

Nursing Care for Puerperal Women with Anemia: Case Report

Cuidados de Enfermagem a Puérpera com Anemia: Relato de Caso

Cuidados de enfermería para mujeres puérperas con anemia: informe de un caso

ABSTRACT

Objective: To develop a nursing care plan proposal focusing on anemia in a puerperal woman. **Method:** Case report of a 24-year-old puerperal woman, eutocic delivery at 39 weeks with a postpartum serum hemoglobin value of 7.9 g/dL. Dorothea Orem's Theoretical Model of Self-Care Deficit and the taxonomy of the International Classification for Nursing Practice were used. **Results:** Nine nursing diagnoses were identified: Activity intolerance; Risk of falling; Abnormal resting pattern; Compromised family process; Anxiety; Pain; Risk of infection; Compromised breastfeeding; Low knowledge about self-care and care for the newborn after discharge. **Conclusion:** The development of this case study favored the identification of the care needs of the puerperal woman, and is the starting point for the development of nursing interventions, providing support for the provision of quality and individual care, making it possible to respond to the identified needs and to the particularities of puerperal women with anemia.

Descriptors: Case Reports; Postpartum Period; Anemia; Nursing Care; Nursing Diagnosis.

Andreia Filomena Monteiro Lobão¹

 0000-0002-2215-2131

Maria Otília Brites Zangão²

 0000-0003-2899-8768

¹Centro Hospitalar Universitário do Algarve (CHUA), Unidade de Portimão (UP), Portimão, Portugal.

²Comprehensive Health Research Centre (CHRC), Universidade de Évora (UE), Departamento de Enfermagem, Évora, Portugal

RESUMO

Objetivo: Elaborar proposta de plano de cuidados de enfermagem com enfoque na anemia em uma puérpera. **Método:** Relato de caso referente a uma puérpera de 24 anos, parto eutócico às 39 semanas com valor de hemoglobina sérica pós-parto 7,9 gr/dL. Utilizado Modelo Teórico do Déficit de Autocuidado de Dorothea Orem e a taxonomia da Classificação Internacional para a Prática de Enfermagem. **Resultados:** Foram identificados 9 diagnósticos de enfermagem, Intolerância à atividade; Risco de queda; Padrão de repouso anormal; Processo familiar comprometido; Ansiedade; Dor; Risco de infecção; Amamentação comprometida; Baixo Conhecimento sobre autocuidado e cuidados com o recém-nascido após a alta. **Conclusão:** O desenvolvimento deste estudo de caso favoreceu a identificação das necessidades de cuidados da puérpera, sendo o ponto de partida para o desenvolvimento de intervenções de enfermagem, dando subsídio na prestação de cuidados com qualidade e individuais, possibilitando responder as necessidades identificadas e as particularidades da puérpera com anemia. **Descritores:** Relatos de Casos; Período Pós-Parto; Anemia; Cuidados de Enfermagem; Diagnóstico de Enfermagem.

RESUMEN

Objetivo: Elaborar una propuesta para un plan de cuidados de enfermería con foco en la puérpera con anemia. **Método:** Reporte de caso de una puérpera de 24 años, parto eutócico a 39 semanas con valor de hemoglobina sérica posparto 7,9 gr/dL. Se utilizaron el Modelo Teórico del Déficit de Autocuidado de Dorothea Orem y una taxonomía de la Clasificación Internacional para la Práctica de Enfermería. **Resultados:** Se identificaron 09 diagnósticos de enfermedad: Intolerancia a la actividad; Riesgo de caída; Patrón de descanso anormal; Proceso familiar comprometido; Ansiedad; Dolor; Riesgo a infección; Amamantamiento comprometido; y Bajo Conocimiento sobre autocuidado y cuidados con el recién nacido tras el alta. **Conclusión:** El desarrollo de este estudio de caso identificó las necesidades de los cuidados de la puérpera, que son el punto de partida para las intervenciones de enfermería, dando lugar a la prestación de cuidados individuales y de calidad, lo que puede dar respuesta a las necesidades identificadas y a las particularidades de la puérpera con anemia. **Descriptores:** Informes de Casos; Período Posparto; Anemia; Atención de Enfermería; Diagnóstico de Enfermería.

Corresponding author:
Maria Otília Brites Zangão
E-mail: otiliaz@uevora.pt

INTRODUCTION

The World Health Organization (WHO) defines anemia as a condition in which there is a decrease in the number of erythrocytes or a reduction in their ability to transport oxygen to meet physiological needs. These needs vary with sex, age, altitude, smoking and pregnancy⁽¹⁾.

Anemia is the result of a wide variety of causes that can be isolated but most often coexist. The most significant is iron deficiency. In this sense, the causes of anemia include a deficiency in the intake of micronutrients (iron, folic, vitamin A and B12), but also other conditions of loss, increased need or reduced absorption of them (acute or chronic infection, inflammatory bowel disease, chronic heart failure, chronic kidney disease, neoplasms, autoimmune diseases), hemoglobinopathies and hereditary pathologies⁽²⁾. The main risk factors involve a low iron intake and/or malabsorption of this micronutrient in a specific period of life whose iron requirements are especially high, such as growth and pregnancy.

Anemia resulting from this micronutrient deficiency negatively affects cognitive and motor development, causes fatigue, low productivity and, when it occurs during pregnancy, may be associated with low birth weight and an increased risk of maternal and perinatal mortality.

In 2011, WHO estimated that about 38% of pregnant women had gestational anemia, while in Europe this prevalence would be 26%⁽³⁾. In Portugal, the EMPIRE study, which is a population-based cross-sectional study, assessed the prevalence of anemia and iron deficiency in the Portuguese population, described an overall prevalence of anemia of 20%, and described a prevalence of anemia in pregnant women of 54, 2%, with regional variations⁽⁴⁾. The same study showed that Iron Deficiency Anemia is the most frequent type of anemia in the adult population in Portugal, being undertreated (2% under treatment) and the population's perception of the disease far below reality (84% were unaware of the diagnosis)⁽⁴⁾.

Anemia is a global public health problem that affects both developing and developed countries, with major consequences for human health, as well as for social and economic development, which affect women's quality of life. Despite occurring in all stages of the life cycle, babies, children under five years of age and women of childbearing age are the most vulnerable groups⁽³⁾.

During pregnancy there is a risk that the woman will develop anemia, as there is an increased demand for blood to support the baby's development. If the body does not receive the iron and nutrients necessary to produce erythrocytes for this additional blood, anemia may develop. This disease, in pregnancy, is defined by hemoglobin values lower than 11 g/dL in the 1st and 3rd trimester of pregnancy, hemoglobin values lower than 10.5 g/dL in the second trimester of pregnancy and hemoglobin values lower than 10 g/dL in the postpartum period⁽⁴⁻⁶⁾. It is recommended to eat foods rich in iron and folic acid to replenish levels in the body, which directly influences the amount of circulating hemoglobin.

