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ORIGINAL

Nursing role in the care of a patient with threatened abortion in the obstetrics and gynecology service of a hospital

Rol de enfermería en el cuidado a paciente con amenaza de aborto del servicio de ginecoobstetricia de un hospital

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ABSTRACT

The threat of abortion is an alert with vaginal bleeding in the first twenty weeks, accompanied by physical and emotional suffering. The common complication is mild to severe anemia. There are no preventive measures to avoid it, so prenatal control is important so that the pregnancy is viable. In order to know the role of nursing in the care of patients with threatened abortion, a qualitative study was carried out, with a single clinical case design based on the Nursing Care Process method, applying as an instrument the evaluation guide of Marjory Gordon to a 22-year-old patient. 10 nursing diagnoses were identified, prioritizing the diagnosis: (00221) Ineffective maternity process r/c with insufficient prenatal care and inadequate maternal nutrition m/p inadequate prenatal management, ineffective management of bothersome symptoms during pregnancy and prenatal lifestyle inappropriate. The interventions carried out were satisfactory, since the patient improved the maternity process. Given the problem of hemorrhage complication, the results are still indefinite due to the few hours of intervention and evaluation. It is concluded that the role of nursing is essential in the assessment of pregnant women with threatened abortion; Knowing its evolution allowed administering care to resolve the process of ineffective motherhood and prioritizing individualized nursing care in the prevention of hemorrhage in the first 20 weeks of pregnancy. In addition, in order to improve the skills of the nursing professional, NANDA I, NOC, NIC, and collaboration problems were used.

Keywords: Nursing Role; Care; Patient; Threatened Abortion.

RESUMEN

La amenaza de aborto, es una alerta con sangrado vaginal en las primeras veinte semanas, acompañada de sufrimiento físico y emocional. La complicación común es la anemia de leve a severa. No existen medidas preventivas para evitarlo, por lo que es importante el control prenatal a fin que el embarazo sea viable. Con el objetivo de conocer el rol de enfermería en la atención de paciente con amenaza de aborto, se realizó un estudio cualitativo, con diseño de caso clínico único basado en el método del Proceso de Atención de Enfermería, aplicando como instrumento la guía de valoración de Marjory Gordon a una paciente de 22 años. Se identificaron 10 diagnósticos de enfermería, priorizando el diagnóstico: (00221) Proceso de maternidad ineficaz r/c con cuidados prenatal insuficiente y nutrición materna inadecuada m/p manejo prenatal inadecuado, manejo ineficaz de los síntomas molestos durante el embarazo y estilo de vida prenatal inadecuado. Las intervenciones ejecutadas fueron satisfactorias, pues la paciente mejoró el proceso de maternidad. Ante el problema de complicación de hemorragia los resultados aún son indefinidos debido a las pocas horas de intervención y evaluación. Se concluye que el rol de enfermería es fundamental en la valoración de la gestante con amenaza de aborto; conocer su evolución permitió administrar cuidados para resolver el proceso de maternidad ineficaz y priorizar los cuidados de enfermería individualizado en la prevención de hemorragia en las primeras 20 semanas de embarazo. Además, a fin de mejorar las competencias del profesional de enfermería, se hizo uso del NANDA I, NOC, NIC, y de los problemas de colaboración.

Palabras clave: Rol de Enfermería; Cuidado; Paciente; Amenaza de Aborto.

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INTRODUCTION

Threatened abortion, as a global problem, implies a condition with early pregnancy loss or the possibility of miscarriage before 20 weeks of gestation, characterized by pain and/or bleeding, closed cervix, evidence of fetal heartbeat by ultrasound, and intrauterine gestation commensurate with gestational age (Carvajal-Cabrera & Barriga- Cosmelli, 2021).

According to the World Health Organization (WHO), between 4,7 % and 13,2 % of annual maternal mortality is attributed to unsafe abortions; during the years 2010 to 2014, 39 induced abortions occurred per 1000 women between 15 and 49 years of age (WHO, 2017). On the other hand, between the years 2015 and 2019, there was an annual average of 73,3 million unsafe or unsafe induced abortions worldwide. In developing countries, each year, about 7 million women are hospitalized for unsafe abortion. In addition, an estimated 121 million unintended pregnancies occurred each year between 2015 and 2019; and between 4,7 % and 13,2 % of maternal mortality can be attributed to unsafe abortion each year (WHO, 2020). Of unintended pregnancies, 61 % ended in abortion, which translates to 73 million abortions per year worldwide (Frederico et al., 2020).

At the Latin American country level, only 1 in 4 abortions were safe, while most of them were considered "less safe". They estimate that 3,7 million induced abortions occur each year in Latin America and the Caribbean, and they estimate that 17 % of maternal deaths are due to unsafe abortion.(WHO, 2017) In South America, 10 deaths due to unsafe abortion occur for every 10 000 live births (WHO, 2020). In this sense, Ramos (2016) states that it is essential to disseminate and understand the situation of abortion, as well as the causes, consequences, and difficulties.

The main issues that women face in deciding to terminate their pregnancies, as well as the attitudes of the various social actors in favor or against the decriminalization of abortion, and the respective actions that are practiced in private and public institutions.

While Ramos and Fernández Vázquez (2020) note that in the 1990s, maternal mortality was 100 times higher than in developed countries, this mainly affected poor women, making them more vulnerable. Likewise, Huanca-Morales (2020) points out that maternal mortality rates are a sign of women's low capacity for negotiation and self-determination.

In Peru, maternal mortality from unsafe abortion is the fourth leading cause (Rivero Navia & Pintado Abad, 2017). In 2015, there were 414 maternal deaths reported by the Peruvian General Directorate of Epidemiology, but it is not detailed how many of these were caused by clandestine abortions (Abanto-Arana & Anhuamán-Morillo, 2019).

For its part, INEI (2019) reports 57,8 deaths caused by abortion corresponding to 578 130 live births. In this country, therapeutic abortion has been legal since 1924; however, exact figures are not available, although the impact of unsafe abortion is recorded, which causes 28 652 hospitalizations and 58 deaths each year. In addition, failure to decriminalize abortion results in 27 166 hospitalizations and 54 deaths per year in Peru.

It should be noted that the threat of miscarriage in the first twenty weeks of gestation, if not controlled in time, leads to the risk of spontaneous termination of pregnancy with bleeding from the uterus and no changes in the cervix (Dulay, 2020); therefore, the present research attempts to identify the present problems and/or needs of the patient through a thorough assessment to issue nursing diagnoses, keeping interest in the primary diagnosis, as well as the

prevention of the risks of complications that could be generated in the patient; given that the vaginal bleeding that could occur as a consequence of an uncontrolled active abortion could generate secondary hypovolemic shock exceeding blood volume losses of more than 40 %.

In this sense, the obstetrics and gynecology nursing professional must provide competent human care, promote timely care, and prevent complications through techniques and procedures that avoid events that could cause maternal death (Diaz Rivera, 2017).

Therefore, and in light of the scenario above, the present study aims to confirm the contribution of nursing in the timely identification of the risk factors that cause miscarriage and prevent it. Abortion can be defined as the termination of pregnancy before 20 weeks of gestation, caused by different factors, including genetic, pathological, and induced factors. In this context, the risks are increased in women who have had miscarriages, exposure to toxins, placental, cervical, or uterine problems, among others (Bergallo et al., 2018).

In addition, this work consists of a qualitative study of a case chosen to analyze, from a bio-psycho-socio-spiritual point of view, the importance of the nursing approach in patients with threatened abortion, considering that nursing is the first contact that patients have after receiving the medical diagnosis, in addition to sharing difficult and intimate situations with them (Martínez-Montaño, 2021).

Objectives

Overall objective

To know the role of nursing in the care of a patient with threatened abortion.

Specific Objectives

To study the threat of miscarriage, its risk factors, treatment, and complications. Describe the importance of nursing care in the prevention of hemorrhage.

Write nursing care in the care of the effective maternity process for a patient with a threatened abortion.

Develop a nursing care plan based on a patient with threatened miscarriage using NANDA taxonomy I, NOC, NIC, and Linda Juall Carpenito's collaborative problem manual (Johnson et al., 2007; "NANDA Nursing Diagnoses: Definitions and Classification 2018-2020," 2019).

Theoretical framework

Abortion

According to Bergallo et al. (2018) abortion comprises the expulsion, through the uterus, of the product of conception, causing the termination of pregnancy abruptly, in a natural or voluntary way, before 22 weeks of gestation, with a fetus weighing less than 500 grams.

Epidemiology of abortion

According to León et al. (2016), 52 % of women in Peru have abortions because "they have many children" or "they did not have a stable partner". Twenty-eight percent reveal that they did so for economic reasons, 8 % for fear of their parents, and 5 % for having suffered rape or incest. These reasons are similar to those in other Latin American countries.

Risk Factors

There is evidence of a high frequency of miscarriage incidence in the following cases: when the patient has anatomical uterine anomalies; when the correction of the uterine anomaly is not possible; when the patient has an anomalous uterine anomaly.

The surgical procedure has decreased the incidence of first trimester losses, mainly in recurrent abortion; with the presence of polyps of more than 2 cm, greater number and size of uterine fibroids that hinder implantation and deficient blood supply to the fetus; when rapidly growing and degenerating tumors appear with cytokine release; when submucosal location or total occupation of the uterine space appears that hinders the growth of the fetus and uterine adhesions, although at this point more evidence is needed (Gaspar-Huánuco & Torres-Rojas, 2018).

Types of abortion

WHO (2019) recognizes 4 types of abortion according to causes and conditions:

Spontaneous abortion

It consists of the termination of a pregnancy that is not intentionally induced, with unwanted death and expulsion of the fetus.

Induced abortion

When the pregnancy is terminated by eliminating the fetus or embryo before it can survive outside the mother's uterus.

Indirect abortion

When the death of the fetus is caused during a medical intervention. This is performed in two circumstances: when the mother's life must be saved or when the viability of the fetus is nil.

Dangerous abortion

It is the termination of pregnancy performed by people who do not have the necessary training and preparation and/or is performed in an environment that does not meet the minimum medical conditions.

Preventive measures

There is no effective preventive therapy in the treatment of threatened miscarriage. However, weekly monitoring of the pregnancy can be performed until the bleeding is resolved, and also pay attention to the risk of preterm delivery, oligohydramnios, and intrauterine growth restriction (Carbajal-Sánchez & Nery-Segura, 2018).

Threat of abortion

According to Vasquez De La Torre (2018), it is a dangerous situation with a risk of culminating in abortion before 20 weeks of gestation; It is characterized by scanty metrorrhagia, with or without pain in hypogastrium type colic, closed cervix. Generally, ultrasound evidence of intrauterine gestation with development is available according to gestational age.

Likewise, a threatened abortion is suspected when bloody vaginal discharge or frank Hemorrhage appears during the first half of pregnancy. In this situation, out of 30 %, approximately half miscarry (Gaspar-Huánuco & Torres-Rojas, 2018).

Finally, according to Huanca Morales (2020) in the eCIE10ES (2022), threatened abortion is defined as specified Hemorrhage as a consequence of threatened abortion.

Pathophysiology

According to Ocón-Cabria (2017), threatened abortion is preceded by bleeding during the first trimester of pregnancy, originating inside the uterus. Mainly, the bleeding is caused by the embryonic implantation of the blastocyst in the internal wall of the endometrium, initiating the formation of the placenta. In the first 20 weeks of gestation, alterations (anatomical or physiological) or bleeding may occur, mainly as a result of the formation of retrochorionic hematoma, which may evolve favorably or culminate in miscarriage.

Also, these characteristics are accompanied by colicky pain in the lower abdomen, which indicates the possible case of spontaneous abortion, considered as uninduced embryonic or fetal death before 20 weeks of gestation.

Risk Factors

There is evidence of a high frequency of miscarriage incidence in the following cases: when the patient presents anatomical uterine anomalies; when surgical correction has decreased the incidence of first trimester losses, mainly in recurrent miscarriage; with the presence of polyps larger than 2 cm, increased number and size of uterine fibroids that hinder implantation and poor blood supply to the fetus; with the appearance of tumors of rapid growth and degeneration with cytokine release, submucosal location or total occupation of the uterine space that hinders the growth of the fetus and uterine adhesions, although on this point more evidence is needed. (Carbajal & Segura, 2018).

Etiology

According to Carvajal-Cabrera and Barriga-Cosmelli (2021), threatened abortion is generally caused by chromosomal (49 % of cases) and morphological abnormalities of the gametes, as well as anatomical abnormalities of the maternal genital tract; endocrine diseases such as corpus luteum insufficiency, hypothyroidism, hyperthyroidism and uncontrolled diabetes mellitus; also, by systemic diseases and infections such as syphilis, rubella and toxoplasmosis; by immunological factors; by ABO incompatibility; by toxic factors with the use of folic acid antagonists and lead poisoning; and by traumatic factors.

Clinical signs and symptoms

The clinical picture is based on the history of transvaginal bleeding during the first 20 weeks of gestation, evidencing the presence of a closed cervix, with or without uterine contractions, secondary amenorrhea, positive pregnancy test (quantitative β-Hcg), fetal vital activity, colicky pain in hypogastrium, uterine volume consistent with amenorrhea, without dilatation or cervical modifications (Ochoa-Marieta et al., 2018).

The presenting signs and symptoms are: vaginal bleeding, usually scanty during the first 20 weeks of gestation; pain in the back and lower abdomen. In most cases the vaginal bleeding stops on its own and the pregnancy runs its course; in other cases the threat progresses to miscarriage (Mayo Clinic Staff, 2020).

