SANUS.2024;9:e434
DOI: https://doi.org/10.36789/revsanus.vi1.434
www.sanus.unison.mx

PRAXIS

Nursing care process in pregnant women with hyperthyroidism

Proceso de atención de enfermería en gestante con hipertiroidismo

Processo de cuidado de enfermagem em gestantes com hipertireoidismo

Perla Murua-Guirado [1*]
https://orcid.org/0000-0001-7244-1970

Narce Dalia Reyes-Pérez [2]
https://orcid.org/0000-0001-9735-1402

Martha Marquez-Marquez [3]
https://orcid.org/0000-0002-9690-405X

Marcela Padilla-Languré [4]
https://orcid.org/0000-0002-3370-072X

1. Master of Science in Nursing, Servicios de Salud de Sinaloa, Hospital General Los Mochis. Sinaloa, México.
2. Course Teacher Level B. Universidad Autónoma de Sinaloa, Facultad de Enfermería Mochis. Sinaloa, México.
3. Course Teacher Level B. Universidad Autónoma de Sinaloa, Facultad de Enfermería Mochis. Sinaloa, México.
4. Full-Time Professor. Universidad de Sonora, Departamento de Enfermería. Hermosillo, Sonora, México.

* Corresponding author: perlamg94@hotmail.com

Received: 13/12/2022
Accepted: 26/10/2023

Abstract

Introduction: Almost 800 female deaths occur daily due to preventable causes associated with complications during or after pregnancy or childbirth, equivalent to two maternal deaths per minute. **Objective:** To develop a nursing care process for a pregnant woman who suffered from hyperthyroidism using diagnostic taxonomies, results and nursing interventions with a focus on Orem's theory. **Methodology:** Case study of a pregnant woman treated in a second level care hospital, the Orem assessment guide was used, developing the stages: assessment, diagnosis, planning, execution and evaluation, individualized care plans were designed and executed. Privacy was protected by omitting identity, respecting the rights and well-being of the participant. **Results:** The risk conditioning factor that compromised the health of the mother-child binomial gave way

to care planning aimed at the process of ineffective motherhood and ineffective self-management of health, establishing interventions such as high-risk pregnancy care and teaching the process of illness and prescribed medications, an improvement was obtained in the patient's health status, which allowed her discharge and adequate management of the high-risk pregnancy. **Conclusion:** The nursing care process exposed the context in which the pregnant woman with known uncontrolled pathology is admitted, which compromised maternal-fetal well-being. Nursing education is required to promote preconception maternal health for future pregnancies.

Key words: Pregnant; Hyperthyroidism; Care plan (DeCS).

Resumen

Introducción: Casi 800 muertes de mujeres en forma diaria ocurren por causas prevenibles asociadas a complicaciones durante o después del embarazo o el parto, equivaliendo dos muertes maternas por minuto. **Objetivo:** Desarrollar un proceso de atención de enfermería a gestante que cursó con hipertiroidismo empleando las taxonomías diagnósticas, resultados e intervenciones de enfermería con enfoque de la teoría de Orem. **Metodología:** Estudio de caso a mujer gestante atendida en hospital de segundo nivel de atención, se empleó la guía de valoración de Orem desarrollando las etapas: valoración, diagnóstico, planeación, ejecución y evaluación, se diseñaron y ejecutaron planes de cuidados individualizados. Se protegió la privacidad omitiendo identidad, respetando los derechos y bienestar de la participante. **Resultados**: El factor condicionante de riesgo que comprometía la salud del binomio madre-hijo, dio paso a la planificación del cuidado encaminado al proceso de maternidad ineficaz y autogestión ineficaz de la salud, estableciendo intervenciones como cuidados del embarazo de alto riesgo y enseñanza del proceso de enfermedad y medicamentos prescritos, se obtuvo mejora en el estado de salud de la paciente, lo que permitió su alta y un adecuado manejo del embarazo de alto riesgo. **Conclusión:** El proceso de atención de enfermería expuso el contexto en el que ingresa la mujer gestante con patología conocida no controlada, lo que comprometía el bienestar materno-fetal. Se requiere educación por parte de enfermería para fomentar la salud materna preconcepcional para futuros embarazos.

Palabras clave: Embarazada; Hipertiroidismo; Plan de cuidados (DeCS).