There are several causes associated with the development of anemia in the puerperium. Iron deficiency anemia before and during pregnancy, as well as peripartum hemorrhage are the main ones^(7,8). The patient with anemia due to iron deficiency may be asymptomatic or have symptoms such as pallor, asthenia, palpitations, dyspnea or even broader symptoms such as changes in thermogenesis, changes in thyroid metabolism, irritability, neurogenic dystonia, muscle weakness, restless legs syndrome, pica and pagophagia⁽⁵⁾.

In Portugal, laboratory investigation of postpartum anemia is not carried out in all situations. Only in cases of bleeding greater than 500 mL, when there is poorly controlled gestational or pre-gestational anemia, or when the patient has symptoms⁽⁵⁾. Postpartum anemia is associated with the development of cognitive and functional deficits that directly affect the woman and indirectly the newborn. In this sense, postpartum anemia is associated with reduced cognitive abilities, emotional instability and

depression, impairing the quality of life of these women and their performance in carrying out activities necessary for the care of the newborn^(8,9).

Considering this, since postpartum anemia is a very relevant problem for the daily practice of nursing in the obstetrics ward, it should be taken as a relevant topic for the elaboration of a case study.

This case study aims to elaborate a proposal for a nursing care plan focusing on anemia in a puerperal woman.

METHOD

This work is characterized by being a study of the patient's and family's problems and needs, to obtain a vast and detailed set of knowledge, granting subsidies for the decision of the best strategy to solve or reverse the identified problems⁽¹⁰⁾. This case study follows the guidelines of the CAse REport (CARE)⁽¹¹⁾, and the flowchart was used to present the case according to the Equator Network model (2019).

This case report results from the direct provision of nursing care in an academic learning environment. It was developed in a Hospital Unit in Portugal, during the months of February and March 2021. Data collection was carried out during the 48 hours of hospitalization of the mother/newborn, in an Obstetrics Service.

As recommended by article 106 of the Code of Ethics (Inserted in the Statute of the Order of Nurses (OE), republished in annex by Law n.º 156/2015, of September 16⁽¹²⁾, the identity and confidentiality of the mother were preserved and the newborn, as well as the health institution. The patient was informed about her rights, and the ethical principles in nursing research (beneficence, non-maleficence, fidelity, justice, veracity and confidentiality) were respected. Informed verbal consent was obtained according to the premises of the Declaration of Helsinki and the Oviedo Convention on research with human beings⁽¹³⁾. However, in view of the publication of the study, the data were substantiated, anonymity was respected, fulfilling the principles established in the Declaration of Helsinki for studies involving human beings (2013) and we follow

the recommendations contained in the Oviedo Convention⁽¹⁴⁾ to guarantee human dignity.

In the application of the nursing process, the theoretical model of Dorothea Orem was adopted, which aims to improve the life, health and well-being of the individual through self-care. Dorothea Orem's nursing theory – Nursing Self-Care Deficit Theory – consists of a general theory composed of three interrelated theories: self-care theory, self-care deficit theory and nursing systems theory. Planned by the professional, the nursing system is based on self-care needs and the individual's ability to carry out activities for their own benefit in order to maintain life, health and well-being⁽¹⁵⁾.

Data collection was carried out through the interview, observation, history taking and physical examination of the patient, to determine the problems or concerns that need to be resolved. Based on the data obtained, an initial assessment was performed based on Orem's theory, which resulted in nursing diagnoses using the International Classification for Nursing Practice – ICNP®, version 2015⁽¹⁶⁾. Based on the elaborated diagnoses, the nursing interventions to be implemented were outlined, with a view to obtaining the expected results. The third and final phase of the nursing process consisted of implementing interventions and nursing assessment, interpreting the results of implementing the plan.

RESULTS

The patient's assessment is presented according to the Self-Care Requirements, according to Dorothea Orem's theory (Table 1). The nursing care evaluation data presented refer to the time of hospital discharge, approximately 48 hours after delivery. Thus, to satisfy the individual's self-care requirements (universal, developmental, and non-health deviation), Orem identified three classifications of nursing systems: fully compensatory system, partially compensatory system, and support-education system. This theoretical model understands the nursing process as a method that determines

self-care deficits, allowing the definition of the roles of the nurse and the person being cared for, in order to satisfy the self-care requirements.

The flowchart was prepared according to the CARE guidelines⁽¹⁷⁾ with a view to a better understanding of the case (Figure 1).