Treatment

Treatment depends on the results of the ultrasound: if it shows ovarian viability, the results of quantitative β-Hcg are in normal ranges and there is no active bleeding, so the respective outpatient management and control should be performed in 72 hours, as well as absolute rest, and metabolic, infectious or other causes should be treated. Suppose there is a certain placental detachment, or the quantitative β-Hcg tests express a specific hormonal deficit. In that case, the patient should be hospitalized for control and evaluation of the pregnancy, with absolute rest, and with administration of progestogens 100 mg. twice a day, discharge after 24 or 48 hours without vaginal bleeding, with rest at home and control within 7 to 10 days in the hospital outpatient clinic. If the ultrasound does not reveal a positive embryo plaque, but the quantitative β-Hcg is positive, rest should be prescribed, without medication (Ríos Canales et al., 2018).

In the pharmacological treatment of progesterone injectable solution 50 mg every 48 hours as a support, progesterone is used in cases of established luteal phase defect. In recurrent abortion of unspecified etiology, and in patients who have received ovulation inducers. The use of antispasmodic suppositories is limited, especially in the period of organogenesis between 18 and 55 days post conception (ANAEL, 2015).

Complications

The most common complication is miscarriage and anemia resulting from moderate or severe blood loss which may require blood transfusion; infection or the likelihood of ectopic pregnancy, which is a potentially life-threatening complication, should not be ruled out (Gaspar-Huánuco & Torres-Rojas, 2018).

Preventive measures

There is no effective preventive therapy in the treatment of threatened miscarriage, which requires weekly monitoring of the pregnancy until the bleeding is resolved and attention should be paid to the risk of presenting preterm delivery, oligohydramnios and intrauterine growth restriction (León et al., 2016)

Nursing role in the care of threatened abortion patients

The nursing role is primarily aimed at monitoring and documenting the clinical progress of the patient at risk of miscarriage. Nursing activities from this perspective can be developed when knowledge and skills merge to reach sufficient understanding of the phenomenon and its complexities. This requires ongoing psychological support for the couple and family because emotional bonds develop as the gestation progresses and are associated with feelings of failure in the pregnant woman. It is also necessary to provide a quiet environment to rest, as sleep is vital for recovery and improvement of the psycho-social balance (Cornejo-Sánchez, 2020).

In the case of a pregnant patient, emotional support should be provided with the participation of the husband and/or family, seek help to promote security and positive attitude; monitor the color, odor and duration of bleeding; control the temperature of the pregnant woman during the first week; avoid the use of tampons or vaginal douches for 15 days; sexual abstinence during the first 15 days; consider general measures such as absolute rest; and try to manage the emotional state of the patient (EAFIT, 2018).

Risk of antepartum complication: hemorrhage

Vaginal bleeding in the first trimester of gestation is a frequent situation that occurs between 15 to 25 % of all pregnancies, putting the life of the mother and fetus at risk (Alayo-Huatay, 2019). According to Herdman and Shigemi (2019), this involves the risk of bleeding, leading to a decrease in blood volume that can seriously compromise health.

On the other hand, statistical data indicate that maternal mortality is a health indicator that evidences social exclusion, low accessibility to health services, gender inequity in decision-making, little respect for human rights and limited access to health services. 27,1 % indicates maternal death due to hemorrhage, according to the recent Lancet 2014 review, which analyzed global, regional, and sub-regional estimates of causes of maternal mortality during 2003-2009. In indigenous populations, the maternal mortality rate is 25 % across the board. Abnormal genital bleeding should be classified as a priority, assessing the amount and rate of immediate postpartum blood loss in the first 24 hours postpartum (INEI, 2019).

Causes

Taking into account Bunce and Heine (2020), hemorrhage in the first half of pregnancy will depend on whether the pregnancy is ectopic, tubal, or cervical; in 1,5-2 % of these cases, blastocyst implantation occurs outside the uterine cavity. The most frequent location is in the fallopian tubes (98 % of cases). It can also occur at the cervical level, in the ovary, in the pelvic cavity, and even in the abdominal viscera.

Treatment

Clinical management will depend on the amount of bleeding, the gestational age, and the type of placental implantation. In the event of presenting hemorrhage, the lost blood is replaced immediately, and a transfusion is administered as a priority while the emergency is resolved; in this situation, it is essential to stop the bleeding and eliminate its origin. In the face of acute bleeding, expansion with plasma is preferred rather than with solution (Llanos-Cerquín, 2018).

On the other hand, surgical treatment consists of the removal of placental remains and the respective repair of genital lacerations or uterine curettage (MINSA-CSS, 2015).

Likewise, complementary treatment includes the administration of uterotonic drugs with oxytocin, prostaglandins, methylergonovine, and fluid replacement or transfusion, iron supplementation, clinical control, and ultrasound monitoring (Carvajal & Barriga, 2021).

Complications

In the process of threatened abortion, bleeding is an emergency complication that must be treated immediately, with the respective pharmacological treatment to control the hemorrhage, and the application of uterine massage to stimulate contraction and avoid abundant bleeding blood discharges. In addition, the respective blood transfusion is recommended to replace losses that could lead to significant complications. If care is not timely or there is little expertise in the prevention of these complications, the probability of death of the pregnant woman is 100 %; therefore, in order to maintain hemodynamics, a constant blood volume needs to be relatively preserved (Alayo-Cuzcano et al., 2018).

Prevention

Preventive measures for hemorrhage are implemented through strict compliance with care protocols based on clinical practices from patient admission to discharge, prioritizing respect for life, confidentiality, and privacy.

There is no effective preventive therapy in threatened abortion (Ochoa-Marieta et al., 2018).

Likewise, early identification of risk factors, the work of the multidisciplinary team, and the initiation of procedures that allow preservation of a safe intravenous line for volume replacement are important. Also important is the strict control of vital signs, assessment of signs of shock, assessment of fetal heartbeat, provision of a blood bank, adequate positioning of arterial catheters for uterine embolization, and placement of urethral catheters, all of which contribute to the patient's good condition.

In addition, bed rest, abstinence from sexual intercourse, decrease of tense emotions, and, in some cases, the use of progesterone in the preparation of the uterus for implantation of the fertilized egg are required (Neyra-Díaz & Palominpo-Bonifacio, 2019).

Nursing care for bleeding

According to Rivero-Navia and Pintado-Abad (2017), the following procedures are considered in the management of uterine bleeding: monitoring of the patient's state of consciousness, assessment of pupils, control of vital signs preferably every 15 minutes, attention to changes in blood pressure, monitoring of uterine involution, control and assessment of vaginal bleeding (scanty, moderate, abundant), control and assessment of vaginal bleeding (especially the amount, color and consistency), strict compliance with medical indications, accurate water balance, assessment of the level of anxiety and fear of the patient and her family, pain management and alertness to warning signs (confusion or altered lucidity, pallor, cold and clammy skin), arterial hypotension, tachycardia, weakness, bleeding greater than 500 ml, and shortness of breath.

Effective maternity process

Maternity in Peru has faced various challenges, such as raising awareness and engaging and motivating public and private entities on safe motherhood. For example, in 1988, the third week of May was declared "Healthy and Safe Motherhood Week" in order to prevent the death of the pregnant woman and/or her child during pregnancy, childbirth or puerperium; the cultural

and socioeconomic context was considered as factors that influence the reproductive behavior of women and their environment (UNFRA-Peru, 2021).

For its part, MINSA-CSS (2015) has implemented care during pregnancy with at least six prenatal check-ups for pregnant women; this includes breast exams and teaching breast self-examination (prevention of breast cancer), breast sampling for pap smear and/or visual inspection of acetic acid (prevention of cervical cancer), continuity in the nutrition of the pregnant woman and the unborn child, counseling for early and exclusive breastfeeding, and administration of micronutrients (iron, folic acid, and calcium supplements).

Similarly, MINSA-CSS. (2015) includes timely teaching in identifying warning signs, birth plan with the pregnant woman, couple counseling, family counseling, community support, counseling and guidance in HIV and syphilis pre-test, rapid test for HIV and syphilis, assessment of cases of family or sexual violence, screening for depression, detection of proteinuria in each visit in order to detect hypertensive/pregnancy diseases, detection of urinary infections, detection of anemia, gestational diabetes, analysis of blood group and blood factor, application of six sessions of obstetric psychoprophylaxis with the participation of the couple and the family, and the implementation of six sessions of obstetric psychoprophylaxis with the participation of the couple and the community, detection of anemia, gestational diabetes, blood group and blood factor analysis, six sessions of obstetric psychoprophylaxis with the participation of the couple and the family, six sessions of prenatal stimulation with the participation of the couple, ultrasounds at the first visit and in the third trimester, two dental exams, vaccinations against tetanus, influenza and others, three home visits, and fetal monitoring once in the third trimester.

Ineffective maternity process (00221)

In 2012, MINSA recorded hemorrhage (40,2 %), followed by pregnancy-induced hypertension (32 %), abortion (17,5 %), and various infections during the puerperium period (4,1 %) as causes of death. Likewise, certain regions in the interior of Peru register high maternal mortality figures, such as Lima, Cajamarca, La Libertad, Puno, Piura, Lambayeque, Ancash, Arequipa, Callao, Apurímac, and Loreto.

According to Herdman and Kamitsuru (2017), the process of ineffective mothering comprises the "inability to prepare for and/or maintain a healthy pregnancy, birthing process, and newborn care to ensure well-being" (p. 329). In the day-to-day work, the nursing considers that the process of ineffective motherhood involves a set of specific interventions aimed at the care of the pregnant woman and the fetus, which do not match due to their vulnerability and biological, psychological, and social factors, as well as failed compliance with norms and expectations.

Defining characteristics of ineffective childbearing

It is presented through specific clinical manifestations, as evidenced by NANDA International, as detailed as "inadequate access to support systems, inadequate prenatal care, inadequate prenatal lifestyle, inadequate preparation of items for the newborn, inadequate preparation of the home environment, ineffective management of bothersome symptoms during pregnancy, unrealistic birth plan, and insufficient respect for the neonate, among others" (Herdman & Shigemi, 2019, p.329). However, in the case of the patient under study, this problem was evidenced by fever, frowning, inadequate prenatal management, ineffective management of bothersome symptoms during pregnancy, and inadequate prenatal lifestyle.

Factors related to ineffective childbearing

The causal factors that the NANDA I taxonomy considers are: "substance abuse, insufficient knowledge about the childbearing process, insufficient prenatal care, insecure environment, maternal helplessness, insufficient parental role modeling, inadequate maternal nutrition, unrealistic birth plan, low maternal confidence, insufficient cognitive preparation for parenting, insufficient support systems, maternal psychological distress, domestic violence, and sporadic health provider visits during pregnancy, among others" (Herdman & Shigemi, 2019, p. 329). Following the above, it is worth mentioning that the patient presented an ineffective maternity process due to insufficient prenatal care and inadequate maternal nutrition. For her part, Bruno-Maldonado (2019) believes that ineffective motherhood usually occurs for different reasons, for example when mothers do not have sufficient knowledge for their care, lack of skills and resources necessary for the proper development of the motherhood process, or due to incorrect conditioning in their environment or in the characteristics of the process that hinder the proper development of the maternal role. In addition, these factors include insufficient knowledge of the motherhood process and lack of confidence, insufficient or non-existent support systems, situations of unplanned or unwanted pregnancy, and even situations of risk, social exclusion, or gender violence.

Nursing care in the process of ineffective childbearing

The contribution of nursing in maternal care consists of educating and strengthening the pregnant woman in the awareness of the value of health, in applying intervention and outcome assessment procedures, and providing timely care that allows adequate monitoring of the evolution of pregnancy (Herdman & Kamitsuru, 2017). Also, it is necessary to highlight the role of the nursing professional by empowering him/herself in the activities of accompaniment, education and counseling through care such as: propitiating prenatal consultation that allows adequate monitoring of the evolution of pregnancy, promoting safe motherhood, educating about care and upbringing of the newborn, involving social participation that contributes to the improvement of aspects of daily life, culture and political activity related to health, fostering an intersubjective relationship with the team of obstetrics, nursing and obstetric nursing professionals, pregnant woman and family; all to reduce the risks of this physiological process (Herdman & Kamitsuru, 2017).

Theories of human care and adaptation

The nursing process, through the scientific method, will test the validity of the theoretical nursing model through research in practice. For the case under study, the theories of Jean Watson and Callista Roy were taken as a frame of reference, in which human care is centered on the person and the adaptation process is attended to (EAFIT, 2018).

The present work is based on Watson's theory, "Theory of the philosophy and science of care" or "Theory of human care," which allows assessing, identifying, and evaluating human care; this is emphatically applied to the care to be provided to the patient with threatened abortion, as it rescues the human aspect, spiritual, and transpersonal sensitivity in clinical, administrative, educational, and research practice in nursing (Cornejo, 2020).

Considering that the study deals with a process of alteration in the mother-child binomial, three dimensions of Watson's theory were chosen: first, health as a unity and harmony between body and soul; second, the person as a unique being free to make decisions; and third, the integral aspect, because the patient can participate in her care considering her sociocultural, religious and emotional aspect (Neglia C., 2017). Therefore, this theory allows for guiding care in a softened way, sustained in a humanistic system, and integrating scientific knowledge in the science of care to facilitate a better quality of life.

