Main DxE

Currently, the probability of multiple pregnancies has increased considerably due to the delay in childbearing and the use of assisted reproductive techniques (Rodrigo, Aparicio Caballero, & Salvador, 2022).

A multiple pregnancy is considered a risky pregnancy, both for the mother and fetus, due to the various anatomical and physiological changes that the body undergoes throughout gestation (Stanford Medicine, 2022).

Multiple pregnancies are complicated due to the large volume occupied by the gestation of more than one baby. The uterus supports an excess of weight and can distend exerting more pressure on the rest of the organs, the placenta grows more than expected, and there is an increase in the mother's blood hormone levels, concluding that multiple pregnancy is a greater demand for the woman's body and contributes to the increase of complications such as: weight gain, preeclampsia, among others (Mayo Clinic, 2022).

Fetal complications are associated with prematurity and low birth weight since the greater the number of fetuses, the shorter the duration of gestation and the lower birth weight,

Some of the complications include: evanescent twin syndrome, feto-fetal transfusion syndrome, congenital defects, and growth retardation (Rodrigo, Aparicio Caballero, & Salvador, 2022).

The maternal-fetal dyad is a bond that is associated with emotional and cognitive aspects that allow the fetus to be recreated as another human being. This bond is expressed through health practices aimed at seeking the protection and well-being of the fetus, and as a result of certain problems and complications during pregnancy, such as multiple pregnancies and gestational hypertension, among others, there is a risk of alteration of this bond (Alvarez Martinez, 2021).

For this reason, the risk of maternal-fetal dyad disruption was chosen as the main nursing diagnosis (DxEp).

Identification of Collaboration Problems (CPs) and their Complication Risks (CRs)

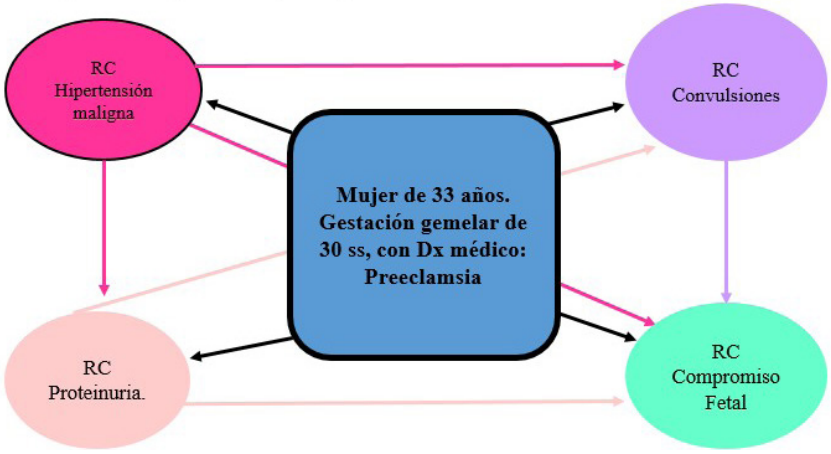

Figure 2. Reasoning network based on the AREA Model for prioritization of major complication risk

To determine of complication problems and complication risks, in relation to twin pregnancy with preeclampsia, the Manual of Nursing Diagnoses manual Carpenito, 2017) was used.

Collaborative Problem in the Prenatal Period: Gestational Hypertension The risks of complication are:

CR of malignant hypertension CR of convulsions
CR proteinuria
CR of fetal compromisse 32
Identification of the main CR.

Malignant hypertension has been identified as the main complication risk (CR) because it was the one with the highest ratio compared to the others, and it is linked to CR seizures, CR proteinuria and CR fetal compromise.

CR Malignant hypertension

Malignant hypertension is very high blood pressure that appears suddenly and rapidly, and is capable of triggering serious complications in the patient.

Justification of the main CR

Malignant hypertension is a type of hypertensive emergency and is so dangerous that it can cause complications such as organ failure (Medical News Today, 2021).

McCarthy (2022) defines malignant hypertension as an increase in blood pressure such an extent that it causes organ damage, affecting the nervous system, cardiovascular system and kidneys. He also states that prompt treatment can prevent serious problems such as organ damage to the blood vessels, eyes, heart, spleen, kidneys and brain.