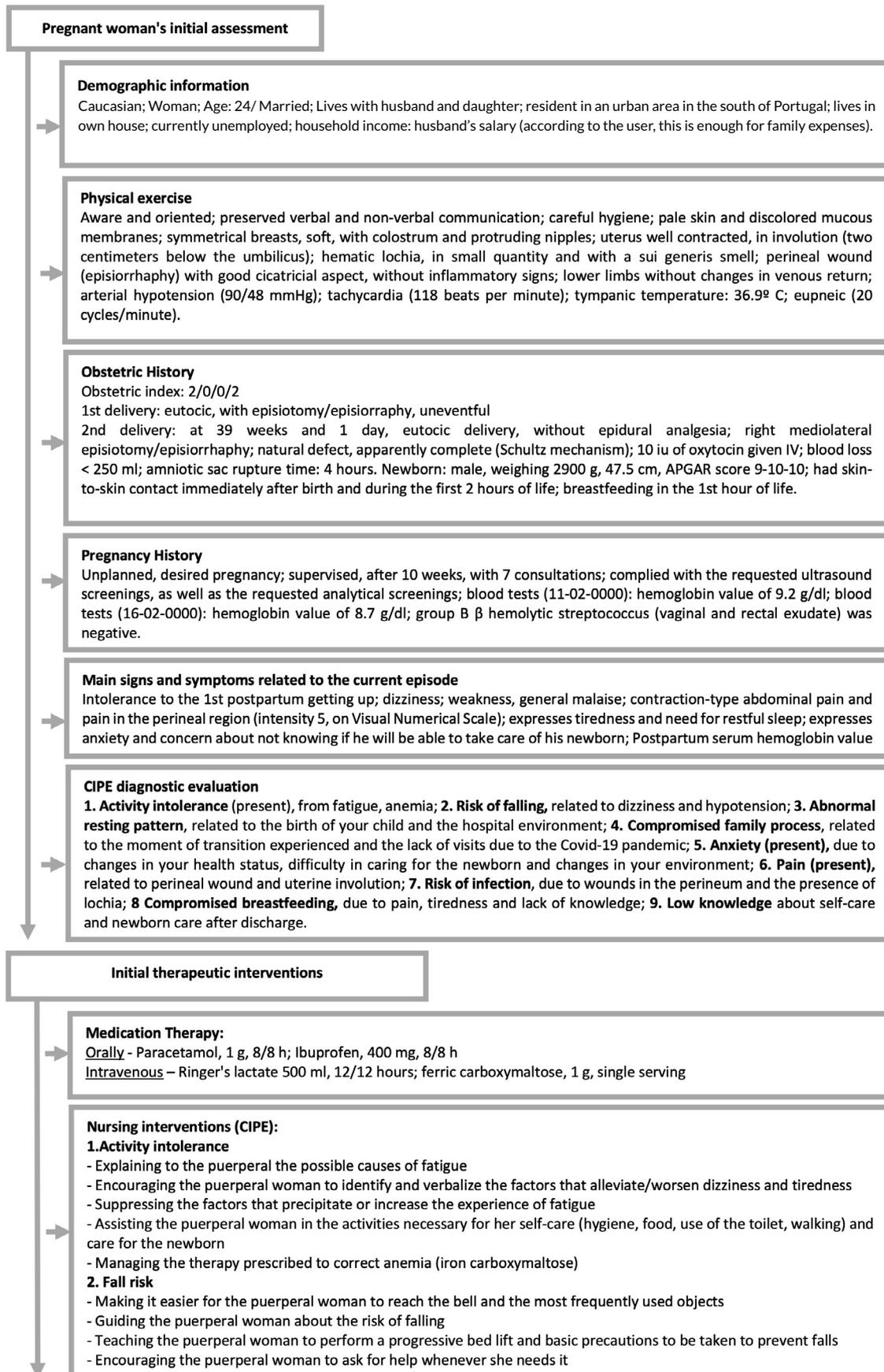
After data collection, the appropriate nursing diagnoses for the user under study were defined, then interventions were planned, applied and an evaluation of these interventions was carried out in order to verify the reduction of the self-care deficit identified (Figure 1).

Table 1 – Evaluation of the postpartum woman according to the Self-Care Requirements, according to Dorothea Orem's theory

Universals	<ul style="list-style-type: none"> • She is eupneic, with no complaints of difficulty breathing. • She is independent in her food and water intake, reporting normal appetite. She refers to a general, diversified, unrestricted diet and intake of about 2 liters of water per day. • She refers to a pattern of daily vesical and intestinal elimination, being independent in this process. Postpartum, she urinated spontaneously in the bedpan and reported intestinal elimination before delivery and 24 h postpartum. • She mentions that since the birth of her first daughter she sleeps for short periods due to the need for care that she requires. She mentions tiredness and the desire to sleep because she considers that the labor and birth were exhausting moments and because of the difficulty in resting due to the need to breastfeed the newborn, as well as because she is in an unfamiliar environment. • While trying the first postpartum stand-up, the puerperal woman had dizziness, weakness and general malaise, unable to remain standing. She tolerates sitting up in bed for short periods. On the second attempt to get up, she continued to feel dizzy and uncomfortable with small efforts, managing to walk short distances with help and supervision. • The risk of falling, according to the Morse scale, ranged from a low risk to no risk of falling, due to the improvement in the health condition of the puerperal woman and the removal of the peripheral venous access due to the suspension of intravenous therapy. • She refers to anguish, fear and uncertainty in view of the need to comply with the protocol of the hospital institution, which suspended visits due to the covid-19 pandemic, voicing their frustration at the lack of bonds of affection and family and social interaction.
Development	<ul style="list-style-type: none"> • She expresses being happy and satisfied with the birth of her second child and, at the same time, mentions fear and insecurity regarding the changes that the birth of the second child will bring in the family dynamics, namely, in time, which she already considered to be little for the marital relationship after the birth of the first daughter, as well as the difficulties she may experience in terms of the balance of care for the two children and the first daughter's reaction to the division of the parents' attention with the newborn brother. She mentions that because she is currently unemployed, she will be responsible for the two children, despite having the help of her mother in the early days. Along with this, the puerperal woman considers that the fact of not being able to have visitors, especially from her partner and eldest daughter, has contributed to her increased anxiety and concern. • Despite verbalizing her satisfaction at breastfeeding the newborn, as she had wanted, she mentions needing practical help as she has doubts regarding the baby's attachment, breastfeeding times, breast care and positions for breastfeed comfortably because she feels tired, uncomfortable and has periods of pain. • She refers to uncertainties and fears regarding self-care during the puerperium, lack of energy, care for the newborn (namely hygiene and comfort, care for the umbilical stump, feeding), the resumption of sexual activity and contraceptive methods during breastfeeding. The puerperal woman attributes her doubts and fears to the lack of knowledge and information she obtained during pregnancy that she considers superficial on these matters.
Health deviation	<ul style="list-style-type: none"> • She has hypotension (98/51 mmHg; 90/48 mmHg) and tachycardia (115/118 beats per minute) • She refers pain of intensity 5 (Visual Numerical Scale) • Laboratory tests (hemoglobin): <ul style="list-style-type: none"> • prepartum: 8,7 g/dL • 1st day post-partum: 7,9 g/dL • 2nd day post-partum: 8,5 g/dL • Drug therapy during hospitalization: <ul style="list-style-type: none"> • Orally – Paracetamol, 1 g, 8/8 h; Ibuprofen, 400 mg, 8/8 h • Intravenous – Ringer's lactate 500 mL, 12/12 hours; ferric carboxymaltose 1 g, single dose

Source: Authors'

Figure 1 – Case Report Flowchart



- Monitoring blood pressure and heart rate once per shift and whenever necessary
- Assessing the risk of falling through the Morse Falls Scale, upon admission and whenever there is a change in your clinical status

3. Abnormal resting pattern

- Encouraging the puerperal woman to identify and verbalize the factors that cause discomfort, such as environmental irritants (noise, light...), lack of privacy
- Teaching the postpartum woman about relaxation techniques (music therapy, aromatherapy, visualization)
- Ensuring a comfortable position and a favorable environment for rest and recovery
- Avoiding unnecessary interruptions and allow for rest periods
- Facilitating the conciliation between the care of the newborn and the rest needs of the puerperal woman
- Teaching the puerperal woman about the sleep/wake cycle of the newborn and its particularities