Likewise, the nursing work is identified with the theory of the adaptation model of the theorist Callista Roy, because in the case study it is considered that gestation is a process of constant person-environment interaction that adapts to train coping mechanisms; this allows highlighting the importance of her environment to survive in her conversion to motherhood. In the same way, nursing work is emphasized in its focus on all contexts of the patient: health, environment, well-being, etc. Therefore, in this process, the patient will be able to be responsible for her care and play new roles, and timely nursing intervention will lead to a higher level of health and well-being (Pezantes-Lazo, 2018).

Finally, as mentioned by Álvarez-Maita (2020) and WHO (2020), this practice promotes in health professionals a humanized treatment of the person based on comprehensive training, proper management of health services systems, and a safe communication system. Therefore, this case study proposes activities that provide scientific, specialized care, as well as philosophical, ethical, and moral bases to promote a better quality of life in the mother-child binomial.

METHOD

Study design

The present study consists of a research with qualitative approach, with a type of study is single clinical case that is based on the method of the Nursing Care Process (PAE), in order to answer the objectives formulated in the study about the process of ineffective maternity and the risk of hemorrhage complication in a patient with threatened miscarriage.

Subject of the study

22-year-old female patient, on her second day of care, selected at the convenience of the researchers, diagnosed with threatened abortion at 11 weeks of gestation by ultrasound. According to her state of vulnerability, manifestations of the process of ineffective maternity and susceptible to hemorrhage were observed.

Scope and period of the study

The study was conducted in the obstetrics and gynecology service of the "Santa Rosa" National Hospital in the Lima Region, from April 12 to 14, 2021.

Data collection procedure

Source of information

The following instruments were used: verbal information provided by the 22-year-old patient M. R. V., direct observation of the patient, clinical history, medical and nursing evolution records and physical examination; likewise, these materials were admitted with the assessment tables, applying the nursing assessment guide according to Marjory Gordon's 11 functional patterns and the bibliographic review as scientific evidence.

On the other hand, the review of scientific evidence was carried out using the following databases: Science Direct, Elsevier, Medline, and Scielo. In addition, documents from official entities (WHO, American Cancer Society), MINSA, practice guides and protocols, theses, and books on nursing were consulted. Interviews and observation were also used for the collection and analysis of the information.

Information procedure

To proceed with data collection, prior authorization was obtained from the patient M. R. V. and the person in charge of the gyneco-obstetrics service of the National Hospital "Santa Rosa", Lima, guaranteeing, during the whole process, the protection and confidentiality of the data provided for the realization of the study, with no identifying information about her.

Collection of information

First phase

The patient's medical history was read and reviewed to extract clinical data such as: personal and family history, reason for consultation, test results, main medical diagnosis, medical and clinical evolution, as well as the evolution of nursing care.

Second phase

A nursing assessment was performed through a personal interview, following Marjory Gordon's 11 functional patterns, using the identification and recognition of the main nursing diagnoses for the development of a specific care plan focused on the case study.

Third phase

The two follow-ups performed on the patient were found in order to see the evolution of the same.

Fourth and final phase

An exhaustive review of the scientific evidence was carried out, setting limits according to date criteria, from 2016 to the present. Likewise, some databases were used such as: Science Direct, Scielo, Elsevier, Google Scholar, and keywords such as: nursing role, care, patient and threat of miscarriage.

Data processing

The data were analyzed and organized based on nursing methodology, following the following procedures:

An analysis was performed based on the nursing methodology associated with the AREA model of Pesut and Herman (2019). After assessing the patient based on the 11 Marjory Gordon functional patterns, a clinical reasoning network was performed based on the aforementioned model to select the primary nursing diagnosis with the taxonomy (NANDA International, 2018). Then, after the choice of the DxEp, we proceed to the establishment of the expected outcome criteria (NOC) and nursing interventions (NIC) and the respective activities.

A critical analysis of the scientific evidence included in this study was performed, taking as a basis the objectives raised according to NOC taxonomy (Moorhead et al., 2019) and prioritizing it with the AREA model (Pesut & Herman, 2019), in order to obtain the central NOC of the nursing diagnosis and the main collaborative problem; this has an impact on the preparation of the respective care plan having the NIC taxonomy as a basis (H. Butcher et al., 2018).

The programmed nursing activities were carried out, with subsequent evaluation of the same to verify the degree of effectiveness of the interventions carried out according to the patient's individualized care plan.

RESULTS

Case description

Young adult female patient, 22 years old, from the La Victoria, Lima district. She was admitted to the emergency gynecology department of the hospital at 09:00 am, accompanied by her husband. She was seated in a wheelchair, flexed on her knees. She was thin, in good hygienic condition, and reported that she felt very weak and 2 days ago she presented brown bloody stains in her vagina, which increased. She was fearful, very sleepy, and unable to stand up. She reported that the night before, she could not sleep, perhaps because of her constipation, plus nausea and vomiting for 3 days, with a very painful and swollen lower abdomen. His additional concern was his intention to go to work.

Nursing Care Process

Valuation

Marjory Gordon's 11 function patterns were used for the assessment.

Description of functional health patterns Functional pattern 1. Perception health management Altered pattern

Patient in REG, with good hygienic conditions, from the district of La Victoria, Lima. She is 11 weeks pregnant, without pre natal control, unaware of pregnancy. She does not receive medication. With medical diagnosis: threatened abortion and 11 weeks gestation by ultrasound. She has had amenorrhea for more than two years (hormonal contraceptive injectable every three months). She had her first pregnancy three years ago (euthyroid delivery and at term), she underwent abdominal ultrasound. She denied previous abortion and allergies. With hemoglobin level of 10,5 mg/dl, as a result of beta-human chorionic gonadotrophin (beta-hCG) quantitative subunit of 13800. She received three doses of tetanus vaccine in her first pregnancy.

Current medical diagnosis

Threatened miscarriage and 11-week gestation by ultrasound. Medical therapy:

Diet: NPO

Vital signs check every 30 minutes for 2 hours, then every hour, Bleeding check

Absolute rest

Parenteral hydration Cl. Na. 0,9 0/0, VE at 40 gts x' OSA

Blood count control at 12 hours Auxiliary tests

Laboratory results show:

Hemoglobin 10,5 mg/dl, VN: (13 mg/dl - 14,9 mg/dl) Hematocrit 31,4mg/dl, VN: (45mg/dl to 55mg/dl) Glucose 104mg/dl, VN: (70mg/dl - 110g/dl)

Creatinine 0,61 mg/dl, VN: (0,6 mg/dl to 9,1mg/dl) Urine test: pH of 7,3 VN: (pH 7,35 - 7,45) VDRL test (-)

HIV test (-)

Blood group "O" and Rh (+)

Bleeding time of 2 minutes and 30 seconds. VN: (1 to 9 minutes) Clotting time of 30 seconds. VN: (25- 35 seconds) Beta-quantitative subunit of VN: (11500-289000 mIU/ml:) human chorionic gonadotropin.

(beta-hCG) of 13800

Abdominal ultrasound: thickened uterine wall and presence of an embryo sac of approximately 11 weeks.

Functional pattern 2: Metabolic Nutritional

Altered pattern. BMI: 23,04 (normal weight), skin and mucous membranes pale and semi-hydrated, afebrile, abdomen painful on palpation, nauseous sensation and vomiting three days ago and constipation.

Functional pattern 3: Elimination

Altered pattern. Constipation three days ago.

Functional pattern 4: Activity and exercise

Altered pattern. P. A of 90/50mmgHg, HR of 125 per minute, FR of 20 per minute, difficulty sleeping, sitting in wheelchair due to pain, in semi-flexed position and weakness.

Functional pattern 5: Rest and sleep

Altered pattern. She reported not falling asleep, with pain and weakness, unable to stand, sitting in a wheelchair.

Functional pattern 6: Cognitive perceptual

Altered pattern. Patient lucid, oriented on PET, with lower abdominal pain.

Functional pattern 7: Self-perception - self-concept

Effective Employer. Worried because she does not attend work. She feels fearful and has not been able to sleep for three days.

Functional pattern 8: Role - Relationships

Altered pattern. She has accompaniment and support from her partner. She generates her own income. She has a three-year-old son. She is concerned about her absence from work.

Functional pattern 9: Sexuality - reproduction

Altered pattern. Two gestations, had a euthyroid delivery two years ago. She did not receive CPN. FUR two years ago (used injectable contraceptive every three months). Asymmetrical breasts, nipple and areolas dark, turgid, without secretions, without presence of striae or masses. Uterus not palpable, very sensitive to palpation. Genitalia of normal appearance with presence of dark brown discharge, in small quantity in the sanitary napkin. No amniotic fluid leakage. Second stage of pregnancy at eleven weeks by ultrasound, menarche at 13 years of age. Sexual debut at 16 years of age.

Functional pattern 10: Adaptation to stress tolerance

Effective employer. Concern about her job, as she will miss the days she remains in the hospital. She is a contracted worker.

Functional pattern 11: Values and beliefs

Effective employer. Practitioner of the evangelical religion.

Care plan

Diagnosis

The formulation of nursing diagnoses (DxE) was performed according to the NANDA International taxonomy (Herdman & Kamitsuru, 2017).

Functional pattern 1: Perceived health management

(00043) Ineffective protection r/w inadequate nutrition m/p weakness, immobility and insomnia.

Definition: “Decreased ability to self-protect from internal and external threats such as illness or injury” (Herdman & Kamitsuru, 2017, p. 160).

Domain 1: Health promotion

Class 2: Health management

Functional pattern 2: Metabolic Nutritional

(0002) Nutritional imbalance: intake below requirements r/insufficient food intake m/p inability to ingest food, pallor of mucous membranes, abdominal pain, insufficient muscle tone.

Definition: “Insufficient nutrient intake to meet metabolic needs” (Herdman & Kamitsuru, 2017, p. 171).

Domain 2: Nutrition
Class 1: Ingestion
Functional pattern 3: Elimination
(00011) Constipation r/c pregnancy m/p abdominal pain, inability to defecate and vomiting.
Definition: "Insufficient nutrient intake to meet metabolic needs" (Herdman & Kamitsuru, 2017, p. 215).

Domain 3: Elimination and exchange
Class 2: Gastrointestinal function
Functional pattern 4: Activity and exercise
(00085) Impairment of physical mobility r/pain and decreased strength muscular m/p gait disturbance, postural instability, limited range of motion and difficulty in standing.
Definition: "Limitation of purposeful independent movement of the body, of one or more limbs" (Herdman & Kamitsuru, 2017, p. 239).

Domain 4: Activity/rest
Class 2: Activity and exercise
Functional pattern 5: Rest and sleep
(00096) Of sleep deprivation r/c prolonged discomfort m/p increased sensitivity to pain, discomfort and worry.
Definition: "Prolonged periods of time without sleep (pattern of natural and periodic suspension of consciousness)" (Herdman & Kamitsuru, 2017, p. 231).

Domain 4: Activity/rest
Class 1: Sleep/rest
Functional Pattern 6: Perceptual Cognitive
(00132) Acute pain r/c biological injury agent m/p rating 7 according to VAS scale, verbal expression of pain in hypogastrium.
Definition: "Unpleasant sensory and emotional experience caused by actual or potential tissue injury or described in such terms, of sudden or slow onset, of any intensity from mild to severe, with a foreseeable end and a duration of less than 3 months" (Herdman & Kamitsuru, 2017, p. 468).

Domain 12: Comfort
Class 1: Physical comfort
Functional pattern 8: Role - relationships
(00146) Anxiety m/p threatened by current state r/c with insomnia, preoccupation with changes in life events, fearfulness, increased heart rate and weakness.
Definition: "Vague, uneasy feeling of discomfort or threat accompanied by an autonomic response (the origin that is often nonspecific or unknown to the person); feeling of apprehension caused by anticipation of danger. It is a warning signal that warns of impending danger and allows the person to take action to deal with the threat" (Herdman & Kamitsuru, 2017, p. 352).

Domain 9: Coping/stress tolerance
Class 2: Coping response
Functional pattern 9: Sexuality - reproduction
(00221) Ineffective maternity process r/c with insufficient prenatal care, inadequate maternal nutrition m/p inadequate prenatal management, ineffective management of bothersome symptoms during pregnancy, and inadequate prenatal lifestyle.
Definition: "Inability to prepare for and/or maintain a healthy pregnancy, birthing process, and newborn care to ensure well-being" (Herdman & Kamitsuru, 2017, p. 329).

Domain 8: Sexuality
Class 3: Reproduction
(00209) Risk of maternal/fetal dyad disruption r/c with inadequate prenatal care.
Definition: "Susceptible to disruption of the maternal-fetal symbiotic relationship as a result of comorbidity or pregnancy-related conditions that may compromise health" (Herdman & Kamitsuru, 2017, p. 327).

Domain 8: Sexuality
Class 3: Reproduction
(00145) Risk of posttraumatic syndrome r/c insufficient social support, environment not conducive to needs and perception of the event as traumatic.
Definition: "Inability to prepare for and/or maintain a healthy pregnancy, birthing process, and newborn care to ensure well-being" (Herdman & Kamitsuru, 2017, p. 229).

