

Late discovery of pregnancy in an advanced age dialytic patient: case report

Descoberta tardia de gravidez em paciente dialítica de idade avançada: relato de caso

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ABSTRACT

Pregnancy in dialysis women still has a low prevalence due to possible complications resulting from the evolution of chronic kidney disease. However, recent outcomes have shown an advance in the continuity of pregnancy increasing the chances of renal dialysis patients completing the gestational process. Among the care for a pregnant woman on dialysis, strict control of the urea value, monitoring of anemia, blood pressure levels, balanced nutrition, metabolic control, and electrolyte changes are the main determinants of preventing complications in this disease. Monitoring fetal growth, when pregnancy is known, is necessary. When pregnancies arise from patients undergoing renal replacement therapy, the obstacles are greater for the mother as well as for the fetus, making it essential to bring the nephrological team closer to the obstetrician and pediatrician. This report addresses the experience of a multidisciplinary team directed to a woman of advanced age and undergoing dialysis, reporting the discovery of a late pregnancy of 29 weeks and the unfolding of its evolution given the peculiarity of this morbid condition.

Keywords: Kidney failure; Dialysis; Pregnancy;

RESUMO

Gravidez em mulheres dialíticas ainda apresenta baixa prevalência devido às possíveis complicações decorrentes da evolução da doença renal crônica. No entanto, desfechos recentes mostraram um avanço na continuidade da gravidez aumentando as chances de pacientes renais em diálise completarem o processo gestacional. Dentre os cuidados à gestante em diálise, o controle rigoroso do valor da ureia, monitoramento da anemia, níveis pressóricos, alimentação balanceada, controle metabólico e alterações eletrolíticas são os principais determinantes da prevenção de complicações nessa doença. É necessário monitorar o crescimento fetal, quando a gravidez é conhecida. Quando as gestações surgem de pacientes em terapia renal substitutiva, os obstáculos são maiores tanto para a mãe quanto para o feto, tornando-se imprescindível aproximar a equipe nefrológica do obstetra e do pediatra. Este relato aborda a experiência de uma equipe multidisciplinar direcionada a uma mulher de idade avançada e em diálise, relatando a descoberta de uma gravidez tardia de 29 semanas e o desdobramento de sua evolução diante da peculiaridade dessa condição mórbida.

Palavras-chave: Falência renal; Diálise; Gravidez;

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INTRODUCTION

Chronic kidney disease consists of kidney damage and progressive and irreversible loss of renal glomerular, tubular and endocrine function. In its most advanced stage, called the end stage of chronic kidney disease (CKD), the kidneys are no longer able to maintain the normality of the patient's internal environment (ROMÃO JÚNIOR, 2004).

Renal failure is a condition in which the kidneys lose the ability to perform their basic functions, and can be classified as acute kidney injury (AKI) when there is a sudden loss of kidney function, or chronic (CKD), when this loss is slow, progressive and irreversible (RIBEIRO et al., 2008).

Pregnancy brings with it many joys, fears, insecurities and so many other transformations in a woman's life, and, when programmed, all the necessary care for maternal and fetal safety is usually sought, with unplanned pregnancies being a possibility of insecurity for health of those involved in the process (MOURA and GOMES, 2014).

The prevalence of unplanned pregnancy is on the rise in Brazil and has implications for the health of the child, the mother, and the family, such as difficulty in attachment between mother and child, short duration of breastfeeding, and impact on child development while some consequences of this condition (CONCEIÇÃO and FERNANDES, 2015).

The main changes in maternal physiology occur in the cardiocirculatory, respiratory, and gastrointestinal systems, in addition to metabolic and hematological changes (REIS, 1993). Among the observed changes, the physiological hydronephrosis of pregnancy stands out, which is caused by extrinsic uterine compression to the ureter influenced by the action of the hormone progesterone (NGUYEN et al., 2010).

Chronic renal pregnant women on dialysis are part of the high-risk group for the maintenance of pregnancy, since the maternal and fetal prognosis still generates conflicting information, requiring strict management of clinical and obstetric complications, to avoid complications, both for the mother and for the baby (BERLATO, COSTENARO and BENEDETTI, 2016). Among the complications, prematurity is a serious problem for children of patients maintained on dialysis, with most births occurring before the 36th week of gestation (ROMÃO JÚNIOR, 1998).

Pregnancy in patients with renal failure is a risky condition both for mothers, who have severe arterial hypertension and anemia, in addition to bleeding problems more frequently than normal pregnant women, and for fetuses, with high morbidity and mortality (HOU, 1994; ROMÃO JÚNIOR, 2001). Because of this, some researchers discourage pregnancy in women with CRF and even suggest the interruption of conception (LINDHEIMER and KATZ, 1994). Others suggest that if the patient wants to become pregnant and has a good chance of undergoing a kidney transplant, it would be better to wait for the surgery to have normal kidney function. If the possibility of kidney transplantation is remote and the couple wants a child, such an attempt should not be discouraged, but the medical team must discuss with the couple the reduced chance of pregnancy, the burden of maintaining a pregnancy, the possibilities of success of evolution and the possible complications for the pregnant woman and the fetus (ROMÃO JÚNIOR, 2001).