4. Compromised family process

- Guiding the puerperal woman and her family about the transitional situation they are experiencing
- Supporting the puerperal woman in the difficulties felt by physical distance, through dialogue
- Facilitating family communication through audiovisual means (mobile phone)
- Encouraging the puerperal woman to maintain frequent contact with family members and friends
- Encouraging the puerperal woman to express her feelings, difficulties and expectations
- Being present during contact (phone and video call) with the family to clarify doubts and provide necessary information

5. Anxiety (present)

- Informing the puerperal woman about her health condition and drug therapy
- Teaching about postpartum anemia
- Stimulating therapeutic dialogue
- Encouraging the puerperal woman to verbalize feelings, perceptions, fears and doubts that cause her uneasiness
- Encouraging the puerperal woman to take care of the child, providing relevant information about the care
- Assisting the puerperal woman in the care of the newborn whenever she needs it, promoting safety and reducing fear
- Clarifying the doubts and fears that the puerperal woman presents
- Reinforcing the self-efficacy of the postpartum woman
- Giving emotional support in times of anxiety
- Encouraging the puerperal woman to share her feelings with her husband and other family members
- Informing about symptoms of postpartum depression that may occur after discharge and the need for specialized psychological or social support, directing them to resources in the community.

6. Pain (present)

- Allowing and encouraging the verbalization of feelings of discomfort and pain
- Informing about the pain, its causes, duration
- Guidance on non-pharmacological pain relief measures (relieving positioning, breathing, reading, music therapy, application of heat/cold)
- Managing the puerperal woman's physical space, providing a calm environment that facilitates her response to pain
- Administering prescribed or SOS therapy to relieve pain (Paracetamol and Ibuprofen)
- Evaluating the pain and effectiveness of control measures, through the numerical visual pain scale

7. Infection risk

- Teaching about perineal hygiene care and regular change of sanitary napkins, perineal washing with lukewarm water in the anteroposterior direction after each trip to the bathroom
- Teaching about the importance of hand washing before and after perineal care
- Teaching about characteristics of lochia (amount, color, odor)
- Teaching about inflammatory signs (edema, redness, heat, odor)
- Teaching about the importance of sexual abstinence until the postpartum review consultation (6 weeks postpartum)
- Teaching and encourage the puerperal woman to apply ice to the perineum
- Observing and evaluating the perineum and perineal wound (characteristics and healing evolution), uterine involution and lochia characteristics once per shift or whenever necessary
- Assessing body temperature once per shift or whenever necessary

8. Compromised breastfeeding

- Commending the puerperal woman for choosing to breastfeed
- Assisting the puerperal woman in breastfeeding
- Being present in times of difficulty
- Validating knowledge about the advantages of breastfeeding
- Teaching about comfortable positions for breastfeeding and that do not increase pain
- Clarifying doubts related to the lactation process, signs of good attachment and prevention of complications in the breasts
- Guiding for resources in the community to support breastfeeding (Breastfeeding Corner)

9. Little knowledge about self-care and care for the newborn after discharge

- Teaching about common signs and symptoms of postpartum maternal physical and psychological problems
- Teaching about resuming sexual activity and contraception
- Guiding the postpartum woman to community resources regarding family planning services
- Guidance on the postpartum review consultation (between the 6th and 8th week postpartum)
- Teaching the puerperal woman about the early diagnostic test (between the 3rd and 6th day of the baby's life), about the baby's weight assessment, weekly, in the 1st month of life, about the baby's 1st health consultation at 15 days of life and its importance compliance with the national vaccination program
- Teaching about risk situations for the newborn (positioning in the crib, suffocation, domestic and road accidents) and about safe transport of the baby from the maternity ward (Project for the Promotion of High Insurance)
- Validating with the puerperal woman the understanding of the transmitted information and the acquisition of knowledge.

Evaluation of results and interventions

CIPE Results assessment:

1. **Activity intolerance** (present): Upon clinical discharge, according to her description, the user presented higher energy levels and showed the ability to carry out her daily activities autonomously, as well as the care of the newborn.
2. **Fall risk**: Upon admission to the Obstetrics service, when evaluating the risk of falling through the scale used in the service, it had a total score ≥ 25 and ≤ 50 points, and therefore low risk of falls. Once the nursing interventions were implemented, at the time of discharge, it was found that the objective of preventing falls had been achieved and the assessment of the risk of falling using the Morse scale had a total score ≤ 24 points (no risk of falling).
3. **Abnormal resting pattern**: In the case studied, the puerperal woman verbalized from the first contact the need to sleep and feel rested in order to be able to take care of the newborn and herself, allowing her to immediately identify the nursing diagnosis, plan and implement interventions successfully. On the day of discharge, the puerperal woman was able to adjust her needs for sleep and rest to the demands of caring for the baby, understands that sleep can be interrupted several times during the puerperal period and demonstrates that she has acquired knowledge to adapt to the new reality.
4. **Compromised family process**: Even though, during hospitalization, it was not possible for family and friends to visit her physically, especially her husband and daughter, on the day of clinical discharge, she verbalized that the implemented strategies contributed to reducing the distance and emphasized the importance of support from the nursing team in promoting interaction between family members. She also mentioned that she does not consider that the relationship between family members has been harmed and understands the arrival of a new member to the family as an important milestone in family restructuring, having knowledge of the support networks available.
5. **Anxiety** due to changes in his health status, changes in his environment: During hospitalization, he presented periods of anxiety due to the feeling of inability to care for his newborn child and verbalized his doubts and fears regarding the family changes that the birth of this child would bring. The fact that she was hospitalized and isolated from her family and friends contributed to making her more vulnerable and anxious, as it distanced her from her social support network. With the interventions implemented, on the day of discharge, the puerperal woman was less anxious, expressed feeling more confident and safer to assume her motherhood and verbalized happiness at going home and being able to be with her husband and daughter. She is aware and knowledgeable about the importance of sharing her feelings with her husband and other family members, seeking the necessary support, and is oriented to seek specialized psychological or social support if she deems it appropriate.
6. **Pain** (present) related to perineal wound and uterine involution: To assess pain, the numeric visual pain scale was used, in which 0 corresponds to the “No Pain” classification and 10 to the “Maximum Pain” classification. Over the two days she was hospitalized, the puerperal woman reported improvement in pain, with the benefit of the implemented measures. On the day of discharge, the puerperal woman had pain intensity 1, and demonstrates knowledge about pain relief measures (pharmacological and non-pharmacological).
7. **Infection risk** by episiorrhaphy, remaining area of placental detachment, lochia: During hospital stay, the puerperal woman in this study did not show any signs or symptoms of infection and, upon discharge, she had good healing evolution from the episiorrhaphy and demonstrated to understand the importance of care hygiene, in general and, in particular, proper hygiene of the perineum, had knowledge about comfort measures, warning signs and reestablishment of sexual activity.
8. **Compromised breastfeeding** due to pain, fatigue and lack of knowledge: During the hospitalization, through the implemented actions, it was possible to verify that the puerperal woman validated her previous knowledge regarding the benefits of breastfeeding for herself and her child, acquired skills related to the breastfeeding technique breastfeeding, breastfeeding duration, not introducing food and supplements before the 6th month, in addition to the difficulties that may arise during the lactation process. On the day of discharge, the puerperal woman, who breastfed exclusively during hospitalization, expresses satisfaction, confidence and security in relation to the breastfeeding process and is aware of the resources in the community, namely, the breastfeeding corner in the hospital unit.
9. **Little knowledge** on self-care and care for the newborn after discharge: Through the postpartum woman's speech, during the hospitalization, it was evident the acquisition of knowledge that allows her to improve the ability to take care of herself and the newborn, such as the learning skills to use this knowledge in decision-making, promoting a healthy motherhood after returning home.

