

Pregnancy in a patient with chronic renal failure*Embarazo en paciente con insuficiencia renal crónica**Gravidez na paciente portadora de insuficiência renal crônica***Juliana de Cassia Reis Boscarino¹**

ORCID: 0000-0003-3861-2670

Marcela Bruna da Silva¹

ORCID: 0000-0002-0416-0066

Letícia Loss de Oliveira²

ORCID: 0000-0002-7779-692X

Rodrigo Rocha de Souza³

ORCID: 0000-0002-9399-8046

¹Instituto Brasileiro de Medicina de Reabilitação. Rio de Janeiro, Brazil.

²Universidade do Estado do Rio de Janeiro. Rio de Janeiro, Brazil.

³Universidade Federal Fluminense. Rio de Janeiro, Brazil.

How to cite this article:

Boscarino JCR, Silva MB, Oliveira LL, Souza RR. Pregnancy in a patient with chronic renal failure. Glob Acad Nurs. 2021;2(Spe.1):e100.
<https://dx.doi.org/10.5935/2675-5602.20200100>

Corresponding author:

Juliana de Cassia Reis Boscarino

E-mail: julianadecassia25@gmail.com

Chief Editor: Caroliny dos Santos Guimarães da Fonseca
Executive Editor: Kátia dos Santos Armada de Oliveira

Submission: 03-18-2021

Approval: 04-08-2021

Abstract

The aim was to identify the care, interventions, and management of pregnant women with chronic renal failure. This is a descriptive bibliographic study, of the integrative review type, with a search for articles in Medline, SciELO and Academic Google databases. Twelve articles related to pregnancy in women with chronic renal failure were selected. Pregnancy in patients with nephropathies is not common and has high risks, so care and therapeutic procedures must be assigned until the end of this pregnancy. The present study identified the care, complications, and management of pregnant women with CKD to obtain a better treatment for the patient.

Descriptors: Nursing Care; Pregnant; Chronic Kidney Failure; Renal Dialysis; Dialysis.**Resumén**

El objetivo fue identificar la atención, las intervenciones y el manejo de la gestante con insuficiencia renal crónica. Se trata de un estudio bibliográfico descriptivo, del tipo revisión integradora, con búsqueda de artículos en las bases de datos Medline, SciELO y Google Scholar. Se seleccionaron doce artículos relacionados con el embarazo en mujeres con insuficiencia renal crónica. El embarazo en pacientes con nefropatía no es común y tiene altos riesgos, por lo que se deben asignar cuidados y procedimientos terapéuticos hasta el final de este embarazo. Este estudio identificó el cuidado, las complicaciones y el manejo de la gestante con IRC, con el fin de obtener un mejor tratamiento para la paciente.

Descriptores: Atención de Enfermería; Embarazada; Insuficiencia Renal Crónica; Diálisis Renal; Diálisis.**Resumo**

Objetivou-se identificar quais os cuidados, intervenções e manejo à gestante com insuficiência renal crônica. Trata-se de um estudo bibliográfico descritivo, do tipo revisão integrativa, com busca de artigos nas bases de dados Medline, SciELO e Google Acadêmico. Foram selecionados doze artigos relacionados à gestação na mulher portadora de insuficiência renal crônica. A gestação em pacientes nefropatas não é comum de acontecer e tem altos riscos, desta forma devem ser atribuídos cuidados e condutas terapêuticas até o fim dessa gestação. O presente estudo identificou os cuidados, complicações e manejo a gestante com IRC, para a obtenção de um melhor tratamento para a paciente.

Descriptores: Cuidados de Enfermagem; Gestante; Insuficiência Renal Crônica; Diálise Renal; Diálise.

Introduction

Chronic Kidney Disease is considered a public health problem worldwide, every year the number of patients is only increasing, it is conceptualized as the progressive and irreversible loss of kidney functions and its most advanced stage is characterized by the impairment of functions of the kidneys, promoting an abnormality, this stage is called chronic renal failure (CRF)¹.

The treatment of CKD, in most cases, is dialysis, which, in addition to being continuous and palliative, has the potential to increase the frailty of patients with renal pathology, who are already debilitated. Under these conditions, the patient with chronic kidney disease must go through an important process of adaptation to the new lifestyle, since restrictions, such as water and food, are associated with invasive dialysis treatment².

In the case of women of childbearing age, the risks of pregnancy are added during treatment. Amenorrhea/sterility can also occur, which restricts the possibility of pregnancy and, consequently, of motherhood².