Abstrato

Introdução: Quase 800 mortes femininas ocorrem diariamente por causas evitáveis associadas a complicações durante ou após a gravidez ou o parto, o equivalente a duas mortes maternas por minuto. **Objetivo:** Desenvolver um processo de cuidado de enfermagem a uma gestante portadora de hipertireoidismo utilizando taxonomias diagnósticas, resultados e intervenções de enfermagem com enfoque na teoria de Orem. **Metodologia:** Estudo de caso de uma gestante atendida em um hospital de atenção secundária, utilizou-se o guia de avaliação de Orem, desenvolvendo as etapas: avaliação, diagnóstico, planejamento, execução e avaliação, foram desenhados e executados planos de cuidados individualizados. A privacidade foi protegida pela omissão da identidade, respeitando os direitos e o bem-estar do participante. **Resultados:** O fator condicionante de risco que comprometia a saúde do binômio mãe-filho deu lugar ao planejamento do cuidado voltado ao processo de maternidade ineficaz e à autogestão ineficaz da saúde, estabelecendo intervenções como o cuidado à gravidez de alto risco e ensinando o processo e medicamentos prescritos, houve uma melhora no estado de saúde da paciente, o que permitiu sua alta e o gerenciamento adequado

da gravidez de alto risco. **Conclusão:** O processo de cuidado de enfermagem expôs o contexto em que a gestante com patologia conhecida não controlada é internada, o que compromete o bem-estar materno-fetal. A educação em enfermagem é necessária para promover a saúde materna pré-concepcional em futuras gestações.

Palavras-chave: Grávida; Hipertireoidismo; Plano de cuidados (DeCS).

Introduction

Hyperthyroidism is a pathology that occurs mainly in the female sex, a situation that, if not treated during pregnancy, can trigger thyrotoxicosis and even in its most serious form "thyroid storm" where the life of the mother and the mother and her child may be at potential risk [(1)]. In the world, the prevalence of thyroid diseases until 2022 was 10 %, and the presence in the female population is ten times more frequent [(2)], they become manifest in around 4 % of pregnancies, situation that is part of the 75 % of deaths in women of reproductive age, according to the World Health Organization (WHO) 2019 [(3)].

In Mexico, the presence of problems related to the thyroid gland was detected in at least 1.4% of women of reproductive age [(3-4)]. Women with hyperthyroidism during pregnancy are at greater risk of loss of maternal-fetal well-being. Some body functions are altered as a result of the hormonal storm that a pregnancy produces (thyrotoxicosis). Thyrotoxicosis is evidenced by hypermetabolism and hyperactivity produced by elevated serum concentrations of free thyroxine (T4L by its acronym in Spanish) and/or free triiodothyronine (T3L by its acronym in Spanish) and its prevalence is found in 1 to 4 of every 1000 pregnancies [(5,6)].

At the beginning of pregnancy, the diagnosis of thyrotoxicosis is differentiated from severe hyperthyroidism. The clinical manifestations in both are the following: palpitations, anxiety, tremors and heat intolerance. A complete history (anamnesis) and physical examination are required to establish the cause [(7)]. From the above, the risks can lead to abortion before week 12, and before week 32, premature birth, premature placental detachment, preeclampsia, high blood

pressure and heart failure for the mother, and in the fetus disorders such as low birth weight and fetal hyperthyroidism, the latter may be present, even if the mother is euthyroideal [8].

Maternal characteristics considered in the reproduction stage such as age, ethnicity, number of pregnancies, physical condition, nutritional status, and comorbidities, in addition to external aspects such as access to health services and prenatal control, are determinants of maternal-fetal health. [3,9,10]. In 2016, the WHO restructured the number of consultations suggested during pregnancy, increasing the steps from four to eight, having to be carried out in a sequence starting from the 12th week of gestation as the first contact, and the subsequent ones every 4 weeks from the 20th, until the 34th week, then every 2 weeks until the 40th week, which marks the end of the pregnancy [11].

The discipline of nursing is recognized from its beginnings as a social process linked to the art of caring, it responds to the need to help people when they do not have sufficient capacity to care for themselves, it identifies the real and/or potential needs of the person who demands care, generates autonomy or dependency as a consequence of the activities assumed by the nurse [12]. The above gives direction for the use of the nursing care process (PAE by its acronym in Spanish) and the nursing taxonomy that allows providing quality care with the standardization of nursing care such as the North American Nursing Diagnosis Association (NANDA), the classification of nursing results (NOC) and the nursing intervention classification (NIC) [13-15].

Dorothea Orem's General Theory of Self-Care Deficit in nursing focuses attention on the person being cared for, seeking to identify to what extent such person assumes responsibility for its own care [16], the nursing professional has five methods of helping relationship or substitute that he/she can use according to the need that the person under his/her care presents, which are: in a compensatory way according to the deficit, he/she can also assume a role to support, guide, teach and provide conditions in the environment that allows the development of such person [16,17]. The

purpose of this work was to develop a PAE for a pregnant woman who suffered from hyperthyroidism using the NANDA, NOC and NIC taxonomies with a focus on Orem's theory.