Case report according to CARE guidelines

Source: Adapted from <https://www.equator-network.org/wpcontent/uploads/2013/09/CAREFlowDiagram-updated-2019.pdf>

DISCUSSION

The postpartum period is marked by several and significant changes in women, either at a physiological or psychological level, which require their consequent adaptation. The postpartum period is intense, entails difficulties and can become even more demanding for women when accompanied by complications. Self-care encompasses all activities necessary to meet day-to-day needs. In this context, nursing interventions were developed for the patient to face the challenges that the health deviation posed, namely in basic self-care and in the care of the newborn, with a view to preserving and strengthening her independence.

It is normal for hemoglobin levels to drop slightly in the first 24 hours after giving birth, due to blood loss during the process. In women who already have anemia during pregnancy, as in the case of the patient under study, this reduction in the level of hemoglobin enhances the biochemical changes, common in the postpartum period, more specifically, microcytosis (assessed by mean corpuscular volume - MCV volume - MCV), hypochromia (assessed by mean corpuscular hemoglobin - MHC), and the deficiency of stored iron (ferritin). This compromises oxygen transport, creating excessive energy demands that exceed the physical and psychological capacity of the woman's.

All clinical manifestations of anemia result from a reduction in the oxygen-carrying capacity of the blood and consequent lower tissue oxygenation. Some of the main symptoms are dizziness, weakening, tinnitus, muscle weakness. Compensatory systems, on the other hand, attempt to balance the reduced oxygen carrying capacity and thereby correct tissue hypoxia. Two of the main compensatory mechanisms of anemia involve increased cardiac output and reducing overall systemic vascular resistance, which translates into hypotension and tachycardia⁽¹⁸⁾. In this sense, considering the signs and symptoms that the patient presents in this case, the risk of falling was considered. A "fall" occurs when a person involuntarily

falls to a level lower than the initial position, caused by multifactorial circumstances, which may or may not result in damage⁽¹⁹⁾. It is considered an undesirable event, which can result in discomfort, injury, increased length and cost of hospitalization, requiring the implementation of preventive strategies. In Portugal, there is still no specific scale to assess the risk of falls in mothers and newborns. The Morse Fall Scale is the instrument validated for the Portuguese population⁽¹⁹⁾, in use in the hospital where the study was carried out, to assess people at risk of falling, discriminating them into three different groups: no risk, low risk or high risk.

In the postpartum period, maternal sleep is unbalanced both in terms of quality and quantity. The patient is confronted with fragmented sleep, mainly due to her caregiver responsibilities and mothering practices, which may also be related to other factors, such as environmental barriers (noise, light exposure, ambient temperature, unknown location) and insufficient privacy⁽²⁰⁾. Decreased quantity and quality of sleep leads to a change in mood and a decrease in energy levels, compromising the mother's functional capacity for self-care and for newborn care. In this sense, it is understood the importance of implementing nursing interventions that promote the quality of the patient's sleep during hospitalization and strategies to rescue the sleep time that the postpartum woman considers necessary to meet her needs, preserving her autonomy, as well as her physical and emotional well-being.

The family process can be defined as the development of interactions and relationship patterns between family members⁽¹⁶⁾. The transition to parenthood is a period of the family life cycle in which profound changes occur in the lives and relationships of individuals who experience it. The family undergoes marked changes in its structure when a child is born, which can lead to family imbalance and vulnerability, being considered one of the most important transitions in the lives of individuals⁽²¹⁾. It is the responsibility of the Nurse Midwife to "Care for women in the family and

in the community during the postnatal period”, with a view to promoting the health of the mother and newborn, facilitating the process of transition and adaptation to parenthood. Considering the covid-19 pandemic, experienced at the time of the patient's hospitalization, visits from family and friends were not possible due to the restrictions in force at the hospital, so the patient lived through the experience of childbirth and the first post-natal days. childbirth away from the family. If the transition to parenthood is already a period of vulnerability for the family process, the distance between family members can make this process difficult and may contribute to fragile or pathological situations during this transition. In this sense, it was essential to find strategies that could bridge the gap and promote interaction between family members, in order to facilitate the transition process in which they find themselves. At the same time, the implemented interventions facilitated the identification of needs, resources and support that the family has at its disposal to overcome the difficulties.

In the process of transition to motherhood, the woman is suddenly confronted with the responsibility of caring for a new helpless person, in addition to having to deal with all the activities she already performed before pregnancy, often deprived of rest, becoming socially more isolated and with the need to restructure her feminine identity. The puerperium is generally presented as a period of greater risk for the onset or worsening of anxiety disorders, which at this stage has specific characteristics and cause problems. Women experience ambivalent feelings around the experience of motherhood, feeling very happy and in love with their babies, although they also feel exhausted and anxious⁽²²⁾. As a result of the transformations undergone, women have fears, doubts and anxieties about their ability to care for the baby, affecting the mother-baby relationship, as it makes it difficult to understand the newborn's requirements⁽²²⁾.

With regard to the patient under study, anemia and, therefore, additional symptoms of

fatigue and general malaise, constitute another risk factor for the worsening of anxiety⁽²³⁾, contributing to the reduction of her ability to take care of herself and her newborn. In fact, anxiety in the context of motherhood is a multifactorial phenomenon, related to different variables, both sociodemographic and psychosocial, which can trigger a state of anxiety in the mother or even be influenced by pre-existing anxiety in the woman's personality. An individual look at each woman is essential, with a view to understanding the origin of maternal anxiety in relation to aspects of motherhood.

In the postpartum period, local and systemic changes occur in the woman's body that lead to the pre-pregnancy state, while some discomforts inherent in the delivery process are evident. Pain is the symptom most reported by women, which causes difficulties in carrying out daily activities, such as self-care, interferes with sleep and rest, urinating and defecating, appetite, tiring limitations of movement, walking, changes in posture, in addition to hinder the exercise of motherhood, interferes with breastfeeding, with newborn care, and makes it difficult to connect the dyad^(24,25).