The nursing role in severe or malignant hypertension consists of providing absolute rest to the patient, assessing blood pressure frequently, cardiac monitoring, providing reassurance to the patient, and administering oxygen. If necessary, perform an electrocardiogram, monitoring of vital functions, as indicated by the physician, oncolysis, and extraction of analytical tests, and monitoring for possible side effects of drug treatment such as hypotension, nausea, vomiting, and headache. Observe the cardiac monitor for possible rhythm disturbances or signs of myocardial ischemia. Constantly assess the state of consciousness and observe the patient for signs of cerebral hemorrhage (Ybarra Clemente & Marin Gasco, 2021).

In conclusion, the clinical manifestation of the patient responds to the symptomatology of malignant hypertension and the risk of suffering multisystemic organ failure if she is not.

Timely intervention should prevent, treat, and control the warning signs of hypertension.

Planning of the main nursing diagnosis (DxEp)

After performing the assessment and obtaining a nursing diagnosis, we proceed to make a follow-up plan for the patient using the Nursing Outcomes Classification NOC (Sue Moorhead et al., 2018) and Nursing Interventions Classification NIC Butcher Howard et a., 2018).

(00209). Risk of alteration of the maternal-fetal dyad evidenced by complications in pregnancy due to multiple gestation.

Definition: Vulnerable to disruption of the symbiotic relationship between mother and fetus due to comorbidities or pregnancy-related conditions that may affect health. NANDA-I Taxonomy, (Heather Herdman et al.,2021).

Domain 8: Sexuality
Class 3: Reproduction

NOC results of the DxEp

According to the NOC taxonomy, the following corresponds to the DxEp:

(0111). Fetal status: Prenatal
Definition: The degree to which fetal signs are within normal limits from conception to the onset of labor.
Domain: Functional health (1) Class: development and growth (B) (1902). Risk control.
Definition: Personal actions to understand, avoid, eliminate or reduce modifiable health threats.
Domain: Health knowledge and behavior (IV) Class: Risk control and safety (T)
(1214). Level of agitation.
Definition: Severity of manifestations of physiological and behavioral disorders of stress or biochemical triggers.
Domain: Psychosocial health (III) Class: Psychological well-being (M)
(1302) Coping with problems.
Definition: Personal actions to control stressors that strain the individual's resources.
Domain: Psychosocial health (III) Class: Psychosocial adaptation (N) DxEp NOC prioritization.
We will perform the critical reasoning network analysis to define the main NOC (figure 3).

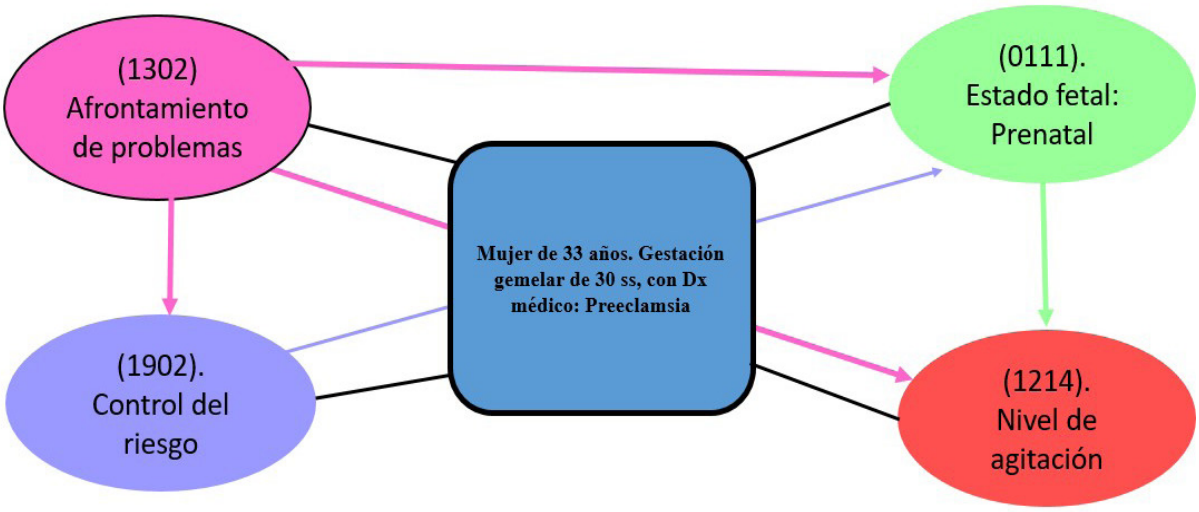

Figure 3. Reasoning network based on the AREA Model for DxEP NOC prioritization

DxEp Main NOC Justification

NOC prioritized from the DxEp

Coping with problems: this is understood as the way in which the person manages losses in bodily functions or disabilities resulting from illness (Navarro and Bueno 2015).