Methodology

The present research refers to a descriptive case study of a pregnant woman with hyperthyroidism, admitted to a second level care public hospital in the city of Los Mochis, in Sinaloa, Mexico. To this effect, the stages included in the PAE were followed, which are: assessment, diagnosis, planning, execution, and evaluation. For the assessment stage, the observation of subjective and objective data was carried out from the physical examination in a cephalocaudal manner, the registration was carried out in an assessment guide based on the General Theory of Self-Care Deficit by Dorothea Orem [17]; in addition, information was indirectly available through the clinical record. For which reason elements proposed by Orem were rescued where the theory is constituted by three theories implicit and related to each other, which are: self-care theory, self-care deficit theory and the nursing system theory, it is a theory that it can be applied to various fields, which has come to be considered of great scope due to its scientific foundation [16,18].

The Orem assessment guide was used as an instrument, which is segmented into two sections, the basic conditioning factors, and the universal requirements, which in turn has three subsections called universal, development and health deviation. The response options are open, multiple, and dichotomous [17]. Based on the data obtained and by using clinical judgment, the diagnostic stage was completed, where the NANDA [13] was used, which allowed the NOC [14] to be proposed. For the third stage, it was approached from the NIC [15], for which independent and interdependent interventions were established, as part of the individualized nursing care plans PLACE [19].

Corresponding to the fourth stage, which is execution, this allowed the PLACE to be implemented in search of achieving the proposed results following three phases: preparation, execution, and documentation. With this, it was possible to complete the fifth stage, which was the evaluation

according to the applicability of the PLACE, as suggested by the nursing care model that is part of the National Nursing Program, which is aimed at improving technical quality and comprehensive care coverage at all levels of care in order to guarantee patient safety and apply a systematized practice of nursing care [20]. The application of the guide and the implementation of the PLACE by the current director of the Hospital was authorized, in the period of 2021. The present investigation was carried out in accordance with the general health regulations regarding research for health and in regard to the recovery of the care person's data, articles 16, 20 and 21 were specifically provided for the protection of the person's privacy and authorization through informed consent [21].

Case presentation

In basic conditioning factors, JLAL is pregnant, 19 years old, single, resident of a rural area of the municipality of Ahome, Sinaloa. At the time of her assessment, her weight was 75 kg and her height was 1.62 cm, her body mass index (BMI) was calculated at 27.5. She mentioned being a housewife and living with her parents, she played the role of caregiver for her parents who covered their needs, which was reflected in the good communication she maintained with them, she denied belonging to any religion, she had incomplete high school education. She had been known to have hypothyroidism since childhood and had been under treatment since then. She had all the public services at her home and expressed the hope that her health and that of her baby would improve.

The assessment according to the General Theory of Self-Care Deficit, in relation to the self-care requirements: Universal, identified a pregnant woman at 31.2 weeks of gestation who attended the gynecological emergency service referred from her health center due to thyroid dysfunction. Upon her arrival at the service, the patient expressed feeling “nervous”, she denied drug addictions and allergies. The measurement of vital signs in the blood pressure figures were found to be elevated (150/100 mmHg), heart rate of 130 per minute, oxygen saturation of 97 % and respiratory rate of

24 per minute. She denied any other symptoms. She was in her first pregnancy and reported experiencing active fetal movements and cramping.

During the nursing intervention, a peripheral line was placed for the administration of crystalloid solutions, laboratory studies and thyroid function tests were requested (T3 5.5 nmol/L, TSH-S 0.01 mIU/L, free T3 15.23 nmol/L, T4 total 24.8 nmol/L), toxemic and preoperative profile (glucose 79 mg/dL, creatinine 0.20 mg/dL, uric acid 4.6 mg/dL, Glutamic Oxaloacetic Transaminase 9.9 U/L, Glutamic Pyruvic Transaminase 6.4 U/L, Total Bilirubin 0.38 mg/dL, Direct bilirubin 0.21 mg/dL, Indirect bilirubin 0.2 mg/dL, Prothrombin times 2.9 seconds, Partial thromboplastin time 26.5 seconds, Hemoglobin 8.4 g/dL, Platelets 400 10^3/µl, leukocytes 9.4 10^3 /µl, urine collection was started within 24 hours (hrs). Interconsultation with the endocrinology service was also requested. The patient remained fasting, starting treatment with intravenous hydralazine 5 mg at a response dose to improve blood pressure levels, after administration of antihypertensives, her figures remained within the therapeutic objective. The process of fetal lung maturation began with the administration of betamethasone intramuscularly at 12 mg every 24 hours for three doses.

