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# Use of crack in pregnancy: repercussions for the newborn

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## Use of crack in pregnancy: repercussions for the newborn

**Objective.** To know the effects for the newborn of the use of crack in pregnancy. **Methods.** This is a qualitative study conducted in a university hospital in southern Brazil, in the first half of 2014. Fifteen mothers crack users and five grandparents participated. The data were produced through semi-structured interviews and later submitted to content analysis. **Results.** It was found that the use of crack in pregnancy leads to repercussions related to the health of the newborn and repercussions related to family restructuring. In relation to the newborn, prematurity, congenital malformation, hospitalization in an intensive care unit, use of care and feeding technologies through artificial milk formulas were mentioned. In the family context, it was evidenced the occurrence of abandonment of the child by the mother, causing the adoption of the newborn by relatives of the family nucleus or their institutionalization due to lack of family structure. **Conclusion.** It was found that the use of crack in pregnancy leads to repercussions related to

the health of the newborn and repercussions related to family restructuring. In this sense, the recruitment of pregnant users of crack by health/nursing professionals and referral for high-risk prenatal care, as well as early identification of the peculiarities of the newborns of these women, and the development of actions that minimize the repercussions of crack are imperative.

**Descriptors:** infant, newborn; pregnant women; postpartum period; cocaína crack; nursing.

## Uso del crack durante el embarazo: repercusiones para el recién nacido

**Objetivo.** Conocer las repercusiones para el recién nacido por el consumo de crack durante el embarazo. **Método.** Estudio cualitativo realizado en un hospital universitario en el sur de Brasil, en el primer semestre de 2014. Participaron quince puérperas usuarias de crack durante la gestación y cinco abuelos. Los datos se recolectaron en entrevistas semiestructuradas y

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posteriormente se sometieron a análisis de contenido. Resultados. Para los participantes del estudio el uso de crack en la gestación llevó a repercusiones relacionadas con la salud del recién nacido, como prematuridad, malformación congénita, internación en unidad de cuidado intensivo, uso de tecnologías de cuidado y alimentación mediante fórmulas lácteas artificiales. Por otra parte, en el ámbito familiar produjo abandono del niño por parte de la madre lo que derivó en la adopción del recién nacido por parientes del núcleo familiar o su institucionalización por falta de estructura familiar adecuada. **Conclusión.** Se constató que el uso de crack en la gestación conlleva a repercusiones relacionadas con la salud del recién nacido y con la desestructuración familiar. En este sentido, se hace indispensable la captación de las gestantes usuarias de crack por los profesionales de la salud y por enfermería para la realización del control prenatal de alto riesgo, así como la identificación precoz de las necesidades de los recién nacidos y el desarrollo de acciones que minimicen las repercusiones del crack.

**Descriptor:** recién nacido; mujeres embarazadas; período de postparto; cocaína crack; enfermería

### Uso de crack na gestação: repercussões para o recém-nascido

**Objetivo.** Conhecer as repercussões do uso de crack na gestação para o recém-nascido. **Método.** Trata-se de uma pesquisa do tipo exploratória e descritiva,

com abordagem qualitativa, realizada em um hospital universitário no sul do Brasil. Participaram quinze puérperas usuárias de crack e cinco avós. Os dados foram produzidos por meio de entrevistas semiestruturadas e, posteriormente, submetidos à análise de conteúdo.

**Resultados.** Para os participantes de este estudo constatou-se que o uso de crack na gestação acarreta repercussões relacionadas à saúde do recém-nascido e repercussões relacionadas à desestruturação familiar. Em relação ao recém-nascido foram apontadas a prematuridade, malformação congênita, internação em unidade de tratamento intensivo, uso de tecnologias de cuidado e alimentação por meio de fórmulas lácteas artificiais. No âmbito familiar evidenciou-se a ocorrência de abandono da criança pela mãe, ocasionando a adoção do recém-nascido por parentes do núcleo familiar ou a institucionalização do mesmo por falta de estrutura familiar. **Conclusão.** Constatou-se que o uso de crack na gestação acarreta repercussões relacionadas à saúde do recém-nascido e repercussões relacionadas à desestruturação familiar. Nesse sentido, faz-se imperativa a captação de gestantes usuárias de crack pelos profissionais da saúde/enfermagem e encaminhamento para a realização do pré-natal de alto risco, bem como identificar precocemente as peculiaridades dos recém-nascidos dessas mulheres, tendo em vista o desenvolvimento de ações que minimizem as repercussões do crack.