According to Nola Pender, a nurse and author of the Health Promotion Model (HPM), behavior is motivated by the desire to achieve happiness and human potential. She is interested in creating a nursing model that provides answers about how people make decisions about their own health care. Her goal is to illustrate the multifaceted nature of people in their interactions with the environment as they attempt to achieve a desired state of health; she emphasizes the connection between personal characteristics and the experiences, knowledge, beliefs, and situational aspects related to health behavior or behavior a person wishes to achieve.

In conclusion, it can be said that problem coping is the way in which the person handles and/or accepts problems in order to achieve a solution.

(1302) Coping with problems.

Definition: Personal actions to control stressors that strain the individual's resources.

Domain: Psychosocial health (III) Class: Psychosocial adaptation (N)

Table 1. Main NOC score for DxEp

NOC	Initial Score	Diana Score	Weather
(1302) Coping with problems	2	4	12

In relation to the score plotted for the main NOC measurement for the DxEp, the assessment at the beginning of the nursing interventions was 2 points (Rarely demonstrated), and after the administration of nursing care, a Target score of 4 points (Frequently demonstrated) is expected to be reached.

Table 2. Main NOC indicator

Indicators	Initial Score	Diana Score	Weather
(130223) Obtains assistance from a healthcare professional	2	4	12
(130205) Verbalize acceptance of the situation	2	4	12
(130220) Seeks accredited information on the diagnosis	2	4	12
(130222) Search Proven treatment information	2	4	12

Regarding the indicators plotted for the main NOC measurement for the DxEp, the assessment at the beginning of the nursing interventions was 2 points (Rarely demonstrated), and after the administration of nursing care, a Target score of 4 points (Frequently demonstrated) is expected to be reached.

NIC interventions for the DxEp NOC

Nursing interventions were identified, using the NIC nursing intervention classification taxonomy Butcher Howard et al., 2018).

(5602) Teaching: Disease Process.

Definition: Helping the patient understand information related to a specific disease process.

Domain: 3. Behavioral

Class: S. Interventions to facilitate learning

Activities

- (560201) Review the patient's knowledge of his or her condition.
- (560202) Provide information about available diagnostic measures, as appropriate.
- (560203) Discuss therapy/treatment options.
- (560204) Instruct the patient which signs and symptoms to report to the health care professional, as appropriate.
- (6610) Risk identification:
    1. Definition: Analysis of potential risk factors, determination of health risks and prioritization of risk reduction strategies for an individual or group of people.
    2. Domain 4: Safety.
    3. Class W. Risk control.

Activities

- (661001) Review medical history and previous documents to determine evidence of current or previous medical and care diagnoses.
- (661002) Determine the availability and quality of resources (psychological, economic, educational, family and other social resources, and community).
- (661003) Identify the center's resources to help reduce the risk factors for risk.
- (661004) Determine compliance with medical and nursing treatments.
- (5270) Emotional support:
    1. Definition: Providing security, acceptance and encouragement in times of stress.
    2. Domain 4: Behavioral.
    3. Class R: Coping assistance.

Activities

- (527001) Hugging or touching the patient to provide support.
- (527002) Help the patient recognize feelings such as anxiety, anger or sadness.
- (527003) Staying with the patient and providing feelings of security during periods of heightened anxiety.
- (527004) Providing assistance in decision making.

With respect to the planned interventions on: teaching of the disease process, identification of risks and emotional support, provided to the patient in a 12-hour shift, the planning was positive, with a noticeable improvement in the patient, thus stabilization of her symptoms.

Major Complication (CR) Risk Classification: Malignant Hypertension

After performing the assessment and obtaining a nursing diagnosis, we proceed to make a follow-up plan for the patient using the Nursing Outcomes Classification NOC (Sue Moorhead et al.,2018) and Nursing Interventions Classification NIC (Butcher Howard et al., 2018).