Subsequently, supplemental oxygen was provided through a nasal prong device providing oxygen at 3 liters (lts) per minute due to the presence of fetal tachycardia. She is questioned about her treatment, to which she responds as not maintaining basic treatment for her disease, for which levothyroxine 100 mcg per day was indicated; however, she expressed having suspended the treatment at the beginning of pregnancy due to fear that it could be affected by the medication, which is why she stopped attending her endocrinology check-up appointment. Her gynecological or prenatal check-ups, she reported that they were carried out irregularly, since she was not informed of the importance of this care. A reassessment was performed with the laboratory results, which highlighted the following: normal toxemic profile, glucose 79 mg/dl, creatinine 0.20 mg/dL, uric acid 4.6 mg/dL, hemoglobin 8.4 g/dL, platelets 400 10^3/µl, leukocytes 9.4 x103 µL, abnormal

thyroid profile (Total Triiodothyronine (T3): 3.4 nmol/L, TSH-S 0.01 mIU/L, Free T3: 6.6 nmol/L, Free Tetraiodothyronine (T4): 3.03 nmol/L, Total Tetraiodothyronine : 23.17 nmol/L, positive hemotype O and general urine test with leukocytes of 25/uL, bacterial flora of 1000/uL, positive crystals, yellow color, Ph of 6, erythrocytes <1.00/uL, pathological urine culture, contained proteins of 12.5 mg/dL in 24-hour urine.

At the time of the physical assessment, the patient was conscious, with adequate coloring and hydration of the skin and in teguments, she presented edema in the lower extremities, referring to "not having noticed it before", she was questioned about her diet to which she responded that she generally consumed enough water, and the foods she frequently consumed were red meat, jam, coffee and sausages. During her pregnancy, at the time of assessment she had gained 5 kg.

Regarding elimination, she mentioned urinating 10 times a day (frequency) and evacuations regularly and spontaneously, without presenting dependency to move around or do daily tasks, given that she had sufficient energy and participation in her self-care.

Regarding psychosocial status, she was recognized as a sociable person, she accepted herself physically, emotionally, and socially. Regarding family history, she had sick relatives who had died from systemic arterial hypertension; in the case of her mother, she mentioned that she also suffered from hypothyroidism. Regarding her development as a person, she was in the adolescent stage; she had her menarche at the age of 15 and began her sexual life at the age of 17; she complied with the vaccination schedule, including the anti-COVID 19 vaccine with 3 doses of 3 and influenza.

She was evaluated by an endocrinologist who mentioned that at the time she had clinical signs of thyrotoxicosis, presence of exophthalmos, fine tremor, tachycardia 138-140 per minute, hyperreflexia, blood pressure monitoring was indicated since upon admission she had high systolic pressures of up to 150-160 mmhg, she was kept under observation and surveillance in the hospital,

with vital signs taken 2 times per shift, monitoring of fetal focus. She was considered a patient at high risk of complications; family members and the patient were talked to about the disease, consequences, and risks that she presented. A new free T4 laboratory was requested in one week to observe changes after treatment for thyrotoxicosis, which included antithyroid medication and beta blocker to control the disease and symptoms such as: propranolol 40 mg every 12 hours, thiamazole 10 mg every 12 hours.

On the 2nd day of her hospital stay, she developed the following diagnoses: pregnancy at 31.4 weeks of gestation by ultrasound, hyperthyroidism, gestational hypertension and grade 2 anemia. A blood transfusion of 1 red blood cell package was performed, improving conditions (9.5 g/dL), and continuing with established medical management. After completing 48 hours of maternal-fetal surveillance, with treatment adjustment, complying with the fetal lung maturation scheme, and not presenting symptoms for more than 24 hours, the medical area personnel indicated hospital discharge with an open appointment for an outpatient consultation of endocrinology and gynecology.

Results

Regarding the assessment of JLAL according to the significant data found and clinical reasoning, the following NANDA labels were identified: Risk of alteration of the maternal-fetal dyad (00209), Willingness to improve self-care (00182), Willingness to improve knowledge (00161), Willingness to improve the childbearing process (00208), Poor knowledge (00126), Risk of ineffective peripheral tissue perfusion, (00228), Risk of decreased cardiac tissue perfusion (00200), ineffective childbearing process (00221), and ineffective self-management of health (00276), the latter two were developed as individualized PLACE and executed in order to make efficient the interventions required by the woman in a health situation.

The PLACE of the ineffective maternity process (00221), allowed the establishment of the NIC high-risk pregnancy care and the administration of blood products, which resulted in the execution of activities for the identification of medical factors related to poor outcomes during pregnancy , the above allows us to know risk factors by reviewing the obstetric history and determining the pregnant woman's understanding of them, thereby allowing the pregnant woman to be guided on self-care techniques, use of prescribed drugs and monitoring compliance with medical treatment and self-care exercised for the healthy development of pregnancy.