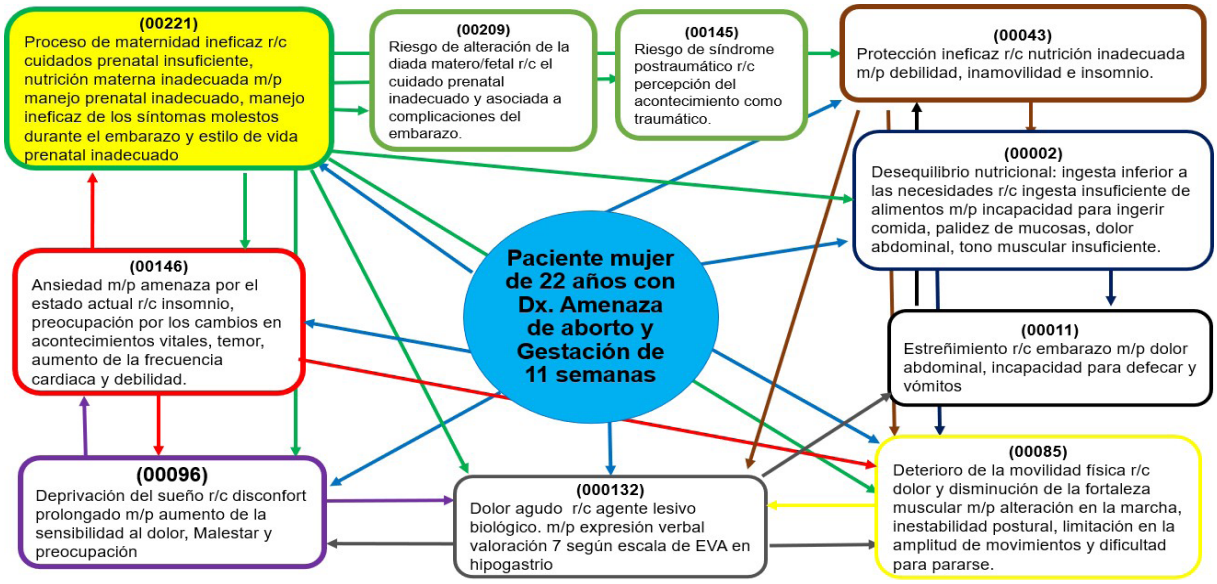


Figure 1. Critical reasoning network, based on the AREA model for obtaining the main Dx.E

Main diagnosis

As can be seen in the Reasoning Network (figure 1), the main DxE. is: (00221) Ineffective maternity process r/c with insufficient prenatal care, inadequate maternal nutrition m/p inadequate prenatal management, ineffective management of bothersome symptoms during pregnancy and inadequate prenatal lifestyle.

Definition

"Inability to prepare for and/or maintain a healthy pregnancy, birthing process, and newborn care to ensure well-being" (Herdman & Kamitsuru, 2017, p. 329).

Domain 8: Sexuality

Class 3: Reproduction Justification of the main DxE

Fuertes Moreno (2019) mentions that motherhood is a complex and personally transformative process, as it helps pregnant women form bonds with their baby, partner, and family. In this period, the threat of miscarriage can occur, which consists of a state that suggests that a miscarriage could occur, and usually happens before 20 weeks of pregnancy. It usually manifests with pain in the back and lower abdomen. On most occasions, the vaginal bleeding stops on its own and the pregnancy continues; however, at other times the threat may progress to miscarriage. This process of ineffective childbearing results in a degree of inability to prepare for and/or maintain a healthy pregnancy, delivery, and newborn care. On the other hand, it is important to consider the relevance of Carvajal-Cabrera and Barriga's -Cosmelli (2021) statement states that motherhood is often a positive experience; however, for other women, it is synonymous with suffering, illness, and even death. To conclude, in a process of ineffective maternity, a complication is the threat of miscarriage that generates states of anxiety, defined as an anticipation of future harm or misfortune, accompanied by a feeling of dysphoria and/or somatic symptoms of tension. In this sense, it is often better to observe the patient and assess their respective emotional and behavioral manifestations, since these influence the course of the disease (Carvajal-Cabrera & Barriga-Cosmelli, 2021).

CR Infection CR Acute pain

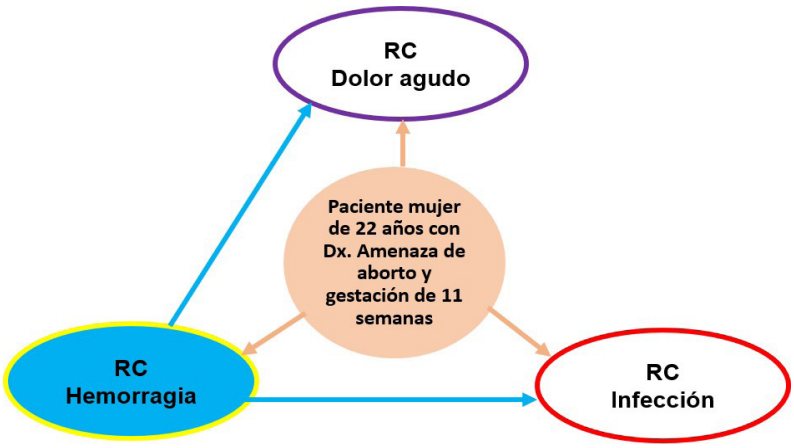


Figure 2. Critical reasonng network based on the AREA method for obtaining the main complication risk (CR)

Collaboration problems (CP) and their complication risks (CR)

In order to know which are the collaborative problems (CP), as well as the patient's complication risks (CR), the "Manual de Diagnósticos Enfermeros" by González-Aguña and Santamaría-García (2015) was used.

Collaboration problem in pre-labor period: CR Hemorrhage.

Identification of the main CR

CR hemorrhage has been identified as the main complication risk, since it is the one with the most arrows in relation to the others, being linked to CR acute pain and CR infection.

CR Hemorrhage

Definition. Hemorrhage is the outflow or loss of blood volume, inside or outside the body, due to rupture or injury of one or more blood vessels, which causes a decrease in blood pressure; that is, the heart increases its activity considerably in an attempt to raise its cardiac output and conserve the volume of circulating blood. It is considered a medical emergency; the severity depends on how fast, how much blood is lost, and the patient's age. This continuous bleeding can lead to complications such as anemia, hypovolemic shock, etc. (Bunce & Heine, 2020).

Justification of the main CR

In cases of post-threatened abortion hemorrhage, timely intervention by the nurse is important, assessing the site, amount, and rate of blood loss and the application of life support measures, correctly recording the origin of the bleeding, noting the gestational age, and identifying the differential diagnosis. Profuse bleeding is classified as a priority in a frequent situation before the 20th week of gestation, occurring in 15-25 % of all pregnancies. This puts the life of the mother and fetus at risk (Ochoa, Reus, & Rogel-Cayetano, 2018).

On the other hand, the presence of hemorrhage of intrauterine origin manifests with or without uterine contractions, without cervical dilatation, and expulsion of the products of conception. The care provided by the nurse in the case of hemorrhage is focused on the patient with the aim is to prevent the onset of bleeding and promptly assess the signs and symptoms of complications. To do this, activities will be performed vital signs charting, assessment of strict body hemodynamics in the water balance sheet, decreasing anxiety, preserving absolute rest, teaching about the disease process and explaining alarm signs and symptoms, as well as verifying the records of the annotations in the care plan, reports and updating the Kardex and detailed examination of the incident in the nursing notes sheet (NANDA, 2018-2020). Similarly, it is important to focus on the prevention of bleeding complications since bleeding is a sign that expresses a decrease in blood volume, affecting cardiac output in relation to the amount and frequency of bleeding. Timely intervention by the nurse is important to avoid irreversible damage to the mother and the product of conception (MINSA, 20|15). It is also important to frequently assess the patient's health, primarily when it is associated with acute visceral pain and is accompanied by vegetative manifestations such as nausea, vomiting, sweating, tachycardia, and increased blood pressure. When there is tissue damage, it should be considered that, during gestation, estrogenic hormonal changes and changes in the woman's pH (low acidity) occur, making her susceptible to infection (Mayo Clinic Staff, 2020). In conclusion, hemorrhage is a sign that expresses a decrease in blood volume affecting cardiac output, including the amount and frequency of bleeding. In this case, timely intervention by the nurse is important to constantly assess the patient's health. Similarly, when associated with acute visceral pain, it is accompanied by vegetative manifestations such as nausea, vomiting, sweating, tachycardia, and increased heart rate.

Blood pressure. As a sign of tissue damage, it should be considered that, in the process of gestation, estrogenic hormonal changes and changes in pH (low acidity) occur, which sensitize her to infection (Bunce & Heine, 2020).

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Planning Planning of the main nursing diagnosis (Dx.E.p)

To prevent and minimize the problem presented in the patient, outcomes were determined and a set of interventions were chosen as part of the care plan. The NOC (Moorhead et al., 2019) and NIC (Butcher et al., 2019) manuals of objectives or outcomes were used.

DxE. main

(00221) Ineffective maternity process r/c with insufficient prenatal care, inadequate maternal nutrition m/p inadequate prenatal management, ineffective management of bothersome symptoms during pregnancy, and inadequate prenatal lifestyle.

Definition

"Inability to prepare for and/or maintain a healthy pregnancy, birthing process, and newborn care to ensure well-being" (Herdman & Kamitsuru, 2017, p. 329).

Domain 8: Sexuality

Class 3: Reproduction

Outcomes (NOC) of the main nursing diagnosis

The NOC taxonomy responds to the patient outcomes that are being sought, using 4-digit codes and six-digit indicators. For

DxE. (0221) Ineffective childbearing process, the following NOCs apply:

(1607) Prenatal health conduct

(1638) Knowledge: gestation (0111) Prenatal fetal stage

(2006) Maternal prepartum personal health status NOC prioritization of principal nursing diagnosis.

The analysis was carried out using the critical reasoning network to define the main NOC. As shown in figure 03.

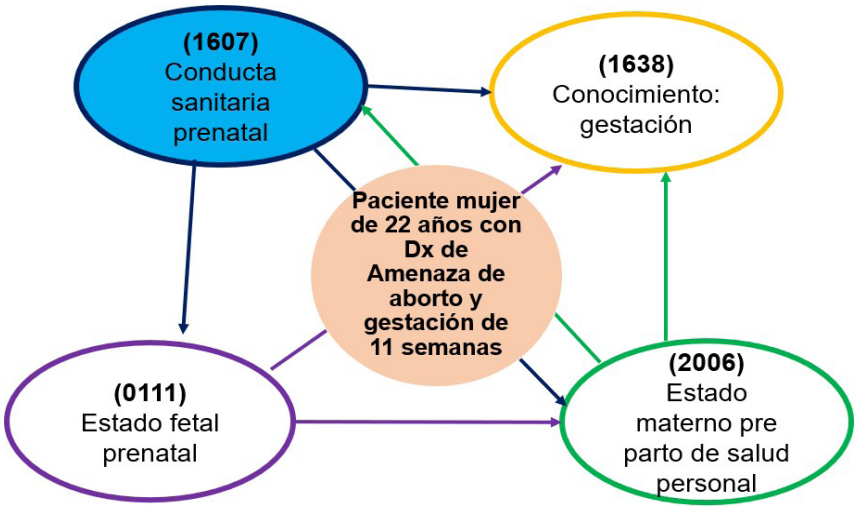


Figure 3. Prioritization of the NOC of the main DxE by critical reasoning network based on the AREA method

Justification of the main DxE. main NOC

We can observe that according to the critical reasoning network the main NOC corresponds to the one most related to the other NOCs:

(1607) Prenatal Health Behavior

Definition: "Personal actions to promote a healthy gestation and healthy newborn." (Moorhead et al., 2019, p. 185).

Domain IV: Health knowledge and behavior. Class Q: Health behavior.

The objective is related to improving the maternity process and fetal well-being, as well as maintaining the viability of gestation and at the same time preventing the risk of maternal and perinatal morbimortality, because the approach has as a priority to maintain a health behavior during the gestational period and therefore of the other objectives and outcomes. In this sense, De la Herrán et al. (2018) consider it important to know and deepen prenatal education to improve childcare policies, reproductive care, and forms of parenting with preventive and interdisciplinary plans. A lower blood supply to the fetus could cause fetal death.

Table 1. Main NOC score for Dx.E.p.(Likert scale: 1-Never demonstrated. 2-Rarely demonstrated. 3-Sometimes demonstrated. 4-Frequently demonstrated. 5-Always demonstrated)

NOC	Initial Score	Target score	Time
(1607) Prenatal Health Behavior	3	5	24 hours

Table 2. Scoring of the Main NOC indicators, according to Likert scale (Likert scale: 1-Never demonstrated. 2-Rarely demonstrated. 3-Sometimes demonstrated. 4-Frequently demonstrated. 5-Always demonstrated)

Indicators	Initial score	Target score	Time
(160703) Maintains visits of prenatal care	1	5	24 hours
(160710) Maintains adequate nutrient intakes for gestation.	2	5	24 hours
(160723) Uses supplements iron	1	5	24 hours
(160714) Avoid exposure to infectious diseases.	2	4	24 hours
(160721) Uses prescription medications	1	5	24 hours

Interventions (NIC) of the main Dx.E

To obtain the prioritized outcome, the Nursing Intervention Classification (NIC) taxonomy was used.

(6680) Vital signs monitoring (Butcher et al., 2018, p. 341).

Definition: Collection and analysis of data on cardiovascular, respiratory and body temperature status to determine and prevent complications.

Domain 4: Safety

Class: V Risk control Activities

(668001) Monitor blood pressure, pulse, temperature, and respiratory status. (668002) Observe blood pressure trends and fluctuations.