**Descritores:** recém-nascido; gestantes; período pós-parto; cocaína crack; enfermagem.

## Introduction

The term “crack baby” was introduced to describe children exposed to cocaine before birth.<sup>(1)</sup> The exposure to crack and other psychoactive substances by the pregnant woman significantly increase the rates of neonatal abstinence syndrome diagnosed in the prenatal and newborn. Newborns exposed to psychoactive substances during gestation presented on average lower birth weight, longer hospital stay after birth and a higher propensity to be preterm, to have alimentary and respiratory problems.<sup>(2)</sup> Maternal use of illicit psychoactive substances as crack is associated with considerable neonatal morbidity. According to the current guidelines, the need to prepare health professionals who attend these pregnant

women to minimize the use of opioid analgesics during pregnancy is reinforced.<sup>(2)</sup>

Physical examination in children of crack-dependent mothers has shown that the child’s respiratory tract becomes one of the most affected parts of the body. It also reveals the use of accessory muscles for breathing, hypoventilation and bilateral wheezing in the lungs. As for vital signs, tachycardia and tachypnea are present in the newborns of these women.<sup>(3)</sup> Also, prenatal exposure to crack and cocaine in newborns crosses the blood-brain barrier reaching brain concentrations that can cause cerebral malformation, changes in brain growth and cortical development, causing disorders in differentiation and neuronal migration. The

neurobehavioral effects of crack and cocaine are several, such as difficulty in eating and sleeping, changes in the regulation of states of consciousness, signs of stress, excitability, motor immaturity, altered reflexes and signs of abstinence.<sup>(4)</sup>

Preterm and full-term infants born of crack and/or cocaine-dependent mothers presented low birth weight and, at the time of the evaluation, lower birthweight than those of non-dependent mothers. Regarding the suction pattern, it was found a change in tongue movement and an arrhythmic suction.<sup>(4)</sup> The children had cognitive impairment, a lower propensity to interact socially, and a higher propensity to die of sudden infant death syndrome.<sup>(1)</sup> Breastfeeding of newborns of crack-dependent postpartum women is discouraged due to the passage of the drug through breast milk, including the generation of clinical changes in infants, such as irritability, tremors, and sleep disturbances. Also, neonates of psychoactive substance-dependent women may have postnatal abstinence syndrome, prolonged hospitalization, eating difficulties, and respiratory problems.<sup>(2)</sup>

Being repeatedly in hospitals, taking treatment of the effects of the drug, as well as conducting frequent clinical and laboratory tests may cause discomfort and irritability in the cohabitation between caregivers and crack dependents, as well as emotional exhaustion for both, hindering the child to live in the social and family environment.<sup>(5)</sup> Another issue experienced by these children is the possible orphanhood and, consequently, institutionalization, the passage through various family structures and organizations and the impossibility of family care, which may interfere with their healthy development.<sup>(6)</sup> Brazil needs to adopt specific programs for the treatment of pregnant women dependent on psychoactive substances and newborns, requiring special care. This reality requires the efforts of health professionals to work with these women and children in prevention, early detection of cases and adequate treatment for the rehabilitation of the mother and newborn and prevention of complications of crack use.

In view of the complexity involved in the care of newborns in crack users, the question was: what

are the repercussions of the use of crack in pregnancy for the newborn? Knowledge about these repercussions may indicate appropriate forms of intervention, enabling an effective and humanized care to this people since this is not only a problem for the mother user, but also for the whole society. Thus, the objective of this study was to know the repercussions for the newborn of the use of crack during pregnancy.

## Methods

This is an exploratory and descriptive research with a qualitative approach. A Pediatric Unit and a Neonatal Intensive Care Unit of a university hospital (HU) in southern Brazil were performed in the first semester of 2014. Fifteen puerperal crack users and five grandparents participated. Inclusion criteria were to be 18 years old or older and to be a puerperal user of crack or an accompanying family member of a newborn of a crack user attended at the time of production of the data, even if they returned to the hospital due to health problems of the puerperium or the newborn. Postpartum women who were under the effect of the drug were excluded.