In women, renal failure during pregnancy is something of great maternal-fetal risk, a pregnancy is currently possible in these cases and an even longer survival. There are several risks involved in a pregnant woman with CRF, but the most common is high blood pressure and, in more severe cases, pre-eclampsia².

For the pregnancy to have a good outcome, the pregnant woman should have a series of care to be followed, starting with her prenatal care, which should start as soon as possible, her consultations should be more frequent than for other pregnant women, the ideal is that the consultations are every 15 days until the 28th week of pregnancy, weekly until the 34th week and then hospitalized for better maternal and fetal³.

The woman with chronic renal failure requires nursing care, performed by trained professionals to avoid the complications of reduced renal function, resulting from the stress and anxiety of dealing with a life-threatening disease, especially in the context of kidney failure/pregnancy, due to possible complications and treatment².

This study aimed to identify the management of care for pregnant women with chronic renal failure, analyze the picture of chronic renal failure in pregnant patients and identify the care and management that should be carried out to this pregnant woman, in addition to addressing the forms of treatments and interventions to this patient. Investigate the most frequent complications and risks.

Methodology

This article was developed based on an integrative review research of a qualitative and descriptive nature, seeking to address nursing care for pregnant women with chronic renal failure. The research was carried out between September and October 2020, through a survey in the databases of SciELO, Medline and Google Scholar, through the Health Sciences Descriptors (DeCS) "Nursing Care", "Chronic Renal Insufficiency", "Renal Dialysis", "Dialysis", "Pregnant Woman".

The research question of this study was used: What is the nursing care for pregnant women with Chronic Kidney Failure?

Scientific articles in a temporal view from 2015 to 2020, in Portuguese and available in full text, were listed as inclusion criteria for studies.

The Boolean operator "and" was used in searches with associated descriptors.

A sample of 24 articles was reached and, after extensive reading, 12 met the study inclusion criteria and objectives by thematic analysis. For the exclusion criteria, the repeated theses, dissertations, articles, and abstracts that did not meet the guiding question of the study were removed.

Results and Discussion

Of the 12 articles that make up the sample, two (02) are available on Medline, four (04) on SciELO and six (06) on Google Scholar. Regarding the language, the 12 articles were edited in Portuguese. Regarding the country where the research was carried out, all studies were carried out in Brazil.

In Brazil, every year, the number of patients with renal failure has increased in considerable proportions and the prevalence of diseases such as hypertension and diabetes has contributed a lot to the growth of these indices. In the past, women with kidney failure could not become pregnant due to the high maternal-fetal risks. Currently, with the progress of medicine and specialized monitoring, it is possible to succeed in pregnancy and an increasing survival of the mother and the fetus. Despite all this progress, adequate family planning is still necessary, as this condition presents significant gestational risk¹.

Chronic kidney disease (CKD) is diagnosed according to the glomerular filtration rate, if it is less than 15 mL / min / 1.73 m², the patient needs a dialysis modality. A cross-sectional survey was carried out in a dialysis clinic, in which 178 patients were selected, who were offered an interview form and physical examination for data collection. After that, the data were individually structured according to clinical judgment and nursing diagnosis. The objective of this research was to investigate and diagnose health problems in hemodialysis patients. Twenty-four nursing diagnoses were found, the most frequent being: risk of infection, excessive fluid volume and hypothermia, these inserted in the safety/protection and nutrition domains⁴.

Since 1980, the course of changes in dialysis treatment has provided an improvement in clinical cases of patients, in addition to pregnancy success on dialysis. However, pregnancy in these patients is risky, care and management must be maintained, and unfortunately the pregnancy rarely comes to term. Some complications in these pregnancies have an impact on the success of the pregnancy. The most frequent problems are polyhydramnios, oligohydramnios, gestational diabetes, high blood pressure and eosinophilic peritonitis⁵.

In addition, pregnant women are at high risk of bleeding accidents, worsening anemia and risk of liver abnormalities. The fetus ends up suffering due to maternal



anemia and chronic hypoxia. The treatment of pregnant women in the end-stage of nephropathy aims to maintain some points of adequate dialysis therapy. However, kidney disease can progress during pregnancy. In these cases, when renal function is completely exhausted, renal replacement therapy through dialysis may be necessary in different gestational periods. In these patients, numerous maternal and fetal complications are reported, some of which are termination of pregnancy, others with a high risk of maternal death⁶.