The patient in this study reports pain in episiotomy and abdominal region that intensifies during breastfeeding. The abdominal pain that the patient presents results from the rhythmic contractive activity of the uterine muscle, characteristic of uterine involution⁽²⁶⁾. The process of uterine involution that occurs after delivery is characterized as a physiological event, of uterine contraction and retraction, which is quite painful. The pain is felt in the lower abdomen and may radiate to the back, sacrum and/or lower limbs. Sometimes this pain is evident at the time of breastfeeding due to the utero-modern reflection. The stimulation of the nipples and the galactophore causes oxytocin release in the bloodstream, intensifying uterine contraction⁽²⁶⁾. Trauma in the perineal region is another factor that often leads to the occurrence of pain in the postpartum period, predominantly in the first 24 hours⁽²⁴⁾, also being one of the complaints complaints of the patient under study. For pain relief, pharmacological

and non-pharmacological methods were used. In this case, cryotherapy⁽²⁷⁾ was used, with good results in the momentary relief of perineal pain. Non-pharmacological methods should be offered to minimize pain, considering the advantage of not interfering with the lactation process⁽²⁴⁾.

Postpartum infections occur regardless of the type of delivery the woman suffered⁽²⁸⁾. In this study, the patient, even with vaginal birth, has other risk factors for postpartum infection, including anemia, immunosuppression related to metabolic pregnancy requirements or even those related to anemia during the gestational period, presence of episiotomy⁽²⁹⁾, as well as the remaining placental detachment area⁽²⁶⁾. In the postpartum period, anemia is associated with an added risk of infection⁽³⁰⁾. To avoid postpartum infection some preventive measures, mainly related to hygiene actions by the patient, as well as health professionals. Health professionals are a source of contamination, which can contribute to the occurrence of postpartum infection, and it is essential to maintain a clean environment and adopt universal precautionary measures to avoid cross infections. At the same time, it is essential that the patient receive guidance to enable her with conditions to improve self-care.

Scientific evidence⁽³¹⁻³⁴⁾ proves the benefits of breastfeeding, which has advantages for both the mother and the newborn. Breastfeeding contributes to increasing the child's immunity, suppresses all the baby's needs up to 6 months, promotes a better adaptation of the child to new foods when introducing food and reduces the risk of developing certain diseases in the baby and mother⁽³¹⁾. Breastfeeding facilitates uterine involution, reducing postpartum blood loss, preventing bleeding and anemia, helps to return to pre-gravidity weight, and has long-term benefits, such as reducing cancer incidence ovary and breast⁽³²⁾. Breastfeeding is a natural food practice that reinforces the affective connection between mother and child⁽³³⁾. Breastfeeding is recommended exclusively by WHO up to 6 months and, in addition to food diversification for at least 2 years⁽³⁴⁾.

Despite being a natural event, breastfeeding is not an instinctive process, but a learned behavior, which requires practice and time to adapt, and can be a time of great challenges for mothers⁽³⁵⁾. Despite the intention of the mother under study to breastfeed her newborn, it is known that the establishment and duration of breastfeeding are influenced by physiological determinants (insufficient milk production, tiredness, fatigue), clinical determinants (mastitis, engorgement breast) and cultural aspects, in addition to the child's participation, the support network and psychological aspects. The first difficulties detected refer mainly to the inappropriate position of the mother-infant binomial, the proper grip, which can lead to trauma and pain in the nipples, ineffective breastfeeding, incomplete breast emptying, causing negative consequences in the production of milk, baby growth and early weaning⁽³⁶⁾. Maternal fatigue and tiredness are also common examples of obstacles to correct breastfeeding technique in the first 24 hours after childbirth. In the participant of this case study, the situation of tiredness and decreased energy, related with labor and delivery, is aggravated by the occurrence of anemia, with less maternal availability to breastfeed in the first attempts⁽³⁰⁾. Pain was another of the difficulties pointed out by the patient during breastfeeding, which can lead to an unsuccessful breastfeeding practice, since it interferes with the milk ejection reflex and, consequently, the child is unable to suckle⁽³²⁾.

In the postpartum period, women experience the first demands of motherhood, and it is common for them to feel emotionally vulnerable in the face of insecurity and doubts, whether in terms of caring for the newborn or taking care of themselves. Sometimes, postpartum women do not receive preparation or information about self-care during this period, during prenatal care, making it essential that, during postpartum hospitalization, they are heard and guided about self-care actions, breastfeeding, family planning, beliefs and care for the baby, in view of autonomy

and safety. It is essential that women have the knowledge, self-confidence and understanding that are essential for making responsible decisions that influence their health during the postpartum period, as well as that of their newborn.

The sources of knowledge that influence women towards adequate self-care in the postpartum period can be varied, including the media, advice from mothers, grandmothers, friends and health professionals. The lack of guidance at the time of hospital discharge regarding the importance of maternal and newborn consultations, as well as the professionals' lack of knowledge about women's practices in the domestic environment, can contribute to women adopting behaviors that are harmful to their health and that of the newborn⁽³⁷⁾. The patient under study did not plan the pregnancy, occurring before the 24-month interval recommended by the WHO⁽³⁸⁾, which denotes a lack of knowledge about planning and spacing the pregnancy. A risk factor for anemia during pregnancy and postpartum is precisely the short interval between pregnancies^(39,40).

CONCLUSIONS

The chosen theoretical model offered subsidy in the provision of quality and individual care, enabling the elaboration of nursing diagnoses, in order to respond to the identified needs and the particularities of the puerperal woman, that is, her personal, physiological and emotional needs. The development of this case study favored the identification of postpartum women's care needs, being the starting point for the development of nursing interventions to meet these needs. In addition, it provided the opportunity for the development of diagnostic skills, favoring the improvement of the intervention of the Specialist Nurse in Maternal and Obstetric Health Nursing.

The Nurse Specialist in Maternal and Obstetric Health Nursing plays a fundamental role in the monitoring of puerperal women, who need recommendations and care so that this period is experienced with serenity and the difficulties that arise are overcome, in the sense of enhancing the health of the mother and

newborn, supporting the process of transition and adaptation to parenthood.

This study contributed to the planning of care for the mother/newborn binomial, resulting in the implementation of effective actions to meet the identified needs. This case was relevant given the considerable prevalence of cases of anemia in the puerperium, closely related to the occurrence of anemia that was not corrected during pregnancy and acute hemorrhages during childbirth, leading to organic and psychological manifestations that harm the mother dyad-drinks.