The number of participants was defined by the saturation of the data defined when, in the researcher's evaluation, a certain redundancy or repetition occurs, and it is not considered relevant to persist in data collection. The participants were guided by the objectives and methodology of the study and signed the Free and Informed Consent Term in two copies.

Data collection was performed through semi-structured interviews with each participant. They were questioned about the repercussions for the newborn of the use of crack in pregnancy. The interviews were held in the waiting room of the Child-Friendly Hospital Program, for comfort, privacy and, by being attached to the Pediatric Unit of the HU.

The interviews were captured by an audio recorder to preserve the original content and increase the accuracy of the data obtained. Participants'

statements were identified by the letter P (puerpera) or F (family) followed by the interview number.

The data were submitted to content analysis. Finally, the results obtained for five puerperal users of crack were read, with the purpose of confirming the data found in the analysis, complementing them and validating them.

The research project was submitted to the Ethics Committee of the Federal University of Rio Grande/FURG and approved, through an opinion nº135/2013.

## Results

The analysis of the data generated the following categories: Repercussions related to the health of the newborn and repercussions related to the family structure.

### Repercussions related to the health of the newborn

It was found that four children born to women who used crack in pregnancy were premature. In the Intensive Care Unit, the high number of hospitalizations are premature newborns and the premature birth has a strong impact, both for the family and for the child: *By prematurity, he was born with low weight. He does not have a pound yet [P1]; He was born prematurely, with a lot of air [P3]; He was born moaning, with shortness of breath and very low weight. As soon as he was born he was taken to the neonatal intensive care unit to take better care of him [P5]; He was born premature. Due to my use of crack. I had problems with the placenta and it was born in 30 weeks. The doctor said that he had a serious respiratory problem [P10]; He had a cardiac arrest in the Neonatal ICU, but he recovered well. He was very quiet: he does not move and does not cry much. I think it is because he was born prematurely as well. They told me she's eight months pregnant [P8].*

Some children were born without any disease. However, four had a sexually transmitted infection of the mother: two had HIV/AIDS, one syphi-

lis, and one gonococcal conjunctivitis. One child had to be treated for tuberculosis because her mother had the disease without treatment and four had serious respiratory problems: *She was born and had asthmatic bronchitis [P2]; He was born and they soon told me that he has epileptic seizures and therefore, he trembled in the bath. I was scared, but they told me to calm down. He would take medication that would help in his crises [P10]; He was born with HIV. When I got pregnant, I did not know I had the disease. [...] my daughter did not deserve to be born with this virus. She has to take several medications! [P4].*

Because of the prematurity and malformations, some newborns need to use care technologies. These technologies include: endotracheal tubes, mechanical ventilators, heated cots and incubators, phototherapy devices, gold and nasogastric and jejunostomy probes, bells, oxygen catheters, among others: *He had respiratory insufficiency and has a tube in his mouth to breathe. He has low sugar and he is not able to maintain the temperature. He is always cold [P1]; They put him in a cot with the light on top. He was yellowing [P6]; He stayed in the ICU full of appliances and inside the incubator. The picture was very serious indeed. It was in the serum, in the oxygen, with a syringe in the mouth [P13]; He remained in the incubator, in the serum, with probe [P15]; With one hour of the life she was transferred to the ICU. He was short of breath and he moaned a lot. He is breathing with the aid of a device and has a nose probed [P11].*

Another repercussion of the use of crack in pregnancy is the birth of children with congenital malformations. Four of them presented different malformations. One was born with cleft palate and cleft lip; One was born with several anomalies, being the main ones of mandible and ear; Another one was born with microcephaly and another one was born without a lung, and the other malformed: *When my daughter was born, they did tests on her and told me that she has a cleft palate and a cleft lip [P11]; [...] malformation of the mandible and in the ear. He had a very different face, had a gum problem; The ears very small in relation to the size of the head. The little eyes*

were far from each other. His neck was very short, he almost did not have it [P6]; He had not the right lung and his left lung was smaller than normal. The picture was very serious [P15]; There were a cleft palate and a cleft lip. I was scared in the delivery room. I knew it was because of the crack that I used the whole gestation [P12].