NOC result of the main CR (RCp)

The NOC taxonomy responds to the results we wish to achieve in the patient, using 4-digit codes and 6-digit indicators.

The RCp Malignant hypertension, responds to the following NOCs: (1822) Knowledge: maternal health in preconception (0401) Circulatory status.

(0405) Cardiac tissue perfusion (2112) Severity of hypertension (0504) Renal function (2112).

Severity of hypertension (0504) Renal function 42.

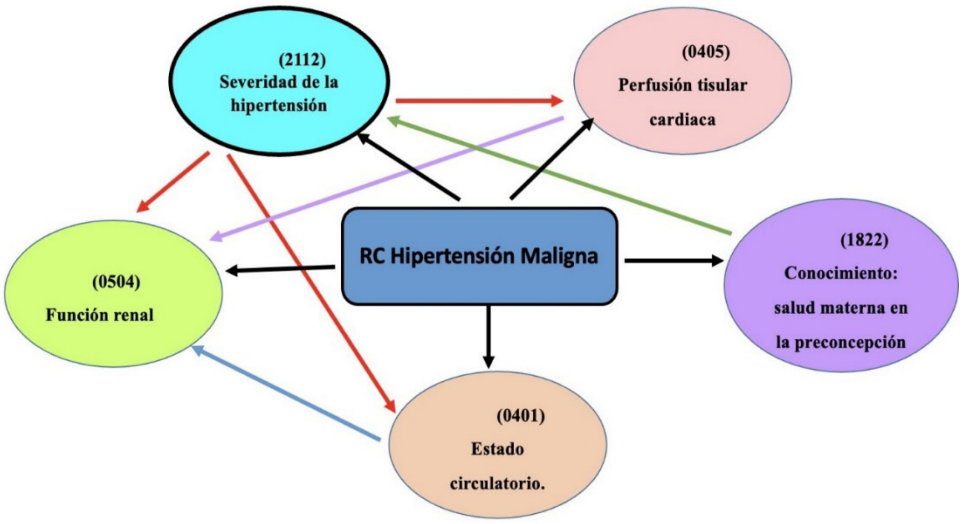

Figure 4. Reasoning network based on the AREA Model for the prioritization of the NOC of the main CR

Prioritized NOC of the main CR Malignant Hypertension

(2112) Severity of hypertension

Definition: "Severity of signs and symptoms due to chronic blood pressure." (Moorhead et al., 2018)

Domain: perceived health (V) Class: symptomatology (V)

Table 3. Main NOC score of the main CR

NOC	Initial Score	Diana Score
(2112) Severity of hypertension	2	4

In relation to the main NOC score of the RCp, according to the Likert scale, an initial score of 2 points (substantial) was obtained for the patient's assessment, with the goal of obtaining a target score of 4 points (Mild) after nursing professional's interventions during a 12-hour shift, giving a positive approach to the patient's evolution.

Table 4. Scores of the main NOC indicators of the main

Indicators	Initial Score	Diana Score	Weather
(211207) Headache	2	4	12
(211212) Tinnitus	2	4	12
(211216) Increased systolic P/A.	2	4	12
(211217) Increase in diastolic P/A	2	4	12

Interventions for risk of major complication (RCp)

Nursing interventions were considered in relation to RCp: Malignant hypertension, for which we used the NIC nursing intervention classification taxonomy Butcher Howard et al., 2018).

(6200) Emergency care

Definition: "Perform assessment and implement therapeutic measures in urgent situations" (Butcher et. al., 2018).

Field 4: safety: supportive care against damage Class U: crisis control.

Activities

(620001) Activate medical emergency system (620002) Monitor vital signs of hypertension (620001) Activate medical emergency system (620002) Monitor hypertension vital signs

(620003) Providing safety and emotional support to the patient.

(620004) Assist with treatment by providing information about the potential situation.

(6771) Electronic fetal monitoring: antepartum.

- Definition: "Electronic assessment of fetal cardiac response to movement, external stimuli, or uterine contractions during antepartum testing" Butcher et. al., 2018).

- Field 5: Family
- Class W: Caring a new baby

Activities

(677101) Review obstetrical history, if available, to determine obstetrical or medical risk factors concerning fetal status that require pre-delivery testing for fetal status.