This study presents as a limitation, the short time to carry out the collection of information due to the reduced period of hospitalization of the user, since it was in 48 hours and took place in a pandemic context.

REFERENCES

1. WHO – World Health Organization. Anemias nutricionais: ferramentas para uma prevenção e controlo eficazes. Geneva: WHO; 2017. Disponível em: <https://www.who.int/publications/item/9789241513067?sequence=1>.
2. Areia AL, Silva CN, Serrano F, Mairós J, Guimarães M, Clode N. Normas de Orientação Clínica. Anemia na Gravidez e no Puerpério. Lisboa: Sociedade Portuguesa de Obstetrícia e Medicina Materno-fetal; 2019. Disponível em: <https://www.spommf.pt/wp-content/uploads/2019/07/Norma-Anemia-na-Gravidez-e-no-Puerpe%CC%81rio.pdf>.
3. WHO – World Health Organization. A prevalência global da anemia em 2011. Geneva: WHO; 2015. <https://apps.who.int/iris/handle/10665/177094>.
4. Fonseca C, Marques F, Robalo Nunes A, Belo A, Brilhante D, Cortez J. (2016). Prevalência de anemia e deficiência de ferro em Portugal: o estudo empire. Rev Med Interna. 2016;46(4):470-78. DOI: [10.1111/imj.13020](https://doi.org/10.1111/imj.13020).
5. DGS – Direção-Geral da Saúde. Norma nº 030/2013 – Abordagem, Diagnóstico e Tratamento da Ferropénica no Adulto. Lisboa: Ordem dos Médicos; 2015. Disponível em: <https://www.dgs.pt/directrizes-da-dgs/normas-e-circulares-normativas/norma-n-0302013-de-31122013-pdf.aspx>.
6. Gynecologists ACO. Boletim de prática da ACOG nº 95: anemia na gravidez. Obstet Gynaecol. 2008;112(1):201-7. DOI: [10.1097/AOG.0b013e3181809c0d](https://doi.org/10.1097/AOG.0b013e3181809c0d).

7. Medina Garrido C, León J, Romani Vidal A. Anemia materna após o parto: prevalência e fatores de risco. *J Obstet Gynaecol.* 2018;38(1):55-9. DOI: [10.1080/01443615.2017.1328669](https://doi.org/10.1080/01443615.2017.1328669).
8. Milman N. Anemia pós-parto I: definição, prevalência, causas e consequências. *Ann Hematol.* 2011;90(11):1247-53. DOI: [10.1007/s00277-011-1279-z](https://doi.org/10.1007/s00277-011-1279-z).
9. Massoni RSDS, Leão, PRD, Ruver CX. Anemia grave sem puerperio. *FEMINA.* 2020;48(10):637-40. Disponível em: <https://docs.bvsalud.org/biblioref/2020/10/1127706/femina-2020-4810-637-640.pdf>.
10. Galdeano LE, Rossi LA, Zago MM. Roteiro instrucional para a elaboração de um estudo de caso clínico. *Rev Lat Am Enfermagem,* 2013;11(3):371-5. DOI: [10.1590/S0104-11692003000300016](https://doi.org/10.1590/S0104-11692003000300016).
11. Riley DS, Barber M, Kienle G, Aronson J, von Schoen-Angerer T, Tugwell P, et al. Diretrizes de cuidados para relatórios de casos: documento de explicação e elaboração de documentos. *J Clin Epidemiol,* 2017;89:218-35. DOI: [10.1016/j.jclinepi.2017.04.026](https://doi.org/10.1016/j.jclinepi.2017.04.026).
12. OE - Ordem dos Enfermeiros. Estatuto da Ordem dos Enfermeiros e Regulamento do Exercício Profissional dos Enfermeiros (REPE). Lisboa: OE; 2015. Disponível em: https://www.ordemenfermeiros.pt/arquivo/publicacoes/Documents/nEstatuto_REPE_29102015_VF_site.pdf.
13. Nunes L. Aspeto Éticos na investigação de enfermagem. Setúbal: Escola Superior de Saúde de Setúbal; 2020. Disponível em: https://comum.rcaap.pt/bitstream/10400.26/32782/1/ebook_aspetos%20eticos%20investigacao%20Enf_jun%202020.pdf.
14. Portugal. Resolução da Assembleia da República n.º 1/2001 de 3 de janeiro. Assembleia da República. Lisboa: Diário da República Eletrónico; 2001. Disponível em: <https://dre.pt/pesquisa/-/search/235128/details/maximized>.
15. Queirós P, Vidinha T, Filho A. (2014). Autocuidado: o teórico de Orem para a disciplina e profissão de Enfermagem. *Rev Enferm Ref.* 2014;4(3):157-64. DOI: [10.12707/RIV14081](https://doi.org/10.12707/RIV14081).
16. OE - Ordem dos Enfermeiros. Classificação Internacional Para a Prática de Enfermagem (CIPE) - Versão 2015. Lisboa: Lusodidacta; 2016. Disponível em: https://futurosenf.files.wordpress.com/2017/04/cipe_2015.pdf.
17. Rede Equator. Diagrama de fluxo – Relatórios de caso seguindo as diretrizes CARE. Oxford; 2019. Disponível em: <https://www.equator-network.org/wp-content/uploads/2013/09/%20CAREFlowDiagram-updated-2019.pdf>.
18. Zago MA. Tratado de Hematologia. Rio de Janeiro: Atheneu; 2014.
19. DGS – Direção-Geral da Saúde. Norma nº 008/2019. Prevenção e Intervenção na Queda do Adulto em Cuidados Hospitalares. Lisboa: Serviço Nacional de Saúde; 2019. Disponível em: <https://normas.dgs.min-saude.pt/wp-content/uploads/2019/12/prevencao-e-intervencao-na-queda-do-adulto-em-cuidados-hospitalares.pdf>.
20. Silva A, Manguieira S, Perrelli J, Rodrigues B, Gomes R. Avaliação do diagnóstico de enfermagem Padrão de sono doado em puerperas. *Rev Cubana de Enfermer,* 2020;36(1):1-15. Disponível em: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-03192020000100008&lng=es&tlng=pt.
21. Tralhão F, Rosado AF, Gil E, Amendoeira J, Ferreira R, Silva M. A Família como promotora da transição para a parentalidade. *Rev UIIPS.* 2020;8(1):17-30. DOI: [10.25746/ruiips.v8.i1.19874](https://doi.org/10.25746/ruiips.v8.i1.19874).
22. Donelli T, Chemello M, Levandowski D. Ansiedade materna e maternidade: revisão crítica da literatura. *Interação Psicol.* 2017;21(1):78-89. Disponível em: <https://revistas.ufpr.br/psicologia/article/view/46153>.
23. Corwin EJ, Murray-Kolb LE, Beard JL. O baixo nível de hemoglobina é um fator de risco para a depressão pós-parto. *Nutr J.* 2003;133(12):4139-42. DOI: [10.1093/jn/133.12.4139](https://doi.org/10.1093/jn/133.12.4139).
24. Francisco AA, Oliveira SMJV, Santos JO, Silva FMB. Avaliação e tratamento da dor perineal sem pós-parto vaginal. *Acta Paul Enferm.* 2011;24(1):94-100. DOI: [10.1590/S0103-21002011000100014](https://doi.org/10.1590/S0103-21002011000100014).
25. Tomasoni TA, Silva JB, Bertotti TCW, Perez J, Korelo RIG, Gallo RBS. Intensidade de dor e desconfortos puerperais imediatos. *BrJP,* 2020;3(3):217-21. DOI: [10.5935/2595-0118.20200047](https://doi.org/10.5935/2595-0118.20200047).
26. Montenegro CAB, Rezende Filho J. Rezende Obstetria Fundamental. 14. ed. São Paulo: Guanabara Koogan; 2019.
27. Dutra LRDV, Araújo AMPH, Micussi MTABC. Terapias não farmacológicas para analgesia no pós-parto: uma revisão sistemática. *BrJP.* 2019; 2(1):72-80. DOI: [10.5935/2595-0118.20190014](https://doi.org/10.5935/2595-0118.20190014).
28. Leidetz ECB, Batista IS, Berlet LJ. Infeciosa Puerperal: Fatores de Risco e a Importância da Assistência Humanizada em Enfermagem. *Revis AJES.* 2019;2(2):133-46. Disponível em: <https://revista.ajes.edu.br/revistas-noroeste/index.php/revisajes/article/view/15/29>.
29. Lima DM, Wall ML, Hey A, Falcade AC, Chaves AC de M, Souza MAR. (2014). Fatores de Risco para Infecção no Puerpério Cirúrgico. *Cogitare Enferm.*