Regarding the second intervention within the PLACE, corresponding to the Administration of blood products, the activities consisted of verifying the medical indications, which requires knowing the pregnant woman's history of transfusions, making authorization through informed consent necessary for the supply of erythrocyte concentrate. The nursing personnel carried out and applied the protocol for supplying the blood product, mentioning the pregnant woman for the timely report in case of a transfusion reaction (pruritus, dizziness, dyspnea, and chest pain). Likewise, the final disposition of the transfusion is fulfilled, (Table 1).

Table 1. Individualized care plan for the pregnant woman with hyperthyroidism, 2021.

Activity domain/8 Sexuality (00221) Class: 3 Reproduction		
Nursing diagnosis (NANDA) Tag: Ineffective maternity process. Related factors: Inadequate knowledge about the motherhood process, inadequate prenatal care, inconsistent prenatal care follow-up. Defining characteristics (signs and symptoms): Inadequate prenatal care, inadequate prenatal lifestyles, ineffective management of bothersome symptoms during pregnancy Result (NOC) Tag: Prepartum maternal status Domain: Family health Class: health status of family members (2509) Indicator Artery pressure Radial pulse rate Hemoglobin Target score 1. Severe deviation from the normal range 2. Substantial deviation from normal range 3. Moderate deviation from the normal range 4. Slight deviation from the normal range 5. No deviation from normal range	Measuring scale For indicators 1 and 2 Keep at: 1 Increase to: 3 For indicator 3 Keep at: 2 Increase to:4 Intervention (NIC): High-risk pregnancy care (6800) Activities -Determine the presence of medical factors related to poor pregnancy outcomes (e.g., thyroid disease) -Review obstetric history to see if there are risk factors related to pregnancy -Determine the patient's understanding of the identified risk factors - Instruct the patient on self-care techniques to increase the possibility of a healthy outcome (importance of regular prenatal checkups) -Instruct the patient on the use of prescribed drugs (tocolytics, antihypertensives, antibiotics and for her thyroid condition). -Monitor compliance with medical treatment in order to ensure a stable fetal heart rate and compliance with lung maturation.	Intervention (NIC): Administration of blood products (4030) Activities -Verify medical orders Activities Obtain the patient's transfusion history -Check the patient's informed consent -Verify that the patient, blood group, Rh group, unit number and expiration date are correct, and record according to institutional protocol -Teach the patient the signs and symptoms of the transfusion reaction (pruritus, dizziness, dyspnea and chest pain). Monitor the IV (intravenous) puncture site for signs of infiltration, phlebitis, and local infiltration. Monitor vital signs (e.g. status during and after transfusion). Monitor and regulate flow during transfusion. Administer saline solution when the transfusion is complete.
Assessment Compliance with the interventions allowed us to understand the conditions for the pregnant woman to carry out self-care actions, based on the ability to comply with the treatment, making the necessary training by nursing personnel. Furthermore, with the administration of blood products, a favorable response was obtained when an increase in hemoglobin (9.6 mg/dl) was detected.		

Source: Own-development

To prevent ineffective self-management of health (00276), NICs teaching was established: disease process, Teaching: prescribed medications and Improving coping were established, for which the pregnant woman is presented with the characteristics of the disease and the importance of

complying with the treatment, therefore, it was important to mention the need for changes in lifestyle in order to avoid future complications and/or control the disease process.

Likewise, when providing help to the pregnant woman initially, the appropriate short and long-term objectives are jointly established, by understanding the pregnant woman's capacity for decision-making, in search of problem resolution, providing objective information related to the diagnosis, treatment and prognosis, which allowed us to conclude with the evaluation of the pregnant woman's knowledge about the specific disease process, (Table 2).

In execution and evaluation, to meet the proposed objective, the results (NOC) were addressed interdependently (gynecologist, endocrinologist, chemist), developing the proposed interventions. From the clinical history, some risk factors were determined for the stage in which the pregnant woman was, such as the history of hyperthyroidism, which triggered in the patient a series of complications associated with a high-risk pregnancy. In relation to the history of not attending prenatal consultations, the pregnant woman was provided with information about the importance of complying with prenatal check-ups on a regular basis, which leads to the next point, which consisted of identifying compliance with treatment for the present thyroid disease, where a deficit in self-care was found when abandoning pharmacological treatment was detected, as expressed by the patient, for this reason it was insisted on carrying out safe control of her pregnancy in conjunction with her chronic illness. Regarding the medical professional, consultation with an endocrinologist specialist was requested, so that he/she would carry out a series of assessments and subsequently indicate new studies to be performed. She was kept under strict surveillance and the medical indications were followed in their entirety (pharmacological treatment, oxygen supply through nasal cannulae.