As previously exposed, pregnancy in patients with CRF undergoing dialysis is a challenging situation, the complications encountered in the patients are varied and the perinatal results are conflicting⁷.

Fortunately, the rate of pregnant women on dialysis remains exceptionally low when compared to all pregnant women; however, according to the literature, there was an increase in the success rate of 25% of these pregnancies only in the 1980s. The work that obtained these data aimed to show the differences, advantages, and disadvantages of dialysis, when compared to hemodialysis. It was noticed that peritoneal dialysis allows the maintenance of a more stable uterine environment, without large fluctuations in blood volume, solutes, electrolytes, and blood pressure, but the need to insert a catheter increases the risk of miscarriage. The maternal complications most frequently identified in pregnant women on dialysis are anemia and arterial hypertension. Currently, it is known that both hemodialysis and peritoneal dialysis can be alternative therapeutic options to be offered to pregnant women³.

Pregnancy in women on dialysis, even though it is rare, can happen, although spontaneous abortions occur in 50% of cases. In cases of suspected pregnancy in women with CRF of childbearing age, this should be confirmed by a gynecological ultrasound, as beta-hCG levels are always high³.

Pregnancy in patients with CRF undergoing hemodialysis is also an uncommon event, but the number of pregnant women in this situation has been increasing. The fetus can suffer several consequences, the most frequent being pneumothorax, newborn respiratory distress syndrome, sepsis, necrotizing enterocolitis, chronic lung disease, intraventricular hemorrhage, and deafness. Therefore, pregnant women with nephropathy should start prenatal care as early as possible. In these situations, one of the problems faced is that usually the symptoms of pregnancy are ignored because the absence of menstruation, nausea or vomiting are common symptoms of CRF, therefore the pregnancy diagnosis can be delayed⁸.

Renal failure can be associated with pregnancy and is more frequent in the first and third month of pregnancy. In this sense, women have a differential in renal treatment. For physiological reasons that also compromise the psychological and subjecting to various changes in the lives of these women, whether pregnant or not, their lives are associated with changes as a whole and particularly the substances of the renal function⁹.

A descriptive-exploratory study was carried out using a qualitative approach to understand the meaning of

pregnancy and motherhood for women of childbearing age with CRF. The survey was conducted at the Institute of Nephrology, 42 women were interviewed, all diagnosed with chronic renal failure, undergoing dialysis. For most of these women, pregnancy is a dream that, despite not being fulfilled, makes them stronger in coping with the disease. The interviewees reported that adoption is a possibility to fulfill the dream of motherhood. Even in the face of this adverse situation, several women participating in the research demonstrated that they had the hope of being "cured", of still fulfilling the dream of motherhood and of being able to share the development of their children more closely².

A systematic survey was also carried out at Hospital São João in the city of Coimbra of all pregnant women with chronic kidney disease. Four cases were found requiring renal replacement techniques, which were used as case studies. Case 1 reports the only pregnancy in a woman already undergoing renal replacement treatment, on peritoneal dialysis and the other 3 cases were diagnosed in the first trimester. Despite the high associated morbidity, pregnancy in women with severe CKD can have an acceptable maternal-fetal outcome, despite the high incidence of complications. It is an article with the aim of evaluating the outcome of pregnancy in women with CKD diagnosed in the institution¹⁰.

Pregnancy is a challenge for women with kidney disease, and this is especially true for dialysis patients. In 1971, the first successful case of pregnancy in a patient with chronic renal failure on dialysis was reported and, since then, recent publications report pregnancy in 1 to 7% of women on chronic dialysis undergoing hemodialysis treatment present anovulatory cycles due to peaks of prolactin that damage the hypothalamic-pituitary axis, thus contributing to a decrease in libido, in addition to other complications inherent to chronic kidney disease, such as anemia, treated with erythropoietin and iron, and depression. All these factors contribute to low fertility and decreased conception⁴.

According to the authors, the number of pregnant women with nephropathy has been increasing, in 1980 we had only 23% of live births with mothers on hemodialysis and this percentage rose to 90% in the last decade. Pregnant women need to start their prenatal care as soon as possible and their consultations should be more frequent than for low-risk pregnant women, with follow-up also with a nephrologist^{1,8,10,11}.

It was observed that for some of the authors, pregnancy in women with nephropathy is not a common occurrence, which may have consequences for both the mother and the fetus. The complications most observed by them in relation to the pregnant woman were arterial hypertension and anemia. As for complications in the fetus, the most frequent are chronic lung disease, sepsis, deafness and intraventricular hemorrhage^{5-7,9,11}.