(668003) Monitor respiratory rate and rhythm (depth and symmetry).

(668004) Monitor pulse oximetry.

(668005) Periodically monitor skin color, temperature and moisture.

(4150) Hemodynamic regulation (Butcher et al., 2018, p. 393).

Definition: Optimization of frequency, preload and cardiac contractility Domain 2: Complex physiological

Class N: Control of tissue perfusion. Activities

(415001) Perform a thorough assessment of hemodynamic status (check blood pressure, heart rate, pulses, venous pressure).

(415002) Recognize the presence of early warning signs and symptoms indicative of hemodynamic system compromise.

(415003) Determine perfusion status (indicate whether the patient is cold, warm or hot).

(415004) Monitor intake and output, diuresis, and patient weight (1450) Management of nausea (Butcher et al., 2018, p. 296) Definition: prevention and relief of nausea.

Domain 1: Basic physiological

Class E: Promotion of physical comfort. Activities:

(145001) Monitor the effect of treatment of nausea.

(145002) Encourage the patient to control her own experience of nausea.

(145003) Encourage adequate rest and sleep to facilitate relief of nausea.

(145004) Encourage eating small amounts of food that is appealing to the patient.

(145005) Encourage the patient to eat small amounts of food that is appealing to the patient.

(145005) Encourage the patient to eat small amounts of food that is appealing to the patient a person with nausea.

(145005) Weigh the patient regularly.

Functional pattern 9: Sexuality - reproduction

Concerning the first interview, a notable decrease in dark brown vaginal bleeding was observed, continuing with her 11-week pregnancy. Due to the transitory situation and the risk of hemorrhage, it is difficult to predict that it will recur in the coming weeks. For now, positive changes have been observed in the evolution of the process of ineffective maternity in the face of the probability of presenting hemorrhage and spontaneous abortion.

Finally, with the continuity of care plan, the evolution and risk of hemorrhage are assessed, thus achieving the greatest possible benefit.

Major Complication Risk Planning (RCp) Hemorrhage

NOC

In order to determine the changes in the patient's condition, the health outcomes measurement classifier was used through NOC objectives (Moorhead et al., 2019). In terms of improving the patient's quality of life, the NIC interventions were used (Butcher et al., 2018). Consequently, the primary complication risk is CR Hemorrhage.

NOC results of the RCp

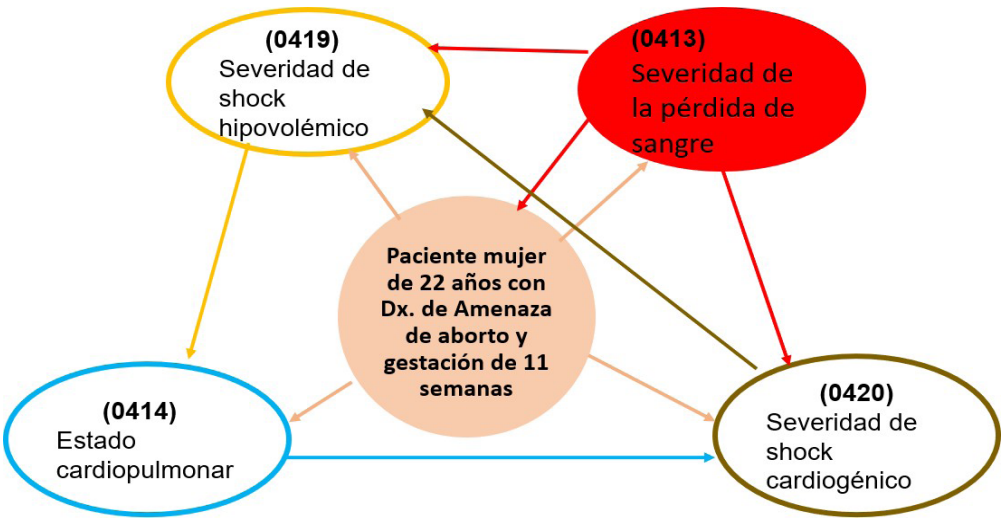


Figure 4. Prioritization of the NOC of the main CR by Critical Reasoning Network Based on the AREA Method

The NOC taxonomy responds to the patient's desired outcomes, using 4-digit codes and six-digit indicators. The following NOCs correspond to the CR Hemorrhage:

(0413) Severity of blood loss
(0419) Severity of hypovolemic shock (0414) Cardiopulmonary status
(0415) Severity of hypovolemic shock (0416) Severity of hypovolemic shock (0416) Cardiopulmonary status
(0420) Severity of cardiogenic shock

Justification of the main NOC of the main CR

The severity of blood loss in hemorrhages is variable and will depend on gestational age, pain intensity, and possible labor. It can also occur as a result of placenta previa, premature detachment of the placenta or uterine rupture; the risks increase if there are risk factors such as: being older than 35 years, multiparous, previous cesarean sections, pelvic diseases, history of uterine curettage, consumption of addictives, etc. (MINSA, 2018). Therefore, it is concluded that maternal hemorrhage is an emergency that should be treated as a priority, since it can cause sudden loss of life (the fetus) and be the leading cause of maternal death.

Prioritized NOC of the CR Hemorrhage

(0413) Blood loss severity

Definition: "Severity of signs and symptoms of internal or external bleeding." (Moorhead et al., 2019, p. 564).

Domain II: Physiological health

Class E: Cardiopulmonary

Table 3. Main NOC score of CR Hemorrhage, according to Likert Scale (1-Severe. 2-Substantial. 3-Moderate. 4-Leve. 5-None)

NOC	Initial Score	Target score	Time
(0413) Blood loss severity	4	5	48 hours

Table 4. NOC Main NOC Indicator Scores for CR Hemorrhage (Likert Scale: 1-Severe. 2-Substantial. 3-Moderate. 4-Level. 5-None)

Indicators	Initial Score	Target score	Time
(041307) Vaginal bleeding	4	5	6 hours
(041313) Pallor of skin and mucous membranes	3	5	6 hours
(041306) Abdominal distention	3	5	6 hours
(041316) Decreased hemoglobin (Hb)	3	5	6 hours
(041317) Decreased hematocrit (Hto)	3	5	6 hours
(041314) Anxiety	4	5	48 hours
(041309) Decrease in systolic blood pressure	4	5	6 hours
(041310) Decrease in diastolic blood pressure	4	5	6 hours
(041312) Loss of body heat	4	5	6 hours

NIC

Interventions (CIN) for risk of major complication (RCp)

Regarding the health behavior to be followed in the prenatal period, it is necessary to perform in-hospital work and counseling, which should then be performed by the patient at discharge. To achieve the prioritized outcome, the Nursing Intervention Classification (NIC) taxonomy was used.

Risk of major complication (RCp). Hemorrhage

(4010) Hemorrhage prevention

Definition: "Decrease in stimuli that can induce bleeding in patients at risk for bleeding" (Butcher et al., 2019, p. 377).

Domain 2: Complex physiological

Class N: Control of tissue perfusion

(441001) Monitor the patient closely for signs and symptoms of internal or external bleeding (e.g., abdominal swelling).
(441002) Record hemoglobin and hematocrit levels, before and after blood loss, as indicated.
(441003) Maintain intravenous access.
(441004) Maintain bed rest during active bleeding.
(441005) Instruct patient and/or family on signs of bleeding.

(5310) Give hope.

Definition: "Increasing belief in one's own ability to initiate and sustain actions" (Butcher et al., 2019, p. 158).

Domain 3: Behavioral.

Class R: Coping assistance

(145001) To help the patient and family identify areas of hope in life. (145002) To foster therapeutic relationships with loved ones.

(145003) Assist the patient in designing and reviewing goals related to the object of hope.

(145004) Create an environment that facilitates the patient's practice of her religion, when possible.

(145005) To avoid or conceal the truth.

(5270) Emotional support

Definition: "Providing reassurance, acceptance, and encouragement in time of stress" (Butcher et al., 2019, p. 74).

Domain 3: Behavioral

Class R: Coping assistance

(527001) Explore with the patient what triggered the emotions.

(527002) Support the use of appropriate coping mechanisms.

(527003) Encourage talking or crying as a means of decreasing emotional response.

(527004) Staying with the patient and providing feelings of security during periods of heightened anxiety.

(527005) Refer to counseling services, if needed.

Finally, it was observed that the functional patterns that were initially altered: health perception-management, nutritional-metabolic, elimination, activity and exercise, rest and sleep, cognitive-perceptual, role-relationships and sexuality-reproduction, have improved within 24 hours and the 11-week pregnancy is still ongoing, thanks to the timely and effective application of nursing interventions.

Execution

In the application of the nursing interventions and activities, the time for care was organized in three shifts: 6 hours, morning shift; 6 hours, afternoon shift; and 12 hours, night shift. In addition, the nursing intervention book (NIC) was used.

Table 5. Timeline of nursing interventions/activities for threatened miscarriage

Date	Interventions/activities	Shifts		
		M	T	N
Primary nursing diagnosis				
12/04/2021	(6680) Monitoring of vital signs			
	Monitor blood pressure, pulse, temperature, etc and respiratory status, as appropriate.	9	6	12
	Observe trends and fluctuations in values of the P.A.	9	6	12
	Monitor respiratory rate and rhythm (depth and symmetry).	9	6	12
	Monitor pulse oximetry.	9	6	12
	Periodically monitor skin color, temperature and humidity.	9	6	12
12/04/2021	(4150) Hemodynamic regulation			
	Perform a thorough assessment of hemodynamic status (check blood pressure, heart rate, pulses, venous pressure).	9	6	12
	Recognize the presence of signs and symptoms early warning signs indicative of the hemodynamic system.	9	6	12
	Determine the perfusion status (indicate whether the patient is cold, warm or hot).	9	6	12
	Place in Trendelemburg position if necessary necessary.	9	6	12
12/04/2021	(1450) Nausea management			
	Encourage the patient to control her own experience with nausea.	9	12	6
	Encourage eating small amounts of food that is appealing to the person with nausea.	9	12	6
	Weigh the patient regularly.			6
	Monitor the effect of treatment of nausea.	9	12	6
Risk of major complication				
12/04/2021	(4010) Hemorrhage prevention			
	Monitor the patient closely for signs and symptoms of internal or external bleeding (example: abdominal swelling).	8	2	10

	Maintain control of intake and consumption elimination.	8	2	10
	Maintain intravenous access.	8	2	10
	Maintaining bed rest during bleeding active.	8	2	10
	Instructing the patient and/or family about the signs and symptoms of hemorrhage.	8	2	10
12/04/2021	(5310) Giving hope			
	Help the patient and family to identify the areas of hope in life.	8	2	10
	Encourage therapeutic relationships with loved ones.		2	
	Help the patient design and review goals. related to the object of hope.		2	
	To create an environment that facilitates the patient's practice of their religion, when possible.		2	
	Avoiding or disguising the truth.		2	
2/04/2021	(5270) Emotional support			
	Comment on the emotional experience with the patient.	8	2	10
	Explores with the patient what has triggered the emotions.	8	2	10
	Making empathic or supportive statements.	8	2	10
	Support the use of defense mechanisms adequate.	8	2	10
	Encourage the patient to express her feelings about the feelings of anxiety, anger or sadness.	8	2	10

Evaluation

A 48-hour follow-up period was established, observing slight progress (improvement of the ineffective maternity process and decrease in the risk of bleeding risk) and nursing activities were evaluated based on the comparison of the patient's initial health status and the effectiveness of the interventions with respect to the planned outcomes.

Evaluation of the main DxE result

Table 6. Principal Diagnosis Main NOC score (Likert Scale: 1-Never demonstrated 2-Rarely demonstrated. 3-Sometimes demonstrated. 4-Frequently demonstrated. 5-Always demonstrated.)

NOC	Initial score	Target score	Score achieved	Time
(1607) Sanitary conduct prenatal	3	5	5	24 hours

Source: prepared based on Palomar-Aumatell (2017).

Table 7. Main Diagnostic Indicator Scores (Likert Scale: 1-Never demonstrated. 2- Rarely demonstrated. 3-Sometimes demonstrated. 4-Frequently demonstrated. 5-Always demonstrated)

Indicators	Initial Score	Target score	Score Achieved	Time
(160703) Maintains the visits of prenatal care	1	5	5	06 hours
(160710) Maintains adequate nutrient intake for gestation.	2	5	5	24 hours
(160723) Uses supplements of iron	1	5	5	24 hours
(160714) Prevents exposure to infectious diseases.	2	5	5	24 hours
(160721) Uses medications according to prescription	1	5	5	24 hours

Source: own elaboration based on Palomar-Aumatell (2017).

Analyzing the results obtained

As can be seen in table 6, achievement results are presented about the patient's stability without clinical manifestations of threatened abortion during the first 24 hours. This risk was supervised and monitored by executing the nursing activities of the NOC (1607) Prenatal Health Behavior, as we can observe that the patient obtained a maximum score of five from the first moment. In order to control and carry out this development, the following indicators were determined as shown in table 7.

About the indicator (160703), it maintains the prenatal care visits, since the patient started with an initial score of one, since in the clinical examination it is found that she did not receive pre natal control; after the evaluation performed by the gyneco obstetrician, the obstetrician and the licensed nurse, the intervention reached a score of five, keeping the patient in a controlled gestational state.