Table 2. Individualized care plan for the pregnant woman with hyperthyroidism, 2021.

Domain: Health Promotion (00276)	Class: 2 Health Management	
Nursing diagnosis (NANDA) Tag (problem): Ineffective health self-management. Related factors: Perceived barriers to therapeutic regimen. Defining characteristics (signs and symptoms): Exacerbation of signs and symptoms of the disease, failure to attend appointments with health provider, failure to include the therapeutic regimen in daily life, neglect of the signs and symptoms of the disease. Result (NOC) Label Self-control: chronic illness Domain: Health Knowledge and Behavior Class: Health Management (3102) Monitor signs and symptoms of complications. Indicator -Follow medication regimen -Seek help for self-care Teach patient measures to control/minimize symptoms, as appropriate. Instruct the patient about the signs and symptoms that should be reported to the healthcare professional, as appropriate. -Avoid behaviors that enhance the progression of disease	-Maintains the appointment with health professional members of the care team, as appropriate Measuring scale 1. Never demonstrated 2. Rarely demonstrated 3. Sometimes demonstrated 4. Frequently proven 5. Always proven Keep at: 2 Increase to: 4 Target score for indicators 2, 3, 4, 5 Keep at: 1 Increase to: 3 Intervention (NIC): Teaching: disease process (5602) Teaching: prescribed medications (5616) -Recognize the patient's knowledge of medications - Assess the patient's ability to self-administer medications Activities Describe the disease process and the importance of treatment compliance.	-Discuss lifestyle changes that may be necessary to avoid future complications and/or control the disease process -Describe the basis for control/therapy/treatment recommendations -Describe possible chronic complications and their complications with her pregnancy. -Instruct the patient on measures to prevent/minimize the side effects of the disease. Intervention (NIC): Improve coping (5230) Activities -Help patient identify appropriate short- and long-term goals -Help patient to solve problems constructively - Provide objective information regarding diagnosis, treatment, and prognosis -Evaluate the patient's ability to make decisions -Assess the patient's current level of knowledge related to the specific disease process.
Assessment The patient showed availability in terms of developing self-care strategies related to treatment and solving problems in a constructive way. Demonstrating that 3 months after discharge through the electronic file, an interest in follow-up and evolution was indirectly shown, revealed by the record of frequent attendance at consultations, it should be noted that the patient's readmission to the tocosurgery service due to complications related to the pregnancy and the known pathology was not identified during the following months.		

Source: Own-development

Laboratory studies showed low hemoglobin (8.4 mg/dL), for which the gynecologist indicated transfusion of blood products. Important information was collected prior to transfusion, such as the presence of allergies, which were denied, type of blood group, informed consent to transfuse, the number and date of the unit to be transfused, once the information is obtained, the protocol is

followed: taking vital signs prior to placing the unit and every hour afterwards, monitoring the puncture site to rule out injuries or infiltration, monitoring the blood package and administration of saline solution at the end of the unit.

Discussion

Based on the objective of developing a PAE for a pregnant woman with thyroid disease, it was pertinent to build and implement two PLACES to encourage the responsibility of self-care on the part of the pregnant woman, planning: ineffective maternity process and ineffective self-management of health. In accordance with the PLACES, the prenatal maternal situation was considered, which was compromised due to the complications generated by the suspension of medical treatment for hypothyroidism prior to pregnancy that led to hyperthyroidism, situation that was addressed with multidisciplinary care of high-risk pregnancy, administration of treatment, blood products, office studies and health education.

Orem's theory has been applied in various studies, of which some have been recovered that have considered women in various stages of life as a subject of study. In the case of pregnant women with sexually transmitted infections, they represented a high incidence compared to other pathologies, so it is necessary for nursing personnel to participate with prevention and health promotion strategies, where the population behaves safely and responsibly toward sexual and reproductive health [22]. Orem's theory allows us to understand the self-care actions that pregnant women develop [23].

Moreover, some authors [24] described in their study adverse events during pregnancy due to the omission of pharmacological treatment, likewise, previous studies [5,25,26] mentioned complications in the newborn due to the thyroid disease during pregnancy, by focusing attention on prenatal care and risk prediction to intervene in a timely manner in the development of possible complications.

Considering it is important to identify those pregnant women with a previous diagnosis of thyroid disease for their follow-up and control [10].

The limitation of this research work was the in-person follow-up with the study person, data was only obtained from the system 3 months after the application of the guide and the interventions. This did not allow us to expand the results objectively nor to evaluate the implemented activities in the long term.