Regarding the ideal age for a low-risk pregnancy, the age group between 20 and 29 years seems to be a consensus in the literature as the ideal one, because the extremes of reproductive life are linked to perinatal complications. Some authors suggest that the advanced age for pregnancy is at the limit of 35 years, ranging up to 45 years (CAETANO, NETTO and MANDUCA, 2011).

The discovery of the pregnancy, already at 27 weeks, of a patient undergoing hemodialysis at an advanced age (45 years), and with chronic kidney disease in a dialysis clinic in the interior of Bahia, motivated us to report the problems of this pregnancy in a program of hemodialysis focusing on the maternal-fetal evolution of this user.

METHODS

This is a case report with data collection in the city of Eunápolis in the state of Bahia, Brazil, in the year 2021. The municipality of Eunápolis is located in the extreme south of the state of Bahia, on the banks of the BR-101 highway. The city has a clinic that has a dialysis service. The unit serves about 230 patients on an outpatient basis, performing hemodialysis 3 times a week for 4 hours to its users. The case reported refers to a 45-year-old chronic kidney patient undergoing dialysis treatment who discovered her pregnancy late.

Data collection and information disclosure were carried out through prior authorizations, with the deletion of identification data. The Informed Consent Term was presented and signed. As it only involves data that does not identify the person in the reported case, considering the observance of beneficence, non-maleficence, absence of risks, and losses, with the guarantee of anonymity to the study subject, this work was not submitted to the research ethics committee.

CASE REPORT

M.F.M., female patient, 45 years old, married, black, mother of 3 adult children, born in Porto Seguro, Bahia, hypertensive for 20 years, with no report of other diseases and reported absence of drug allergy. She did not use contraceptives because she imagined that she was not at risk of becoming pregnant simultaneously with hemodialysis treatment. She has been on renal replacement therapy for 1 year and 6 months, with a schedule of three weekly sessions.

At one point during the visit by the nurse at the unit, she complained of a “discomfort” in her belly, reporting discomfort not presented in previous sessions. She was evaluated by the physician on duty, who requested a diagnostic ultrasound. The dialysis sessions were continued without interurrences, with good adherence to treatment.

Over the days, the patient was waiting for the ultrasound and with her, she brought fears and anxieties due to the recent loss of a sister with cancer. When performing the ultrasound, the patient left the doctor's office in tears, discovering a 27-week pregnancy of a female baby weighing 1570 grams, in stable and satisfactory development for normal parameters, except for a decrease in amniotic fluid.

The gestational diagnosis was difficult to make based only on the common symptoms of pregnancy, due to the lack of menstrual flow, symptoms of nausea and vomiting during dialysis sessions, not raising suspicion of a probable pregnancy.

From the gestational diagnosis, measures were taken quickly, such as changes in dialysis prescription, requests for exams and follow-ups with the obstetrics team, suspension of anticoagulant, increase in the number of dialysis sessions, from 3 times to 6 times. per week, with the maintenance of 4 hours per session.

There were many changes in the patient's life based on the behaviors adopted, with the daily displacement from the city where she lived to the dialysis unit, the multiple

punctures in the fistula, and changes in the treatment routine, which led to the observation of physical and emotional wear and tear on the part of the user. Another factor observed was the reduction in the anticoagulant dose, leading to the appearance of clots in the system, which was corrected by adjusting the heparin dose.

There was adherence and adaptation of the user to the changes, and the interurrences were minimal in the trans-dialysis phases. Monthly exams remained within the normal range for a patient with chronic renal failure. The urea samples collected weekly remained within acceptable standards. There was an adaptation in the acceptability for the dry weight of around 300 grams per week, in an attempt to approximate the normal weight gain in the gestational period. Although stable, the user reported a feeling of fear at this stage, among the factors reported, was the fear of not being able to give birth by vaginal delivery.

DISCUSSION

Chronic kidney disease does not contraindicate pregnancy but requires a different treatment and changes in the patient's therapeutic prescription before and during pregnancy (MARIANO et al., 2019). Among the observed changes, respiratory alkalosis, typical of pregnancy, associated with greater hemoglobin requirements, contributes to a greater demand on maternal kidneys. Patients with chronic kidney disease have greater difficulty adapting to these variations because the disease compromises the adaptive capacity of the kidneys, making pregnancy in these situations an extremely complex challenge (BLOM et al., 2017).

Pregnancy in dialysis patients has more complications than a pregnancy considered normal, thus increasing the risk of mortality for both mother and child. In this sense, it is recommended that the renal patient does not become pregnant, although studies are showing a change in this reality. It is part of this process, prior planning, and monitoring by a multidisciplinary team aims to reduce possible damage to the mother and fetus (MARIANO et al., 2019).