About the indicator (160710), she maintains an adequate nutrient intake for gestation. Initially, the patient had a score of two since, in the clinical examination, she indicated preventive NPO in case the patient would have required a surgical intervention in PCOS. After the intervention and care, she has been able to achieve a score of five in 24 hours, maintaining stability in her vital

functions and vaginal bleeding and indicating a liquid diet with good oral tolerance.

About indicator (160723), uses iron supplements; initially, the patient had a score of one, since in the clinical examination, the patient presented a hemoglobin of 10,5 mg/dl. After intervention and care, she achieved a score of five at 24 hours. She will continue treatment with iron to improve her anemia status. This treatment will continue even after medical discharge, and she will gradually improve regarding the signs and symptoms of anemia.

About indicator (160714), avoid exposure to infectious diseases.

Initially, the patient had a score of two. Because her anemia condition decreased her defenses, she required greater protection with biosafety measures during non-invasive and invasive procedures. After the intervention and care, she has reached the maximum score of five, so she will continue with personal hygiene care and improvement of anemia.

About indicator (160721), she uses medication as prescribed. Initially the patient had a score of one, considering that in the clinical evaluation she was admitted as an emergency patient with abdominal pain and presence of dark discharge via the vagina. After the intervention and care, she complied with the indicated therapy and, as shown in the nursing chart and the respective notes, she was administered medications parenterally.

Maintaining a good fluid perfusion with biosafety measures during the whole process and using sterile material. The patient scored five, so he will continue with the pharmacological treatment according to medical indications.

Therefore, the 22-year-old adult patient who was admitted to the emergency room with abdominal pain and presence of dark brown vaginal discharge, during her two days of hospital stay and evaluations, was diagnosed as: 11 weeks pregnant by ultrasound, mild anemia with 10,5mg/dl of hemoglobin, and currently presents better general condition, afebrile, with iron medication support and control of vaginal bleeding.

Likewise, she presented an ineffective maternity process with insufficient prenatal care, inadequate maternal nutrition, after having received the set of nursing interventions. After two days of evaluation of functional pattern 9: Sexuality - reproduction, the patient did not show any dark-colored vaginal bleeding, which determines the achievement of improving prenatal health behavior through the patient's actions, in order to promote a good gestation process and a healthy newborn.

Evaluation of the performance of the RCp

The evaluation was performed in relation to the comparison of the patient's initial health status and the effectiveness of the resolved actions of the planned outcomes.

Table 8. Evaluation of the NOC Score of the main CR (Likert Scale: 1. Severe. 2. Substantial 3. Moderate 4. Level. 5-None)

NOC	Initial Score	Target score	Score Achieved	Time
(0413) Blood loss severity	4	5	5	48 hours

Source: Prepared based on Palomar-Aumatell (2017).

Table 9. Scoring of main complication risk indicators

Indicators	Initial score	Target score	Score achieved	Time
(041307) Vaginal bleeding	4	5	5	24 hours
(041313) Pallor of skin and mucous membranes	3	5	5	24 hours
(041306) Abdominal distention	3	5	5	12 hours
(041316) Decreased hemoglobin (Hgb)	3	5	4	24 hours
(041317) Decreased hematocrit (Hto)	3	5	4	24 hours
(041314) Anxiety	4	5	4	24 hours
(041309) Decrease in systolic blood pressure	4	5	5	6 hours
(041310) Pressure reduction diastolic arterial	4	5	5	6 hours
(041312) Loss of body heat	4	5	5	12 hours

Source: Elaboration based on Palomar-Aumatell (2017).

Interpretation

Table 8 shows that the patient remained stable without signs of internal or external bleeding. This risk of bleeding complications has been monitored using the NOC (0413). He also presented the severity of blood loss, as demonstrated in the permanent monitoring formats. According to medical indication and nursing activities, it can be demonstrated that the patient reached a score of five, i.e., in stable condition. In order to be able to monitor and carry out optimal nursing care, the activities established in table 9 were applied, with the following indicators:

In relation to indicator (041307) vaginal bleeding, according to the hourly monitoring record, no signs of altered vaginal bleeding, both intra-abdominal and extra-vaginal, have been evidenced. Regarding abdominal swelling and control of vital signs and other

clinical manifestations, a maximum score of five was reached within 24 hours.

Referring to (041313) pallor of skin and mucous membranes, as an evaluation indicator that in this case manifests the hemoglobin level through the skin and mucous membranes, the patient has remained constant and has started treatment with iron supplements to improve anemia, associated with the improvement of an iron-rich diet, achieving a maximum score of five at 24 hours.

About (041306) abdominal distension, this indicator is associated with the risk of intra-abdominal bleeding. During the patient's evaluation and monitoring, the level of pain was assessed based on a scale, reaching a score of five in 12 hours.

Regarding the (041316) decrease in hemoglobin (Hgb), she maintained a hemoglobin of 10,5mg/dl from admission, which has not changed during her hospitalization period, as shown by the hemoglobin control. Likewise, the patient was kept in a stable condition with a final score of four at 24 hours.

The (041317) decrease in hematocrit (Ht) is closely related to hemoglobin levels since it corresponds to 1/3 of the total. In this case, it was not altered during the critical period of his stay; it reached a maximum score of four at 24 hours.

Regarding (041314) anxiety, the patient initially showed signs of this disorder, associated with her concern about the current conditions of her pregnancy. After receiving the information from the physician and the respective emotional support, she regained her self-confidence. According to the laboratory and ultrasound examination results, she was allowed the usual help and counseling provided to the patient. As a result, she achieved a maximum score of four at 24 hours.

Regarding the (041309) decrease in systolic blood pressure, she has maintained normal blood pressure levels during her stay. Her decrease would automatically orient to a decrease in blood volume. In this case, the patient has manifested stability in her vital functions. She obtained a maximum score of five at 06 hours.

The (041310) decrease in diastolic blood pressure is related to unexpected changes in blood pressure values, in this case due to the risk of suffering a bleeding episode at any time. The patient reached a maximum score of five at 06 hours, maintaining her blood pressure stable during her hospital stay.

Finally, the (041312) loss of body heat is associated with a decrease in blood volume and alteration of her vital functions. According to continuous follow-up and monitoring, the patient has maintained a normal temperature, and no signs of feeling cold have been evidenced. Despite this, she achieved a maximum score of five at 12 hours, i.e., she is in a favorable and stable condition.

After the nursing care provided to the patient, in which the risk of hemorrhage was the main objective in avoiding and/or controlling it, constant evaluations of the indicators of the activities were carried out, so that a term of 6 to 48 hours was achieved to have significantly decreased the risk of vaginal bleeding; therefore, the patient presented an initial score of four, and reached the maximum score of five, which means a regular or stable condition.

It was concluded that bleeding states during pregnancy are one of the main obstetric complications in prepartum. According to NANDA I. (2018-2020), the presence of vaginal bleeding, frequency and amount of bleeding, associated with other manifestations in the vital signs and skin. Bleeding in pregnant women can be catastrophic, not always being evident as hemoperitoneum or hematomas. Therefore, blood pressure and pulse should be checked regularly for any patient suspected of hypovolemic shock.

In the professional nursing practice, meaning has been given to the reality where care is performed, applying the systematic method to organize, execute, and evaluate the required nursing interventions. This is the case of Jean Watson's "Theory of human care" and Callista Roy's "Adaptation Model", which are consistent with applying the care plan and nursing activities, denoting professional commitment and responsibility. This procedure is scientific, since it involves planning, organization, control, monitoring, and evaluation of the quality of nursing care in daily care based on health guidelines, the availability of resources, and the use of technology in care management. Thus, the care provided to the patient allowed for attentive listening, dialogue, and respect for her rights during care and spiritual assistance.

On the other hand, the patient's hemodynamic support was achieved without any signs of hemorrhage. This risk of complication has been permanently monitored according to medical indication and the NOC indicator (0413) severity of blood loss. Thus, a final score of five was achieved, i.e., she is in a state of normalcy.

Based on the above, it is confirmed that the planned results for the patient's nursing care have been achieved with the application of the activities in the established time, achieving favorable results. In addition, the intervention has been timely in the health care process was ineffective, as evidenced by the maximum rating of five points achieved in 48 hours. In conclusion, the nursing care plan was successful, reflected in the patient's improvement and absence of complications.

DISCUSSION

The patient in the present study was admitted to the gynecology department after being seen in the emergency department. She presented with threatened miscarriage at 11 weeks of gestation and CR of hemorrhage, considering her clinical condition as high risk for her health. Likewise, after the respective literature review, numerous studies have been obtained that show the fundamental role of nursing in comprehensive and quality care, in order to help patients with threatened abortion (Carvajal-Cabrera & Barriga-Cosmelli, 2021).

This involves making a care plan corresponding to the use of the fundamental nursing tool (PAE), which confers autonomy in collecting information from the patient and in executing a series of activities that reinforce the weaknesses or discomforts at different levels: physical, emotional, spiritual, and social. In this sense, assistance is emphasized in the most relevant aspects that nursing can address (Franco-Campos, 2019).

It should be noted that the care plan makes it possible to protocolize nursing actions about the needs of the patient with threatened miscarriage, for monitoring, evaluation, and consolidation, as an axis for improving interventions in patients with similar diagnoses. Therefore, every pregnant woman in her first trimester experiences mixed feelings between illusion and fear of miscarriage until

after 20 weeks. Pregnant patients are emotionally labile and need good support and treatment.

The patient's health care team is a human team that makes them feel that they are valuable and that they have a team of health care professionals attentive to their hospital stay and the resolution of their health problem.

It is also emphasized that, in this care process, it was important for the participation of the family and the couple through their support, the resolution of doubts, and the expansion of information about the patient; this allowed covering all the components of the holistic care provided in the nursing intervention. By integrating the close members of the pregnant woman, they became indirect participants in improving the patient, avoiding complications, and decreasing the hospital stay (Macias et al., 2018).

In nursing interventions, two theories have been applied in terms of the care plan: Jean Watson's "Humanized Care Theory" (which focuses on the patient's priority needs and refers to holistic and humane care) and Callista Roy's "Adaptation Theory," which takes into consideration the assessment of behavior and stimuli that may influence the adaptation of the woman in a situation of threatened abortion.

The relationship between the theories and the patient's situation is observed after the diagnosis of threatened miscarriage, which usually occurs in the first 20 weeks of pregnancy (i.e., in the first trimester), with the possibility of improvement with effective treatment in most cases. However, proper care and self-care are required to improve their lifestyle.

On the other hand, the process of ineffective motherhood occurs as a consequence of the inability to prepare for and/or maintain a healthy pregnancy, and it is here where the nursing professional plays an important role in the management of the prevention of bleeding complications, with strict and scientific compliance with pharmacological and non-pharmacological treatment.

The CR of hemorrhage could occur if the patient has any risk factors that could hinder gestation. In this sense, nursing actions play an essential role as they are aimed at prevention and timely intervention to prevent this problem from worsening; in addition, it is helpful to apply interventional procedures and techniques to restore health with an intersubjective attitude, with the support of technology and promoting a relationship between the caregiver and the patient.

All of the above agrees with Guerrero-Hernandez et al. (2017) and Carvajal-Cabrera and Barriga-Cosmelli (2021) consider threatened miscarriage a state that could end in miscarriage before 20 weeks of pregnancy, and in most cases vaginal bleeding stops on its own and the pregnancy continues its course; however, other times the threat progresses to miscarriage: at least 20-30 % of pregnant women have hemorrhage in the first trimester, and in known pregnancies, the average miscarriage is approximately 10 %, usually presenting between seven and 12 weeks of gestation (Reproductive, 2018). Also, hemorrhage is one of the first causes of maternal perinatal morbidity and mortality, making immediate, timely, and effective care essential in order to avoid subsequent complications that cause family pain.

In conclusion, health professionals are committed to carrying out a broad and thorough nursing assessment to prevent any risk of complications from aggravating the patient's already existing situations. The study shows that, after having provided care to the patient, a favorable evolution was evidenced compared to the initial phase of the care plan.

Limitations

The limitations encountered throughout the study's development have been: Limited time to follow up on the case under study, since the severity of the situation in which the patient found herself and the consequences it entails require more time for the improvement that has been obtained after the actions carried out. Therefore, a long-term nursing care plan will be continued.

Also, the period was restricted for follow-up of the threatened abortion case under study. Social isolation due to the COVID-19 pandemic has limited the time for family visits in the hospital. In addition, the limited conditions for access to information by the patient's family played a restrictive role, since no visits were permitted due to the pandemic, nor were additional data considered very intimate because they were part of the professional secret.

CONCLUSIONS

The role of the nurse is an important place in the care of patients who are attended to in the obstetrics and gynecology service; among the different cases, there is the threat of abortion. This implies that the nursing professional must strengthen his/her competencies for the timely and assertive management of these cases, avoiding complications and favoring the well-being and health of the patients.

Likewise, the importance of knowing in depth the pathological process of the health problems presented by the patients attended to daily in the hospital environment is highlighted. An effective nurse diagnostician establishes the necessary clinical judgments to know the pathophysiology and behavior of the diseases of the service where he/she works in order to make a good diagnosis.

On the other hand, one of the leading causes of maternal morbidity and mortality in Peru is puerperal hemorrhage, which requires that nursing professionals in the area of obstetrics and gynecology know the preventive measures and premonitory signs of hemorrhage in order to control and reverse the cases, avoiding major complications. Also, it is of vital importance that prenatal care education occurs in prenatal controls, in order to favor the gestation process and the conception of the fetus, avoiding risks in the maternity process.