None of the women in this study breastfed their children. That is why all children used artificial formulas to be fed, failing to receive the benefits of breast milk. Female crack users have to breastfeed contraindicated, as there are clinical evidence that demonstrate the adverse effects of crack through breastfeeding in these newborns. also, there were women disinterested in the child or with aggressive behavior due to the abstinence of crack, which could put the child at risk if they could breastfeed: *He feeds with milk from the hospital through a tube that goes to the stomach [P9]; From the moment he was born, they gave the hospital's canned milk from a thin hose through his mouth. They said it would go to his stomach so he did not get hungry. I could not breastfeed because of crack. She could pass the drug through breastfeeding [P14]; The study shows that the use of crack in pregnancy can lead to death at birth; The other was twin with this one. He died two days after birth because they are very premature [P9].*

## Repercussions related to family restructuring

For the continued use of crack by the puerperal mother, there are cases where they disappear from the hospital and are reluctant to care for the child. Two were being taken care by the grandmothers at the time of the interview: *I am the one who stays here in the hospital because her mother disappears and appears from time to time. The state of the child is serious and I feel sorry for them. I'm her mother. If the child survives I will help to care [F1]; I'm her grandmother. I come at all times of visit here at the NICU. I know the case is very serious and if he is saved, he will have several sequels but I fought so hard for my daughter to get this child that it will not be now that I will give back. I do not know where her*

*mother is for days. Her life is due to this crap. She is a crack user [F4].*

The death of the mother by the use of crack causes the newborn to be taken care of by another relative. Family members join in to help with child care: *His mother, a crack user, died in childbirth. He will be with his father. His father works hard, so he does not have time to look after him. I'm a paternal grandmother and I'll move in with them to help with the care. Since their mother was ill during pregnancy, I was already helping with the care of other siblings. I feel sorry for my son because although she was thrown into the drug he was in love with her [F3]. When a punctured puerperal woman is killed, the newborn can be transferred to an institution because of a lack of family structure that sometimes gives care to more than one dependent child: Her baby goes to the orphanage. We do not know yet. We're still talking, here in the hospital, to the social worker to see where he goes. I already take care of two of her children, including one of them has a head problem and wants to beat everyone. I already have financial problems in taking care of them, I could not take care of another [F2].*

Besides to institutionalization, when the newborn is available for adoption also became a possibility considered by the family against the death of the crack-dependent mother: *She was complicated. She did not take care of his children well. His godmother, a very nice girl, wanted to be with him. But he is my grandson and has to stay with his father. It was a possibility this adoption issue [F5].*

## Discussion

Regarding the repercussions for the child of the use of crack in pregnancy, it was observed that newborns of crack-dependent women are born with gestational age below 37 weeks, presenting prematurity and neonatal morbidity and mortality. The use of crack during pregnancy decreases placental uterine perfusion, impairing fetal growth, associated with significantly greater odds of preterm birth, low birth weight and smaller size for gestational age.<sup>(7)</sup> The newborn may have affected her Neurological maturation, and may present problems in learning and development of

cognitive processes, increasing the risks of difficulties in school learning, increased risk of social adjustment disorders, family and maintaining healthy affective bonds.<sup>(8)</sup>

Diseases in the newborn, associated with the use of crack during pregnancy, are common. Exposure to psychoactive substances during pregnancy may increase the risk of sexually transmitted infections. Contamination of HIV to the fetus can lead to damage to the placenta, induction of preterm birth, and increased maternal plasma viral load, through a variety of possible mechanisms.<sup>(9)</sup> Congenital syphilis is an important cause of pregnancy, especially among women who have not received prenatal care or inadequate treatment, as often the case for women who are dependent on crack. A study shows that 40% of the concepts infected by congenital syphilis develop into a spontaneous abortion before 22 weeks of gestation, or weighing less than 500 grams, stillborn after 22 weeks of gestation or weighing at 500 grams or above or perinatal death.<sup>(10)</sup> About gonorrhea, newborns may be related to complications from gonococcal conjunctivitis, atypical interstitial pneumonitis, bronchitis and otitis media.<sup>(11)</sup>