Conclusions

The PAE in a pregnant woman with thyroid pathology exposed the context experienced by women who suffer from chronic diseases and are in risk situations where they do not usually foresee or separate their health conditions prior to pregnancy, and which lead to compromising maternal-fetal well-being. That said, nursing personnel have an important role in the first level of care for the timely detection of women of childbearing age with comorbidities. The application of tools is suggested, such as records of vital signs, somatometry and history of the beneficiaries, which will allow the identification of the female population at risk of a complicated pregnancy. This combined with the monitoring of each of the women of childbearing age with risk factors, which will allow an approach to provide them with education for preconception maternal health.

Conflict of interests

The authors declare that there is no conflict of interest.

Financing

The authors declare that there was no type of financing.

Biblographic References

1. Valdés E. Pilasi C, Núñez T. Tirotoxicosis gestacional: patologia con riesgo vital. Rev. chil. obstet. Ginecol [Internet] 2003 [cited 25 sep 2023];68(1):54-57. Available at: https://www.scielo.cl/scielo.php?script=sci_ar

2. Taylor PN, Albrecht D, Scholz A, Gutierrez-Buey G, Lazarus JH, Dayan CM, et al. Global epidemiology of hyperthyroidism and hypothyroidism. Nat Rev Endocrinol [Internet]. 2018 [cited 27 sep 2022];14:301-316. Available at: https://doi.org/10.1038/nrendo.2018.18
3. Organización Mundial de la Salud. Mortalidad materna. [Internet]. Suiza: OMS; 2019 [cited 30 sep 2022]. Available at: https://goo.su/c8vT1uL
4. Fernández VR, Pérez CN. Actualización sobre patología tiroidea durante el embarazo: hipotiroidismo e hipertiroidismo. Rev méd sinerg [Internet]. 2020 [cited 27 oct 2022];5(10):e491. Available at: https://revistamedicasinergia.com/index.php/rms/article/view/491
5. Ares-Segura S, Temboury-Molina C, Chueca-Guindulain M, Grau-Bolado G, Alija- Merillas M, Caimari-Jaume M, et al. Recomendaciones para el diagnóstico y seguimiento del feto y del recién nacido hijo de madre con patología tiroidea autoinmune. Anal Pediatr (Barc) [Internet]. 2018 [cited 07 sep 2022];84(4):195-262. Available at: https://www.analesdepediatria.org/es-recomendaciones-el-diagnostico-seguimientodelarticulo-S1695403318303163
6. Zavala BB, Espinosa MN, Viruéz SJ, Pérez CÁ, Álvarez LA, Malanco HL, et al. Riesgo prenatal en el hipertiroidismo. Arch Inv Mat Inf [Internet]. 2020 [cited 28 sep 2022];10(2):65-73 Available at: https://www.medigraphic.com/cgi-bin/new/resumen.cgi?IDARTICULO=93507
7. Alexander E, Pearce E, Brent G, Brown R, Chen H, Dosiou C, et al. Association for the diagnosis and management of thyroid disease during pregnancy and the postpartum. thyroid [Internet]. 2017 [cited 03 sep 2023];27(3):315-389. Available at: https://doi.org/10.1089/thy.2016.0457
8. Corrales HJ, Sánchez MA, Recio CJ, Iglesias LR, Mories AM. Tratamiento médico del hipertiroidismo. Rev. ORL [Internet]. 2020 [cited 03 sep 2023];11(3):273-281. Available at: http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S2444-79862020000300005&lng=es
9. Alvarado-Rodriguez VL, Fonseca-Figueroa JD, Morales-Vindas V. Hipotiroidismo durante el embarazo: revisión bibliográfica. Revista ciencia y salud [Internet]. 2021 [cited 29 sep 2022];5(2):4-14. Available at: https://doi.org/10.34192/cienciaysalud.v5i2.245
10. Lira-Lucio J, Roldán-Rodríguez E, Ochoa-Millán J, Hernández-Escobar L, Padilla-Rivera C, Ochoa-Gaitán G. Factores asociados a mal pronóstico en embarazadas con diagnóstico de SARS-CoV-2. Ginecol Obstet Mex [Internet]. 2020 [cited 03 oct 2022];88(7):450-457. Available at: https://doi.org/10.24245/gom.v88i7.4242
11. Organización Mundial de la Salud. La OMS señala que las embarazadas deben poder tener acceso a una atención adecuada en el momento adecuado [Internet]. Who; 2016 [cited 30 aug 2023]. Available at https://www.who.int/es/news/item/07-11-2016-pregnant-women-must-be-able-to-access-the-right-care-at-the-right-time-says-who
12. Naranjo-Hernandez Y, Concepcion-Pacheco J, Rodriguez- Larreynaga M. Teoría del déficit de autocuidado: Dorothea Elizabeth Orem. Gaceta Medica Espirituana [Internet]. 2017 [cited 02 nov 2022];19(3):89-100. Available at: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1608-89212017000300009&lng=es&tlng=es l
13. Herdman TH, Kamitsuru S, Takáo-Lopes C. Diagnósticos enfermeros definiciones y clasificación. 12a ed. España: Elsevier; 2021.
14. Moorhead S, Swanson E, Johnson M, Maas ML. Clasificación de resultados de enfermería (NOC). 6a ed. Italia: Elsevier; 2019.
15. Butcher HK, Bulechek GM, Dochterman JM, Wagner CM. Clasificación de intervenciones de enfermería (NIC). 7a ed. Italia: Elsevier, 2019