In conclusion, the nursing professional must know and adequately manage the nursing care process, which is an indispensable tool in managing maternal care. Maintaining a standardized language through the interrelation of NANDA I, NOC, NIC, and Linda Juall Carpenito's collaborative problems will result in optimal and focused attention to the problems and risks that may arise in obstetric events, such as threatened abortion.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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ANNEXES

Appendix A. Plan of care
AFFILIATION DATA
User's name:_____Address: _____
HOSPITALIZATION DATA
HCL:_____Account:_____Insurance:_____ Origin: Outpatient ( ) Emergency ( ) SOP ( ) Referred
Age:_____
Religion:_____from:_____
Grade of education:_____Occupation: _____ Source of Information: Patient ( ) Relative/friend ( ) Other:_____
Method of arrival: Walking ( ) Stretcher ( ) Wheelchair ( ) Reason for admission: _____
Dx. Medical:_____ Date of assessment:_____

ASSESSMENT ACCORDING TO FUNCTIONAL PATTERNS OF HEALTH
FUNCTIONAL PATTERN OF HEALTH PERCEPTION/CONTROL
History of disease and surgical history:
HTA ( ) DM ( ) Miscarriages ( ) Gastritis/ulcer ( ) TB ( ) Asthma ( ) HIV ( ) VDRL ( ) Other_____
Surgeries: No ( ) Yes ( )
Allergies and other reactions:_____
Pharmaceuticals:_____Food:_____ Signs-symptoms:_____Others_____ Risk factors:_____
Consumption: Tobacco No ( ) Yes( ) Alcohol No( ) Yes( ) Drugs No( ) Yes( ) Yes ( )
Medications (with or without medical indication)
What are you currently taking? Dose/Freq._____Last dose_____

Hygiene condition: Good ( ) Fair ( ) Poor ( ) Poor ( )
What do you know about your disease current?
Where do you go when you get sick?
What do you need to know about your disease?

FUNCTIONAL PATTERN OF SEXUALITY/REPRODUCTION
Obstetric Formula: G P_____EG: CPN NO.: FUR: FPP:
Breasts: sensitive ( ) Not sensitive( ) soft( ) hard( ) secretory( )
( ) nonsecretory ( ) hard mass ( ) abscess ( ) healing ( ) bandage ( ) Nipples: Formed ( ) flat ( ) inverted ( ) inverted ( ) cracked ( )
Uterus: Gravid ( ) not gravid ( ) contracted ( ) not contracted( ) Uterine height:
Uterine dynamics:
Freq:_____Tone:_____Intensity:_____ Genitalia: normal ( ) edema ( ) hematoma ( ) other: _____
Vaginal discharge: white ( ) yellow( ) yellow( ) green( ) green( ) foul-smelling ( ) Volume vaginal bleeding:
M:_____T:_____N:_____
Vaginal plug: Yes ( ) No ( ) No ( ) No. of gauze:_____ Amniotic fluid leakage:_____qty:_____
color:_____odor:_____
Lochia:_____cant:_____color:_____odor:_____Fetal Movements: Yes ( ) No ( )
FCL:_____Observation:_____

NUTRITIONAL-METABOLIC FUNCTIONAL PATTERN
Weight:_____Height:_____BMI:_____T:____°C
Wound: Location and description:_____
Glucose:_____
Hb:_____
Protected with dressing: clean ( ) dry ( ) stained ( ) wet ( ) without signs of phlogosis ( ) with signs of phlogosis ( ) with ecchymotic borders ( ) ecchymotic ( )
With drain: tubular ( ) laminar( )Infected: No( ) Yes( )
FUNCTIONAL PATTERN OF RELATIONSHIPS
ROLE
Occupation:_____ Marital Status: Single ( ) Married( ) Cohabitant( ) Divorced( )
With whom do you live? Alone ( ) With your family ( ) Other_____
Sources of support: Family ( ) Friends ( ) Others____
Family conflict/violence: Yes ( ) No ( )

Attempted/suicide Yes ( ) No ( ) When:___
AGA:____

Skin and mucosa: pinkish ( ) pale ( ) cyanotic ( ) ikteric ( ) warm ( ) warm ( ) cold ( ) hydrated ( ) dehydrated ( ) dry ( ) turgid ( ) edematous ( ) hemorrhagic ( ) crampy ( ) diaphoresis ( ) over hydration ( )
Thirst ( ) Sweating ( ) Integrity: Intact ( ) Lesions ( ) Observation:
Nutrition: Fluid intake: 24 hr / food: 24 hr Route of administration: oral ( ) enteral( ) SNG( ) SNG( ) ostomy( ) parenteral( ) peripheral ( )
Appetite: Norm l( ) Decreased( ) Increased( ) Type of diet:

Oral cavity: Denture: Complete ( ) Incomplete ( ) Denture ( ) Prosthesis( ) Difficulty swallowing: Yes ( ) No ( ) Nausea ( ) Pyrosis ( ) Vomiting ( )
Oral hygiene status: Poor ( ) Fair ( ) Good ( ) Good ( ) Weight change during the last days: Yes ( ) No( )

FUNCTIONAL PATTERN OF ACTIVITY - EXERCISE
age: ( ) Underweight:( ) Specify:_____
RESPIRATORY ACTIVITY FR:____
Breathing:
superficial l( ) deep( ) Dyspnea: At rest( )
On exercise( ) Tires easily: No ( ) Yes( )
Cough: dry( ) productive( ) expectoration:
Cough reflex: Present ( ) Absent ( ) Absent ( ) Diminished ( )
Secretions: No( ) Yes ( ) Characteristics:
Soft ( ) depressible ( ) distended ( ) tympanic ( ) globular ( ) painful ( )
Emotional state Calm ( ) Anxious ( ) Negative ( ) Fearful ( ) Irritable ( ) Different ( ) Depressed ( )
Main concerns/comments:____
O2: No ( ) Yes ( ) Mode:_____l/min

FUNCTIONAL ELIMINATION PATTERN
Bowel habits No. of bowel movements/day:
Normal (CIRCULATORY ACTIVITY) Constipation ( ) Diarrhea ( ) Incontinence ( )
Peripheral pulse:_____
P/A:____unaltered:
Bladder habits Frequency: / day pollakiuria ( ) Dysuria ( ) nocturia ( ) Proteinuria:_____Albumin in urine:
Hypotension () hypertension () tachycardia ( ) bradycardia ( )
cold extremities( ) numbness( ) sensitivity of limbs( )
arrhythmias( ) precordial pain( ) pacemaker( )
Edema: No Yes Location:
Others:

FUNCTIONAL PATTERN OF REST – SLEEP +( ) ++ ( ) +++( )
Presence of invasive lines: Peripheral catheter:

EXERCISE: SELF-CARE CAPACITY
1= Independent 3= Completely dependent 2= Partially dependent
Additional comments:

Sleeping hours:
Sleeping problems: Yes ( ) No( )
Specify:
Do you use any medication to sleep? Yes ( ) No ( ) Specify:

FUNCTIONAL PATTERN OF VALUES - BELIEFS
Religion:
Assistive devices: none ( ) Wheelchair ( ) Other:
Religious restrictions:
Request chaplain's visit: Yes ( ) No ( )
Mobility of limbs: Preserved ( ) Flaccidity ( ) Contractures ( ) Paralysis ( )
Muscle strength: Conserved ( ) Decreased ( ) Additional comments:

PERCEPTUAL-COGNITIVE FUNCTIONAL PATTERN
Oriented: Time ( ) Space ( ) Person ( ) Disoriented ( ) confused ( ) drowsy ( ) agitated ( ) convulsing ( )
stupor( ) coma( ) lethargic( ) Communicative ( ) not very communicative ( )

GLASGOW SCALE SCORE:
Hearing: no impairment ( ) hearing loss ( ) hearing aids ( ) prosthesis ( ) Vision: no impairment ( ) impaired ( ) blindness ( ) prosthesis ( ) Hallucinations: auditory ( ) visual ( ) olfactory ( ) tactile ( ) tactile ( ) Alterations of thought: dementia ( ) Speech/ language:
Pain: No ( ) Yes ( ) Location: Headache ( ) Uterine Dynamics ( )
Pain Scale: 1 2 3 4 5 6 7 8 9 10 Other:
Additional comments:
Nurse's name:
Signature:_____CEP:_____ Date:_____CURRENT MEDICAL TREATMENT:

AUXILIARY EXAMINATIONS:

TESTS OF FETAL WELL-BEING:
NST: TST:
ECO Biofco:

Appendix B: Informed Consent

Universidad Peruana Unión Graduate School
UPG Health Sciences Purpose and procedures
I have been informed that the title of the academic work is "Nursing role in the care of a patient with threatened abortion in the obstetrics and gynecology service of a hospital in Lima, 2021". The objective of this study is to apply the Nursing Care Process to the patient with initials M.R.V. This academic work is being carried out by Lic. Marcela Flor Monzón Murillo and Lic. Sofía Dora Vivanco Hilario, under the supervision of Dr. María Teresa Cabanillas Chávez. The information provided through the assessment guide, interview and physical examination will be confidential and will be used only for the purposes of the study.

Risks of the study

I have been informed that there is no physical, chemical, biological, and psychological risk associated with this research. However, since some personal information will be obtained, there is a possibility that my identity may be discovered from the information given. However, precautions such as identification by numbers will be taken to minimize such a possibility.

Benefits of the study

There is no monetary compensation for participation in this study.

Voluntary participation
I have been informed that my participation in the study is completely voluntary and that I have the right to withdraw my consent at any point before the report is finalized, without penalty. The same applies for my initial refusal to participate in this project.
Having carefully read the consent form and listened to the oral explanations of the investigator, I voluntarily sign the present document.
Name and surname: M.R.V. DNI: 00000000
Date: January 28, 2022

Signature

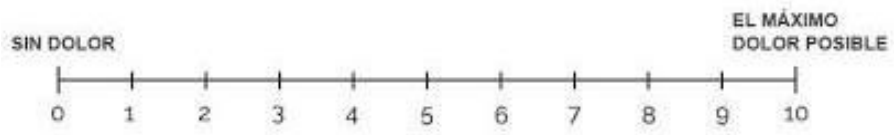


Figure C 1. Visual Analog Scale (VAS) for pain measurement

Bed mobilization
Wander
Toileting/bathing
Food intake
Dress

Appendix C. Rating scales used

PARÁMETRO	DESCRIPCIÓN	VALOR
ABERTURA OCULAR	ESPONTÁNEA	4
	VOZ	3
	DOLOR	2
	NINGUNA	1
RESPUESTA VERBAL	ORIENTADA	5
	CONFUSA	4
	INAPROPIADA	3
	SONIDOS	2
	NINGUNA	1
RESPUESTA MOTRIZ	OBEDECE	6
	LOCALIZA	5
	RETIRADA	4
	FLEXIÓN	3
	EXTENSIÓN	2
	NINGUNA	1

Figure C 2. Glasgow BMI rating scale

Clasificación	IMC (Kg/m²)	Riesgo
Normal	18.5 - 24.9	Promedio
Sobrepeso	25 - 29.9	Aumentado
Obesidad grado I	30 - 34.9	Moderado
Obesidad grado II	35 - 39.9	Severo
Obesidad grado III	Más de 40	Muy Severo

Fuente: OMS (Organización Mundial de la Salud)

Figure C 3. Glasgow BMI rating scale

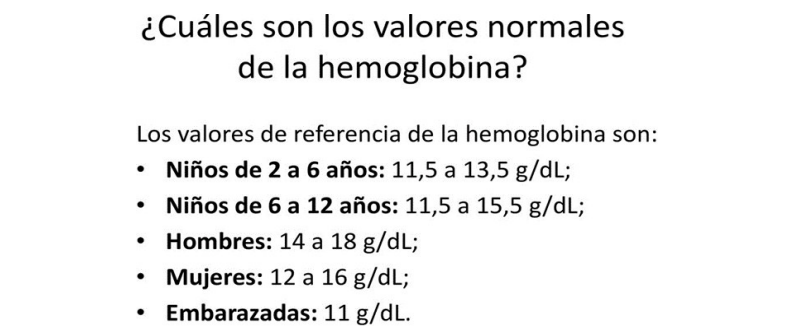


Figure C 4. Hemoglobin reference values

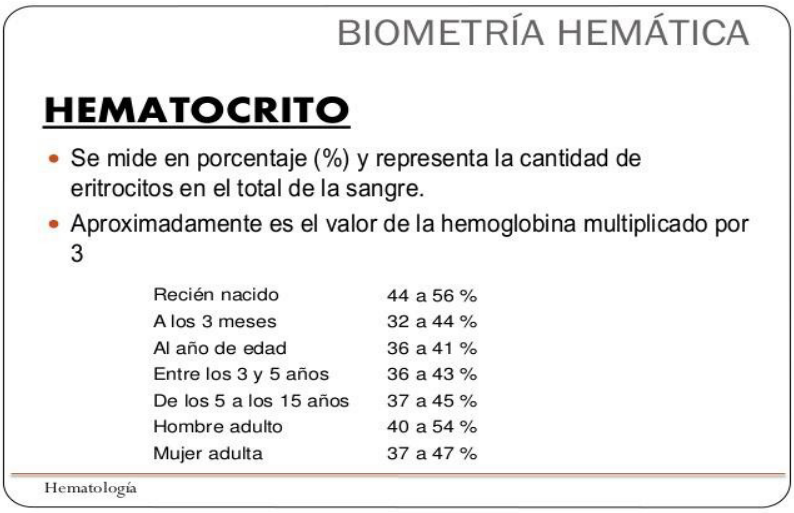


Figure C 5. Anemia rating scale

	Clase 1	Clase 2	Clase 3	Clase 4
PERDIDA SANGUINEA (ml)	< 750	750-1500	1500-2000	>2000
% VOLUMEN SANGRE	15%	15% -30%	30% -40%	>40%
PULSO	<100	>100	>120	>140
PRESION ARTERIAL	Normal	Hipotension Ortostatica	Hipotension supina	Pres Diastolica no medible
LLENADO CAPILAR	Normal	1	2	>3
FREC RESPIRATORIA	14-20	20-30	30-40	>40
DIURESIS (ml/h)	>30	20 a 30	5 a 15	Anuria
ESTADO MENTAL	Leve Ansiedad	Moderada Ansiedad	Severa Ansiedad Agitación	Letargo Coma
REEMPLAZO DE FLUIDOS	Cristaloides	Cristaloides	Cristaloides Paquete Gl.	Cristaloides Paquete Gl.