Blood pressure measurement (recommended <140/90mmHg) and monthly exams were covered in most studies; it was realized that this should be monitored frequently, as it tends to be increased, as well as the increase



in the frequency of exams to check how is the anemia of these patients^{5,6,11}.

In this sense, therapeutic approaches should be attributed, such as the increase in hemodialysis sessions, treatment of anemia with erythropoietin (a drug used in cases of anemia due to renal failure) and iron (noripurum)²⁻⁴.

In women with Chronic Kidney Failure, the diagnosis of pregnancy is usually late due to menstrual irregularities that happen to these women and symptoms such as nausea and vomiting, which is something common^{8,12}.

The treatment modality when pregnancy is discovered is not changed unless there is an immediate need. According to authors, it is better to start with hemodialysis, since dialysis requires the insertion of a

Conclusion

The study identified nursing care for pregnant women with chronic renal failure to obtain better treatment for pregnant women and their babies in training. This treatment should be performed more times a week and the care of pregnant women doubled due to the risks they face during pregnancy, considering that Nursing has a fundamental role for patients with chronic renal failure because it is ahead of this patient all the time. The role of Nursing in hemodialysis is fundamental and contributes to the care of the pregnant woman, following her drawing during dialysis, checking vital signs, and accompanying this woman until the end of her pregnancy.

References

1. Lemos KC. Gravidez e maternidade em hemodiálise: limitações e sentimentos, 2015. 116 f., il. Dissertação (Mestrado em Enfermagem) — Universidade de Brasília, Brasília, 2015.
2. Oliveira TL, et al. Insuficiência renal crônica e gestação: desejos e possibilidades. Rev REME [Internet]. 2007 [acesso em 30 mai 2021];11(3). Disponível em: <https://www.reme.org.br/artigo/detalhes/344>
3. Ribeiro CI, Silva N. Gravidez e diálise. Braz. J. Nephrol [Internet]. 2020 [acesso em 30 mai 2021];42(3):349-356. Disponível em: https://www.scielo.br/scielo.php?pid=S0101-28002020005025202&script=sci_arttext&lng=pt
4. Santos SSB, et al. Relato de caso: gravidez bem-sucedida em paciente renal crônica hemodialítica. Revista do Hospital Universitário Getúlio Vargas. 2012 jul/dez:49–52.
5. Romão Júnior JE. Atualização em diálise: Tratamento dialítico de mulheres grávidas. Braz. J. Nephrol. [Internet]. 2001 [acesso em 30 mai 2021];23:49-54. Disponível em: https://bjnephrology.org/wp-content/uploads/2019/11/jbn_v23n1a08.pdf
6. Trevisan G. Gestação em pacientes com Insuficiência Renal Crônica, 2003. 67 f., il. Dissertação (Mestrado em Medicina: Nefrologia) — Universidade Federal do Rio Grande do Sul, Porto Alegre, 2003.
7. Zanlorenci VP. Análise dos resultados obstétricos e perinatais das gestantes com insuficiência renal crônica em terapia dialítica, 2009. 118 f., il. Dissertação (Mestrado em Enfermagem) — Universidade de São Paulo, São Paulo, 2009.
8. Berlato LP, et al. Gestação na paciente renal crônica em hemodiálise. Ciências da Saúde [Internet]. 2016 [acesso em 30 mai 2021];17(1):171-180. Disponível em: <https://periodicos.ufn.edu.br/index.php/disciplinarumS/article/view/1918>
9. Silva CLL, Arrais AR. Vivências de uma gestante em tratamento de hemodiálise no SUS. R. pesq. cuid. fundam. Online. 2018;10(Especial):53-7. <https://doi.org/10.9789/2175-5361.2018.v10iEspecial.53-57>
10. Pinto PV, et al. Gravidez na doença renal crônica: da diálise peritoneal à hemodiálise. Acta Obstet Ginecol Port. 2016 set;10(3):194-200.
11. Frazão CMFQ, et al. Diagnósticos de enfermagem em pacientes renais crônicos em hemodiálise. Acta paul. enferm. 2014;27(1):40-43. <https://doi.org/10.1590/1982-0194201400009>
12. Santos CB, Marçal RG, Voltarelli A, Silva RPM, Sakman R. Métodos não farmacológicos de alívio da dor utilizados durante o trabalho de parto normal. Glob Acad Nurs. 2020;1(1):e2. <https://dx.doi.org/10.5935/26755602.20200002>