(677102) Verify fetal and maternal heart rate before initiating electronic fetal monitoring.

(677103) Interpret the electronic monitoring strip for long-term fetal heart rate variability and presence of accelerations, decelerations or spontaneous contractions.

(677104) Observe the monitoring strip for the presence or absence of late decelerations.

(677105) Communicate test to the responsible physician or midwife.

(4062) Circulatory care, arterial insufficiency

Definition: "Improvement of arterial circulation" Butcher et. al., 2018).

Field 2: Complex physiological: Care that supports homeostatic regulation Class N: Control of tissue perfusion.

Activities

(406201) Perform comprehensive assessment of peripheral circulation edema, capillary refill, color and temperature.

(406202) Evaluate edema and peripheral pulses (406203) Monitor water balance.

This last intervention was chosen, since the main complication risk is "malignant hypertension", through the intervention of seizure management; being the drug used magnesium sulfate parenterally, executed in emergency care; thus avoiding the compromise of fetal distress.

Execution

To apply the nursing interventions and activities, a 12-hour day shift is chosen; for this, the NIC Nursing Intervention Classification book was used Butcher et. al., 2018).

Table 5. Timeline of interventions/nursing activities in risk of maternal-fetal dyad disruption

Date	Interdependent and dependent activities	Shifts						
		8:30	10:00	12:00	14:00	16:00	18:00	20:30
9/9/2022	(00209) Risk of alteration of the maternal-fetal dyad	X						
	Activities:							
	Teaching: Disease Process.	X	X					
	Review the patient's knowledge of his or her condition.	X	X					
	Provide information about diagnostic measures		X	X				
	available, as appropriate.			X	X			
	Discuss therapy/treatment options.				X	X		
	Instruct the patient on what signs and symptoms he/she should be aware of.	X						
	notify the health care professional, as appropriate.	X						
	Risk identification.	X						
	Review medical history and previous documents for	X	X					
	determine evidence of current or past medical and care diagnoses.		X	X				
	Determine the availability and quality of resources (psychological, economic, educational, family and other social resources community	X	X	X	X	X	X	X

	Identify the center's resources to help reduce the risk factors that may cause the risk.	X	X					
	Determine compliance with medical and medical treatments			X				
9/9/2022	Nursing.							
	Emotional support							
	Hug or touch the patient to provide support.	X						
	Helping the patient to recognize feelings such as anxiety, anger	X						
	or sadness.	X		X		X		X
	Staying with the patient and providing feelings of safety and security	X	X	X	X	X	X	X
	during periods of high anxiety.	X						
	Provide assistance in decision making.	x	x	x	x	x	x	x
	(RCp) Malignant hypertension	x						
	Activities:	X	X	X	X	X	X	X
	Emergency care	X	X	X	X	X	X	X
	Activate the medical emergency system.	X	X	X	X	X	X	X
	Monitor vital signs for hypertension.	X	X	X	X	X	X	X
	Provide security and emotional support to the patient.	X		X		X		
	Assist with treatment by providing information about the situation.	X		X		X		
	Electronic fetal monitoring: before delivery	X		X		X		
	Review obstetrical history, if available, to determine obstetrical or medical risk factors concerning fetal status that require pre-delivery testing to ascertain the	X			X			X

After administration of the main nursing interventions, in response to the DxEp NOC and the RCp NOC, change scores of +1 and +2 were obtained.

Evaluation

It was performed based on the assessment of the pregnant woman's condition at admission, compared with the results the administration of the nursing interventions.

A follow-up period was established in the gynecology hospitalization service in the day shift; some progress was observed, however, continued care was needed. Nursing activities were evaluated based on the comparison of the patient's health status and the effectiveness of the planned outcomes.

Evaluation of the Outcome of the main Dx. E. main

(00209). Risk of alteration of the maternal-fetal dyad

Evidenced by complications in pregnancy due to multiple gestation.

Definition: Susceptible to disruption of the symbiotic mother-fetal relationship as a result of comorbid or pregnancy-related conditions that may health.

Domain 8: Sexuality.

Class 3: Reproduction.