Figure C 6. Hemodynamic parameters of hypovolemic shock

TENSION ARTERIAL			
Grupo	Edad	Rango Sistólica	Diastólica
RN	Nacimiento – 6 semanas	70-100 /	50-68
Infante	7 semanas - 1 año	84-106 /	56-70
Lactante mayor	1 – 2 años	98-106 /	58-70
Pre-escolar	2 – 6 años	99-112 /	64-70
Escolar	6 – 13 años	104-124 /	64-86
Adolescente	13 – 16 años	118-132 /	70-82
Adulto	16 años y más	110-140 /	70-90

FRECUENCIA RESPIRATORIA		
Grupo	Edad	Ventilaciones por minuto
RN	Nacimiento – 6 semanas	40-45
Infante	7 semanas - 1 año	20-30
Lactante mayor	1 – 2 años	20-30
Pre-escolar	2 – 6 años	20-30
Escolar	6 – 13 años	12-20
Adolescente	13 – 16 años	12-20
Adulto	16 años y más	12-20

FRECUENCIA CARDIACA		
Grupo	Edad	Latidos por minuto
RN	Nacimiento – 6 semanas	120-140
Infante	7 semanas - 1 año	100-130
Lactante mayor	1 – 2 años	100-120
Pre-escolar	2 – 6 años	80-120
Escolar	6 – 13 años	80-100
Adolescente	13 – 16 años	70-80
Adulto	16 años y más	60-80

TEMPERATURA		
Grupo	Edad	Grados Centígrados
RN	Nacimiento – 6 semanas	38
Infante	7 semanas - 1 año	37.5 a 37.8
Lactante mayor	1 – 2 años	37.5 a 37.8
Pre-escolar	2 – 6 años	37.5 a 37.8
Escolar	6 – 13 años	37 a 37.5
Adolescente	13 – 16 años	37
Adulto	16 años y más	36.2 a 37.2

Figure C 7. Table of normal values of vital functions

Appendix D. Care plan according to AREA model
AREA Model
(Modified)

FRAMEWORK
Professional Reflection: After having provided adequate nursing care during the patient's stay in the obstetrics and gynecology hospital, the patient has been able to control the episode of threatened abortion, as shown by the comparison of the initial values of the indicators with the assessment of the same in periods of time from 6 to 24 hours, confirmed by the favorable evolution without risk of losing her pregnancy for the time being.
Person EVALUATION:
Patient 22 years old, admitted for emergency in wheelchair, accompanied by family member, was evaluated by the doctor and Dx. of threatened abortion, with gestation of 11 weeks by ultrasound, amenorrhea more than two years (by use of hormonal contraceptive method injectable every 3 months), first pregnancy (euthyroid delivery and term), abdominal ultrasound. She denies previous abortion and denies allergies.
Hemoglobin of 10.5 mg/dl, Subunit (beta-hCG) of 13800, three doses of tetanus vaccine in her first pregnancy.
(00221)
Ineffective maternity process
r/c
with inadequate prenatal care, inadequate maternal nutrition m/p
inadequate prenatal management, ineffective management of bothersome symptoms during pregnancy and inadequate prenatal lifestyle.

Person Dx. NURSING

PLAN OF CARE
NOCp

Indicator (1607) Prenatal health behavior
Indicator (160703) Maintains pre-birth attendance visits
Indicator (160710) Maintains adequate nutrient intake for gestation.
Indicator (160723) Uses iron supplementation
Indicator (160714) Prevents exposure to infectious diseases.
Indicator (160721) Uses medicines according to prescription

State/Behavior/ Perception
Weakness Inamobility Insomnia
Start of prenatal care
Patient with hemoglobin of 10.5 mg/dl
Patient with hemoglobin of 10.5 mg/dl
Dark brown vaginal discharge.
Prescription medication

Standard of normality
Counseling: maternal and fetal care during pregnancy. As well as warning signs
Recommendations: start prenatal care after discharge from the hospital
Recommendations for consumption of an iron-rich diet
Progressive increase of hemoglobin with treatment.
Absence of vaginal discharge
Full treatment compliance

Indicator (1607) Sanitary behavior
Indicator (160703) Maintains visits from pre natal care
Indicator (160710) Maintains an intake of nutrients suitable for gestation.
Indicator (160723) Uses iron supplements
Indicator (160714) Avoid exposure to diseases infectious diseases.
Indicator (160721) Uses medicines according to subscription
With the nursing care administered to the patient being
With the 24-hour nursing care administered to the patient be it achieved a Dartboard score of 5 (+4)
With the 24-hour nursing care administered to the patient be it achieved a Dartboard score of 5 (+3)
With the 24-hour nursing care administered to the patient be it achieved a Dartboard score of 5 (+4)

With the 26 hours of nursing care administered to the patient be it achieved a Dartboard score of 4 (+2)
With the 24-hour nursing care administered to the patient be it achieved a Dartboard score of 5 (+4)

Likert scale: 1-Never demonstrated. 2-Rarely demonstrated. 3-Sometimes demonstrated. 4-Frequently demonstrated. 5-Always demonstrated.
NICs for NOCs (DxEp) ***(6680) Vital signs monitoring*** (Butcher et al., 2019, p. 341) Activities:
(668001) Monitor blood pressure, pulse, temperature and respiratory status.
(668002) Observe blood pressure trends and fluctuations.
(668003) Monitor respiratory rate and rhythm (depth and symmetry).
(668004) Monitor pulse oximetry.
(668005) Periodically monitor skin color, temperature and moisture.
(4150) Hemodynamic regulation (Butcher et al., 2019, p. 393).
Activities:
(415001) Perform a thorough assessment of hemodynamic status (check blood pressure, heart rate, pulses, venous pressure).
(415002) Recognize the presence of early warning signs and symptoms indicative of system compromise.
hemodynamic.
(415003) Determine perfusion status (indicate whether the patient is cold, warm or hot) (415004) Monitor inflow and outflow, diuresis and patient's weight
(1450) Nausea management (Butcher et al., 2019, p. 296)
Activities:
(145001) Monitor antiemetic treatment effectiveness
(145002) Encourage patient to self-manage nausea
(145003) Promote adequate rest/sleep to alleviate nausea
(145004) Recommend small, appealing meals
(145005) Weigh patient regularly

Likert scale: 1-Never demonstrated. 2-Rarely demonstrated. 3-Sometimes demonstrated. 4-Frequently demonstrated. 5-Always demonstrated.
NICs for NOCs (RCp)
(4410) Hemorrhage prevention
Activities:
(441001) Closely monitor for signs of internal/external bleeding (e.g., abdominal swelling)
(441002) Record Hb/Hct levels pre- and post-bleeding
(441003) Maintain IV access
(441004) Enforce bed rest during active bleeding
(441005) Educate patient/family on bleeding signs
(5310) Hope instillation
Activities:
(531001) Help patient/family identify hopeful aspects
(531002) Foster therapeutic relationships with loved ones
(531003) Assist in setting/reviewing hope-related goals
(531004) Facilitate religious practice if applicable
(531005) Avoid masking the truth
(5270) Emotional support
Activities:
(527001) Explore emotional triggers
(527002) Support healthy coping mechanisms
(527003) Encourage talking/crying to reduce distress
(527004) Provide reassurance during anxiety peaks
(527005) Refer to counseling if needed

Appendix E. Care plan according to the BIFOCAL model

BIFOCAL Model
(Modified)

Person
VALUATION:
Patient 22 years old,

Person
RC p

RC
HEMORRHAGE

FRAME

Professional Reflection: NOC DxEp - Gestation in its first 20 weeks is at risk of threatened abortion (spontaneous or induced), causing signs similar to other pathologies that require discarding, hence the importance of pre-natal control to prepare for a viable pregnancy. Every threatened miscarriage is accompanied by physical and spiritual suffering, as well as other signs that suggest pregnancy loss such as pain and vaginal bleeding was admitted in an emergency wheelchair, accompanied by a family member, was evaluated by the doctor and diagnosed with threatened abortion, with an 11-week gestation by ultrasound, amenorrhea for more than two years (due to the use of hormonal contraceptive injectable every 3 months).

Planning NOCp (DxEp) (1607) Prenatal health behavior
Indicator (160703) Maintains pre-birth attendance visits
Indicator (160710) Maintains adequate nutrient intake for gestation.
Indicator (160723) Use iron supplements
Indicator (160714) Prevents exposure to infectious diseases.
Indicator (160721) Uses medicines according to prescription

With the nursing care administered to the patient, a target score of 5 (+4) was achieved.
With the nursing care administered to the patient, a target score of 5 (+3) was achieved.
With the nursing care administered to the patient, a target score of 5 (+4) was achieved.
With the nursing care administered to the patient, a target score of 4 (+3) was achieved.
With the nursing care administered to the patient, a target score of 5 (+4) was achieved.

(RCp) (0413) PI

(041307) Bleeding vaginal
(041313) Pallor of skin and mucous membranes
(041306) Strain abdominal
(041316) Decrease in the Hb.
(041317) Decrease of hto
(041314) Anxiety
(041309) Systolic BP decrease
(041309) PA decrease diastolic
(041309) Loss of body heat
With the nursing care provided, a Diana score of 5 (+1) was achieved.
With the nursing care provided, a Diana score of 5 (+2) was achieved.
With the nursing care provided, a Diana score of 5 (+2) was achieved.
With the nursing care provided, a Diana score of 5 (+2) was achieved.
With the nursing care provided, a Diana score of 5 (+2) was achieved.
achieved a Diana score of 5, (+1)
With the nursing care provided, a Diana score of 5 (+1) was achieved.
pregnancy (euthyroid delivery at term), abdominal ultrasound. She denies previous abortion and denies allergies.
Hemoglobin
10,5 mg/dl, Subunit (beta-hCG) of 13800. Three doses of tetanus vaccine in her first pregnancy.

Likert scale: 1-Never demonstrated. 2-Rarely demonstrated. 3-Sometimes demonstrated.
4-Frequently demonstrated 5-Always demonstrated.
NICs for NOCs (DxEp)
(6680) Vital signs monitoring. (Butcher et al., 2019, p. 341) Activities:
(668001) Monitor blood pressure, pulse, temperature and respiratory status.
(668002) Observe blood pressure trends and fluctuations.
(668003) Monitor respiratory rate and rhythm (depth and symmetry).
(668004) Monitor pulse oximetry.
(668005) Periodically monitor skin color, temperature and moisture.
(4150) Hemodynamic regulation (Butcher et al., 2019, p. 393).
Activities:

(415001) Perform a thorough assessment of hemodynamic status (check blood pressure, heart rate, pulses, venous pressure).
(415002) Recognize the presence of early warning signs and symptoms indicative of a compromise of the hemodynamic system.
(415003) Determine perfusion status (indicate whether the patient is cold, warm or hot) (415004) Monitor inflow and outflow, diuresis and patient's weight
(1450) Management of nausea (Butcher et al., 2019, p. 296).
Activities:
(145001) Monitor the effect of treatment of nausea.
(145002) Encourage the patient to control her own experience of nausea. (145003) Encourage adequate rest and sleep to facilitate relief of nausea.
(145004) Encourage ingestion of small amounts of food that is appealing to the nauseated person.
(145005) Weigh the patient regularly.

Likert Scales: 1-Severe. 2-Substantial. 3-Moderate. 4-Leve. 5-None.
NICs for NOCs (RCp)
(4410) Prevention of hemorrhage.
Activities:
(441001) Monitor patient closely for signs and symptoms of internal or external bleeding. (example: abdominal swelling).
(441002) Record hemoglobin and hematocrit levels before and after blood loss, as indicated.
(441003) Maintain intravenous access.
(441004) Maintain bed rest during active bleeding. (441005) Instruct patient and/or family on signs of bleeding.
(5310) Give hope.
Activities:
(145001) To help the patient and family identify areas of hope in life.
(145002) Foster therapeutic relationships with loved ones.
(145003) Help the patient design and review goals related to the object of hope. (145004) Create an environment that facilitates the patient's practice of her religion, when possible. (145005) Avoid disguising the truth.
(5270) Emotional Support.
Activities:
(527001) Explore with the patient what triggered the emotions.
(527002) Support the use of appropriate defense mechanisms.
(527003) Encourage conversation or crying as a means of decreasing the emotional response. (527004) Stay with the patient and provide feelings of security during periods of heightened anxiety.
(527005) Refer to counseling services if needed.