2014;19(4):734-40. Disponível em: <https://revistas.ufpr.br/cogitare/article/view/35170/23940>.

30. Munhoz NT, Schmdt KT, Fontes KB. Dificuldades vivenciadas por puérperas no cuidado domiciliar com o recém-nascido. Rev Enferm UFPE. 2015;9(Supl. 3):7516-23. Disponível em: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/10489>.

31. Lopes JML, Chora MAFC. Aleitamento Materno: Fatores que contribuem para o abandono precoce. Rev Iberoam Saúde Envelhecim. 2019;5(2):1797-1809. Disponível em: http://revistas.uevora.pt/index.php/saude_envelhecimento/article/view/314/577.

32. Costa S, Fettermann FA, Azevedo L da S de, Freitas HMB de, Bordignon JS, Donaduzzi DS da S. A Prática do Aleitamento Materno na Percepção de Mulheres Primigestas. Vivências. 2019;15(29):289-310. DOI: [10.31512/vivencias.v15i29.90](https://doi.org/10.31512/vivencias.v15i29.90).

33. Levy L, Bértolo H. Manual do Aleitamento materno. Comité Português para a UNICEF e Comissão Nacional Iniciativa Hospitais Amigos dos Bebés. Lisboa: UNICEF; 2012. Disponível em: <https://unicef.pt/media/1581/6-manual-do-aleitamento-materno.pdf>.

34. WHO – World Health Organization. Alimentação infantil e infantil: capítulo-modelo para manuais escolares para estudantes de medicina e profissionais de saúde aliados. Geneva: WHO; 2009. Disponível em: <https://apps.who.int/iris/handle/10665/44117>.

35. Barbosa DFR, Reis RP. O Enfermeiro no Incentivo do Aleitamento Materno. Rev Elet Estácio Recife. 2020;6(1):1-10. Disponível em: [http://nippromove](http://nippromove.hospedagemdesites.ws/anais_simposio/arquivos_up/documentos/artigos/7a26bb461b3bd3d6a6b088d6bf87a476.pdf).

[hospedagemdesites.ws/anais_simposio/arquivos_up/documentos/artigos/7a26bb461b3bd3d6a6b088d6bf87a476.pdf](https://doi.org/10.1590/1982-0194201800060).

36. Carreiro J de A, Francisco AA, Abrão ACF de V, Marcacine KO, Abuchaim E de S V, Coca KP. Dificuldades relacionadas ao aleitamento materno: análise de um serviço especializado em amamentação. Acta Paul Enferm. 2018;31(4):430-8. DOI: [10.1590/1982-0194201800060](https://doi.org/10.1590/1982-0194201800060).

37. Acosta DF, Gomes VL de O, Kerber NP da C, Costa CFS. Influências, crenças e práticas no autocuidado das puérperas. Rev Esc Enferm USP. 2012;46(6):1327-33. Disponível em: <https://www.scielo.br/j/reeus/p/a/hn8gV53YMLfBWPs89yfTf5C/?format=pdf&lang=pt>.

38. WHO – World Health Organization. Relatório de uma consulta técnica da OMS sobre o espaçamento do nascimento: Genebra, Suíça de 13 a 15 de junho de 2005. Geneva: Organização Mundial de Saúde; 2007. Disponível em: <https://apps.who.int/iris/handle/10665/69855>.

39. Montenegro C, dos Santos F, de Rezende-Filho J. Anemia e gravidez. Rev Hosp Univers Pedro Ernesto. 2015;14(2):29-33. Disponível em: DOI: [10.12957/rhupe.2015.18350](https://doi.org/10.12957/rhupe.2015.18350).

40. Muñoz M, Peña-Rosas JP, Robinson S, Milman N, Holzgreve W, Breyman C, et al. Gestão do sangue do paciente em obstetria: gestão da anemia e das deficiências hemáticas na gravidez e no período pós-parto: declaração de consenso naTA. Transfus Med Rev. 2018;28(1):22-39. DOI: [10.1111/tme.12443](https://doi.org/10.1111/tme.12443).

Responsible editors:

Patrícia Pinto Braga | Chief Editor
Helisamara Mota Guedes | Experience Report

Note: There was no funding by a funding agency.

Received in: 14/03/2022

Approved in: 17/11/2022

How to cite this article:

Lobão AFM; Zangão MOB. Nursing Care for Puerperal Women with Anemia: Case Report. Revista de Enfermagem do Centro-Oeste Mineiro. 2022;12:e4624. [Access ____]; Available in: _____. DOI: <http://doi.org/10.19175/recom.v13i0.4686>