Table 6. Scores of the main diagnostic indicators				
Indicators	**Initial Score**	**Diana Score**	**Score achieved**	**Weather**
(130223) Obtains assistance from a health professional	2	4	3	12
(130205) Verbalizes acceptance of the situation	2	4	3	12
(130220) Search for information accredited on the diagnosis	2	4	3	12
(130222) Search Information accredited on the treatment	2	4	3	12

Analyzing the results obtained, the following is observed in relation to the indicators table 6; represented: (130223) Obtains help from a health professional, (130205) Verbalizes acceptance of the situation, (130220) Seeks accredited Information about the diagnosis, (130222) Seeks accredited Information about the treatment, the patient started with a score of 2 (Rarely demonstrated) and reached a score of 3 (Sometimes demonstrated) in a period of 12 hours, During this time she was able to be attended by a multidisciplinary team, where she was able to verbalize her situation that affected her, and was able to find a diagnosis of her disease process and obtain an adequate treatment to stabilize her altered health patterns and achieve the recovery of the mother and the preservation of the pregnancy through the care applied.

(1302) Coping with problems

Definition: Personal actions to control stressors that strain the individual's resources.

Domain: Psychosocial health (III) Class: Psychosocial adaptation (N)

Table 7. Main NOC score for DxEp				
NOC	**Initial Score**	**Diana Score**	**Score achieved**	**Weather**
(1302) Coping with problems	2	5	4	12

The interventions have been carried out achieving the proposed target score, being the initial score of 2 points, after a period of 12 hours of permanence in the service of gynecology hospitalization. A score of 4 points according to the Likert scale was achieved, reaching compliance with problem coping assessment of major complication risk outcome.

Table 8. Main NOC score of the main CR			
NOC	**Initial Score**	**Diana Score**	**Score Achieved**
(2112) Severity of hypertension	2	5	4

The programmed nursing interventions were carried out, obtaining the proposed target score, the initial score being 2 points, after a period of 12 hours in the hospital. A score of 3 points was achieved according to the Likert scale, achieving moderate management of the severity of hypertension in the pregnant woman.

Table 9. Scoring of the main NOC indicators of the main CR				
Indicators	**Initial Score**	**Diana Score**	**Score achieved**	**Weather**
(211207) Headache	2	5	4	12
(211212) Tinnitus	2	5	4	12
(211216) Increased systolic P/A.	2	5	4	12
(211217) Increase in diastolic P/A	2	5	4	12

Observing the results obtained, the following is observed: in relation to the indicators in table 9, represented: (21207) headache, (211212) tinnitus, (211216) increase in systolic P/A, (211217) increase in diastolic P/A, the patient started with a score of 2 (substantial) and a score of 4 (mild) on the Likert scale in a period of 12 hours, achieving a good score in the stabilization of the symptomatology presented through

the care applied by the multidisciplinary health team.

DISCUSSION

The patient in the present study was admitted to the gynecology hospitalization service, presenting a temperature of 38,7 °C, headache, tinnitus, abdominopelvic pain, lower limb edema, and P/A 190/110mm Hg, with medical diagnosis: preeclampsia and twin gestation of 30 weeks due to FUR and CR of malignant hypertension as a consequence of the disorder in the third trimester of pregnancy; for which, she is in the gynecology hospitalization service after being referred from the emergency area for timely care to avoid damage.

After reviewing the literature, numerous studies have shown that nursing care is essential, comprehensive, and of high quality and is key to preventing cerebrovascular, cardiovascular, and renal diseases. In affirming the above, there is scientific evidence that the nursing professional has a key role in prenatal care for the timely detection, prevention, diagnosis, and treatment that can attenuate the factors that can condition maternal and perinatal morbidity and mortality. (Guarnizo et. al., 2019).

The elaboration and execution of the nursing care plan as an instrument to establish and document the actual situation of the patient, the expected outcomes, interventions, and evaluation allow constant monitoring to improve the weaknesses found. Nursing care is both autonomous and collaborative for the delivery of service care (PAHO, 2022).

Psychophysiological changes during pregnancy are often accompanied by different emotions, which occur throughout pregnancy, such as mood swings, irritability, fear, and anxiety. For this reason, a pregnant woman is considered emotionally unstable. She needs to be treated humanely and feel satisfied with her care by a qualified multidisciplinary team of medical professionals. Likewise, we consider the mother's family as another major component of the comprehensive care provided and of the nursing intervention that should be directed to the partner and family, who are also directly concerned with maternal health problems. To help improve (Maset, 2021).