16. Naranjo HY. Modelos metaparadigmáticos de Dorothea Elizabeth Orem. Revista Archivo Médico de Camagüey AMC [Internet] 2019 [cited 30 aug 2023];23(6):814-825. Available at: http://scielo.sld.cu/scielo.php?script=sci_abstract&pid=S1025-02552019000600814
17. López M, Moreno-Pérez N. Construcción de instrumentos para realizar el proceso de enfermería basado en la teoría general de orem. Desarrollo Cientif Enferm [Internet]. 2010 [cited 03 oct 2022];18(3):138-140. Available at: http://www.index-f.com/dce/18pdf/18-135.pdf
18. Meza FA, Bolaños MS, Solarte CD, Narváez NJ, Eraso BD, Gallardo SK. Modelo teórico de Dorothea Orem aplicado a algunas necesidades del paciente. Bol. Informativo CEI [Internet]. 2021 [cited 02 sep 2023];8(3):176-177. Available at: https://revistas.umariana.edu.co/index.php/BoletinInformativoCEI/article/view/2887
19. Secretaría de Salud. Lineamiento general para la elaboración de planes de cuidados de enfermería. [Internet]. México; 2011 [cited 27 nov 2022]. Available at: http://www.cpe.salud.gob.mx/site3/publicaciones/docs/lineamiento_general.pdf
20. Secretaria de Salud. Programa nacional de enfermería. Modelo del cuidado de enfermería [Internet]. México; 2018 [cited 27 nov 2022]. Available at: https://goo.su/vUEaX3
21. Cámara de Diputados del H. Congreso de la Unión. Reglamento de la ley general de salud en materia de investigación para la salud. Diario Oficial de la Federación [Internet]. 2014 [cited 10 oct 2023]. Available at: https://www.diputados.gob.mx/LeyesBiblio/regley/Reg_LGS_MIS.pdf
22. Romero PA, Sanmartin RM, Aguilar RM. Eclampsia abordaje enfermero basada en la teoría de Dorothea Orem: a propósito de un caso. Pol Con [Internet]. 2023 [cited 01 sep 2023];8(1):231-246. Available at: https://www.polodelconocimiento.com/ojs/index.php/es/article/view/5071/12307
23. López II, Salazar MA, Riofrío TS. Teoría de Orem para el abordaje de la salud sexual durante el climaterio. Enferm. Investig [Internet]. 2022 [cited 01 sep 2023];7(3):94-100. Available at: https://revistas.uta.edu.ec/erevista/index.php/enfi/article/view/1689
24. Nares-Torices M, Hernández-Pacheco J, Estrada AA, Flores-Cortés M, González-Guzmán O, Becerra-Navarro N. Tirotoxicosis en el puerperio. Revisión de literatura y reporte de un caso. Med. crít [Internet]. 2021 [cited 20 apr 2023];35(4):220-225. Available at: https://www.scielo.org.mx/scielo.php?pid=S2448-89092021000400220&script=sci_arttext
25. Coronel J, Salazar Z, Espinosa L, Aspiazu K, Medardo H, Peña S, et al. Hipotiroidismo en gestantes usuarias del Centro de especialidades central Cuenca, periodo 2016. Revista Latinoamericana de Hipertensión [Internet]. 2018 [cited 20 apr 2023];13(5):375-380. Available at: https://www.redalyc.org/journal/1702/170263776011/html/
26 López PG, Fiallos MT, Quinatoa C, Delgado J. Hipotiroidismo subclínico en el embarazo una revisión para la actualización diagnóstica. Revista Científica Ciencias [Internet]. 2021 [cited 20 apr 2023];7(5):93-109. Available at: https://dialnet.unirioja.es/servlet/articulo?codigo=8383814

How to cite this article: Murua-Guirado P, Reyes-Pérez ND, Marquez-Marquez M, Padilla-Languré M. Proceso de atención de enfermería en gestante con hipertiroidismo. SANUS[Internet].2024 [citado dd mm aaaa];9:e434. Available at: URL/DOI