Care technologies are being increasingly implemented and used for newborns of crack-dependent women so they can survive. Nursing care of the newborn is based on the control and balance of several vital parameters, through the use of devices such as: monitors, infusion pumps, incubators, closed and open heated cribs, continuous positive pressure of the nasal routes (CPAP) or assisted ventilation, pulse oximeter, cardiac monitor, infusion pump, respirator, as well as essential procedures and procedures for the treatment of NB.<sup>(12)</sup> These children are dependent on care technologies, which are characterized by dependence on technological and/or pharmacological artifacts indispensable for survival. In this sense, the approach of technological production with Nursing, comprises an alternative that the nursing team uses to overcome their difficulties in care.<sup>(13)</sup>

Anomalies, malformations, and deformations of newborns of crack-dependent women are defined to describe developmental disorders present at birth and the major cause of infant mortality. The main malfor-

mations of these children lead to the need for surgical treatment, such as: oral fissures, cleft palate, cleft lip, cheekbones, congenital heart anomalies, rectal atresia/stenosis, hip dislocation, hypospadias, spina bifida, hydrocephalus, microcephaly, anencephaly. Therefore, it can be stated that the teratogenic effects of crack use during pregnancy affect embryogenesis and fetal metabolism and may cause malformations.<sup>(14)</sup> Breastfeeding of a crack-dependent mother is not advisable for the newborn because the exposure to crack by the mother's milk during the first month postpartum brings as adverse effects to the baby sedation or reduction of muscle tone, retardation in child growth, decreased motor and metabolic development of brain cells. Also, the use of crack by the puerperal mother during breastfeeding reduces the chances of newborn nutrition due to maternal malnutrition and the risk of psychiatric comorbidities from crack abstinence, such as aggressiveness and lack of maternal affection for the baby.<sup>(15)</sup>

The use of crack in pregnancy increases the toxicity associated with higher levels of active metabolites of the drug in the maternal circulation passing directly via the placenta to the fetus, causing vasoconstriction of the placental vascular bed and risk of births of stillbirths, neonatal deaths and abortions.<sup>(16)</sup> Social marginalization and other challenges faced by puerperal dependents of crack can put them at greater risk of abandoning their children. A study reveals that acute drug abstinence and the mother's abstinence symptoms during and after childbirth contribute to the abandonment of the newborn in search of crack.<sup>(17)</sup> Another repercussion of crack use is the death of the dependent mother. This fact may lead to the orphanhood of the newborn, who is then taken care by another relative or referred by a social worker from the hospital where he was born to social institutions to welcome them. The orphanhood to which these children are exposed is minimized when family members undertake to take care of the orphaned newborn.<sup>(18)</sup> Otherwise, the child goes through the process of institutionalization or referral to adoption.<sup>(19)</sup>

## Conclusion

It was found that the use of crack in pregnancy leads to repercussions related to the health of the new-

born and repercussions related to family disruption. In the newborn, prematurity, congenital malformation, hospitalization in an intensive care unit, use of care and feeding technologies through artificial milk formulas were mentioned. In the family context, it was evidenced the occurrence of abandonment of the child by the mother, causing the adoption of the newborn by relatives of the family nucleus or institutionalization due to lack of family structure. Given the repercussions highlighted in this study, it is imperative to capture pregnant women users of crack by the health/nursing professionals and referral for high-risk prenatal care, as well as to identify early the peculiarities of the newborns of these women, considering the development of actions that minimize the repercussions of crack.

Public policies ensuring the reception of these children should be implemented so they do not become homeless if they suffer from family neglect. Newborns of crack-dependent mothers upon discharge from the hospital must have been periodically monitored by health/nursing professionals and the Guardianship Council so they may have identified situations of vulnerability early. Family caregivers of crack-dependent women should be included in programs and receive social, psychological and economic support to be able to invest in their treatment and prevention of pregnancy, those women who want, and the sequels of crack use and dependence for women and the newborn.

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