In the case presented, the informant was the patient; data collection and assessment were carried out through assessment instruments, relying on interviews and observation, as well as other sources of data collection.

Nursing interventions are based on the theories of Hildegard E. Peplau who seeks to highlight the psychological tasks that develop from the nurse-patient relationship, depending on the nurse's ability to recognize the difficulties posed by relationships with their patients and the ability to help them resolve their difficulties, so that they can develop new faculties for coping with problems (Martinez Esquivel, 2020).

This theory, in relation to the patient's situation after the diagnosis of Risk of alteration of the maternal-fetal dyad in the patient with twin gestation of 30 weeks, guided us to improve the coping of problems by improving the nurse-patient relationship. Likewise, our care was oriented in the theory of "Humanized Care" by Jean Watson, reducing the risk of dehumanization in patient care and rescuing the human, spiritual, and transpersonal aspects during nursing care of the pregnant patient (Gaona Castillo, 2021).

The Risk of alteration of the maternal-fetal dyad occurs as a consequence of pregnancy complications such as hypertension and due to a deficit of knowledge on the part of the mother, in the face of which the nursing professional participates in the timely treatment, avoiding the occurrence of maternal vascular lesions, such as compromised hepatic, renal damage, and consequently fetal compromise (Department of Obstetrics, UC of Chile, 2020).

Malignant hypertensive CR manifests with a high risk of seizures and Risk of fetal compromise (Tango, 2020). Timely intervention with the actions of Nursing plays a very important role in the prevention of this problem of maternal and perinatal complications, with the aim of contributing to the reduction of maternal morbidity and establishing technical criteria for the prevention, diagnosis, treatment, and control of preeclampsia.

To conclude, as health professionals, we have the responsibility to perform a good assessment and, through our timely care, reduce the risks of complications in the maternal-fetal binomial. After the nursing care provided to the patient at a critical moment, we were able to assess a favorable evolution compared to the initial phase of care in the gynecology hospitalization service.

Limitations

The limitations encountered in the development of the case study in the twin pregnancy with preeclampsia were:

Limited time for monitoring and care who was only seen during a 12-hour shift in the gynecology service.

Care could not be continued in the following days, due to interference with the working hours of nursing professionals.

When applying nursing care, we had the limitation of finding the appropriate diagnoses and interventions for the patient's pathology because the NOC and NIC did not include the diagnosis of preeclampsia.

At the same time, due to the COVID-19 pandemic situation, the conditions for family access to information

were limited since visits were restricted in the institution.

CONCLUSIONS

Preeclampsia is a hypertensive disorder that can occur during pregnancy from 20 weeks of gestation, and becomes a serious condition representing a major danger to the mother-fetus binomial. In Peru (2020-2021), maternal deaths represent 21,4 % (2020) and 15,8 % (2021). (MINSA, 2022), this indicator allows measuring the impact of health policy on the provision of maternal health services.

The PAE was applied, developing the nursing care plan, according to the NANDA I. taxonomy, NOC, NIC, and Lynda Carpenito's bifocal model for a patient with twin gestation, preeclampsia and risk of complication: malignant hypertension, in order to promote professional practice with a creative approach based on human responses specific situations.

The assessment by functional patterns was based on the theoretical framework, on the nursing theory of Hildegard Peplau and Jean Watson, which helped to identify the nursing diagnosis of risk of alteration of the maternal-fetal dyad and the problem of collaboration in the prenatal stage, gestational hypertension and risk of complication of malignant hypertension.

The risk factors of the patient with twin gestation and preeclampsia were identified and described, considering situations, personal characteristics, and diseases that have hindered the patient's ability to continue with the pregnancy and project us toward recovery due to her vulnerability to the risk of complication: malignant hypertension.

90 % of the activities of the nursing care plan were fulfilled, where the actions were protocolized based on the patient's needs, monitored to consolidate the evaluation and define the improvement of the interventions in the patient through participatory work with the multidisciplinary team for the solution of the collaborative problem.

Nursing care, as a basic and primordial tool, strengthened the autonomy and empowerment of the nurse in the care of the patient with preeclampsia, achieving the objectives in the evolution of the disease process.

Through the care plan, the proposed objectives were achieved by prioritizing the main nursing diagnosis to provide timely and quality care, improving maternal and fetal health.

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