Since 1980, the course of changes in dialysis treatment provided the improvement of clinical cases of patients, in addition to the success of pregnancy on dialysis. However, pregnancy in these patients is risky, and all care and differentiated management must be

maintained, and there are few favorable outcomes in this process (ROMÃO JÚNIOR, 2001).

In pregnancies of patients with chronic kidney disease, complications such as polyhydramnios, oligohydramnios, gestational diabetes, arterial hypertension, and eosinophilic peritonitis are common (BARRETT et al., 2020). Pregnancy is a challenge for women with kidney disease, especially for dialysis patients. In 1971, the first successful case of pregnancy in a patient with chronic renal failure and on dialysis was reported and, since then, recent publications have reported pregnancy in 1 to 7% of women with chronic kidney disease on hemodialysis (BERLATO, COSTENARO and BENEDETTI, 2016).

Anovulatory cycles due to prolactin peaks impair the hypothalamic-pituitary axis, thus contributing to decreased libido, associated with this factor, complications inherent to chronic kidney disease, such as anemia that are treated with erythropoietin and iron, in addition to depression (SANTOS et al., 2012). All these factors contribute to low fertility and decreased conception.

The patient in question had factors that contributed to pregnancy failure, including advanced age, late discovery of the pregnancy, the distance between home and the dialysis unit, in addition to socioeconomic factors. Even with these unfavorable variables, there was an adaptation to the proposed changes, which were, the increase in the number of dialyzes, an adjustment in anticoagulant doses, weekly dry weight adjustments, reduction in the intervals of routine exams in addition to nutritional and psychological monitoring.

Among the symptoms presented by the patient during this period, fatigue is highlighted, justified by the increase in the pregnant abdomen and the daily visit to the treatment. There was also the presence of dry cough, abdominal pain, pain in the lower limbs (mainly in the ankle), and complaints that were controlled by pharmacological treatment and the adjustment in dialysis.

An unusual episode occurred during a session when the patient requested to go to the bathroom to urinate during dialysis, an unusual need in patients with chronic kidney disease.

It is noteworthy that the Unified Health System does not provide for an increase in the number of dialysis sessions in the case of pregnancy. The adjustments made in this process were mediated by the health department, with the authorization of the extra sessions, since there is no budget forecast for this cost in the public health service.

Among the changes in the medical prescription was the insertion of the drug Metoprolol, which was only started at the insistence of the team, as it impacted the patient's family budget. The anticoagulant administration method was changed, passing to 5,000 units of pre-dialysis heparin, washing the extracorporeal circuit with a saline solution containing 5,000 units of unfractionated heparin per liter, thus leaving a minimum dose of heparin in the dialysis system, which significantly reduced the effect of heparin on the patient, minimizing the risk of bleeding since regional anticoagulation with H-P (heparin and protamine sulfate) consists of pre-capillary infusion of heparin (5-10 U/Kg/h) to maintain the anticoagulated dialysis filter, reversing the effect of systemic anticoagulation (GARCÉS, VICTORINO and VERONESE, 2007).

Other complications were observed along this route, including dyspnea, arterial hypertension, system coagulation, complaints of pain mainly in the lower limbs, and edema in the arteriovenous fistula, as the punctures became daily. There was an occurrence of hypertension at home, which was reversed in the local urgent and emergency outpatient unit.

The patient gave birth on September 6, 2021, with excellent evolution of an uneventful eutocic delivery, being taken to a dialysis session one day after delivery. She was admitted to the service with weakness and slight vaginal bleeding. New measures were taken, such as prescribing heparin to prevent bleeding, diluting anticoagulants to adjust the system, and correcting the patient's dry weight. The next sessions returned to the conventional system. During this interval, there was a need for hospitalization for two days due to vaginal bleeding and generalized weakness. After conventional treatment, the sessions returned to their normal routine.

Regarding the baby, it is a healthy girl, although it was necessary to be admitted to a neonatal ICU due to low weight for a few days, and soon after the condition stabilized, she was discharged and remained stable.

CONCLUSION

Guidance and more specific measures are necessary so that women who are of childbearing age and who have chronic kidney disease can have information about the possibility of pregnancy and the relevant procedures for this period. The Unified Health

System needs to predict the increase in the number of dialysis for pregnant patients, as the increase in dialysis sessions is necessary for a favorable prognosis. Weekly control of laboratory tests to maintain low levels of urea and control anemia are also necessary at this time.

The favorable outcome observed in this case report was possible thanks to the availability and agility in the multidisciplinary articulation between specialists in the area of nephrology, obstetrics, pediatrics, nutritionist, and psychologist, who greatly contributed to an efficient and decisive workup for the good clinical prognosis of the binomial.

ACKNOWLEDGMENT

The authors are grateful for the collaboration and availability of the Santa Cruz clinic's multidisciplinary team and the user in providing the information for this report.

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Recebido em: 21/08/2022

Aprovado em: 23/09/2022

Publicado em: 29/09/2022