ORIGINAL ARTICLE

Pregnant crack addicts in a psychiatric unit

Gestantes dependentes de crack *em uma unidade de internação psiquiátrica*

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ABSTRACT

Objective: In this study we aim to characterize a sample of 85 pregnant crack addicts admitted for detoxification in a psychiatric inpatient unit. **Method:** Cross-sectional study. Sociodemographic, clinical, obstetric and lifestyle information were evaluated. **Results:** Age of onset for crack use varied from 11 to 35 years (median = 21). Approximately 25% of the patients smoked more than 20 crack rocks in a typical day of use (median = 10; min-max = 1-100). Tobacco (89.4%), alcohol (63.5%) and marijuana (51.8%) were the drugs other than crack most currently used. Robbery was reported by 32 patients (41.2%), imprisonment experience by 21 (24.7%), trade of sex for money/drugs by 38 (44.7%), home desertion by 33 (38.8%); 15.3% were positive for HIV, 5.9% for HCV, 1.2% for HBV and 8.2% for syphilis. After discharge from the psychiatric unit, only 25% of the sample followed the proposed treatment in the chemical dependency outpatient service. **Conclusion:** Greater risky behaviors for STD, as well as high rates of maternal HIV and Syphilis were found. Moreover, the high rates of concurrent use of other drugs and involvement in illegal activities contribute to show their chaotic lifestyles. Prevention and intervention programs need to be developed to address the multifactorial nature of this problem.

Keywords

Substance-related disorders, crack cocaine, pregnancy, sexually transmitted diseases.

RESUMO

Objetivo: Caracterizar uma amostra de 85 gestantes dependentes de *crack* admitidas para desintoxicação numa unidade de internação psiquiátrica. **Método:** Foram avaliadas, de forma transversal, variáveis sociodemográficas, clínico-obstétricas e informações sobre o seu estilo de vida. **Resultados:** A idade de início de uso do *crack* variou dos 11 aos 35 anos (mediana = 21). Aproximadamente, 25% das pacientes fumavam mais de 20 pedras de *crack* em um dia típico de uso (mediana = 10; mín-máx = 1-100). Além do *crack*, as drogas mais utilizadas eram: tabaco (76; 89,4%), álcool (54; 63,5%) e maconha (44; 51,8%). Roubo foi relatado por 41,2% (32 pacientes), prisão por 24,7% (21), troca de sexo por dinheiro/drogas por 44,7% (38) e abandono do lar por 38,8% (33); 15,3% (13) tinham soropositividade para HIV,

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5,9% (5) para HCV, 1,2% (1) para HBV e 8,2% (7) para sífilis. Após alta da unidade de internação psiquiátrica, somente 25% da amostra deram continuidade ao tratamento no ambulatório de dependência química. **Conclusão:** Comportamentos de risco para DSTs, altas taxas de HIV e sífilis, elevado uso de outras drogas e envolvimento em atividades ilegais fazem parte do estilo de vida caótico dessas mulheres. Programas de prevenção e intervenção dirigidos à natureza multifatorial dessa condição precisam ser desenvolvidos.

INTRODUCTION

According to the *World Drug Report 2011* cocaine use in South and Central America remains at levels higher than the global average, while Brazil has the highest number of cocaine users (900.000) in South America[1]. Crack addiction is a leading public health problem in Brazil. Two national household surveys about licit and illicit drug use conducted in 2001[2] and 2005[3] showed lifetime crack use of 0.4% and 0.7%, respectively. Lifetime crack use in south Brazil was the highest in the country, increasing from 0.5% in 2001[2] to 1.1% in 2005[3].

The economic impact of crack addiction is not only due to the large and rapidly growing number of cases, but also to the high costs of detoxification, prolonged hospitalization, high morbidity and its association with criminality[4].

Crack can influence on shaping users attitudes, values and behavior. Women who are crack addicts may affect their lives by means of difficulties in interpersonal relationships, emotional instability, violence, deprivation of schooling, economic instability and risk of HIV infection and other sexually transmitted diseases. Crack addicts, mainly women, exchange sex for drug, usually under craving[5-7]. Regarding sexually transmitted diseases (STD), this behavior shows that crack is not as safe as initially supposed[8,9]. In the meantime, many former intravenous drug users moved towards crack believing that the absence of needle-sharing would make it a safer method of administration of the drug[8].

Besides all that, little is known about crack use during pregnancy, despite its potential for harming the unborn child[10-12].

Therefore, our main objective is to describe pregnant crack addicts' sociodemographic and psychosocial characteristics, focusing on some associates (addictive features, comorbidities, type of psychoactive substances used, as well as trade of sex for money or drugs, robbery, home desertion and imprisonment following crack use).

METHODS

The present research is a retrospective, cross-sectional study of crack addiction during pregnancy. The research project was approved by the Research Ethics Committee of Presidente Vargas Women and Children Hospital (protocol number 24/09).

Medical chart reviews of all pregnant crack addicts admitted to detoxification from July 2006 to February 2010 in the psychiatric unit of Presidente Vargas Women and Children Hospital were conducted (n = 85). This hospital is a regional reference service for high risk pregnancy in Porto Alegre, Brazil. Its psychiatric unit has 24 female hospital beds, of which only up to 5 are available monthly for drug treatment.

Women selected into the study had a history of crack use during the current pregnancy, met ICD-10 criteria for cocaine/crack dependence and were heavy users (self-reported use of crack twenty or more times in the past month, according to the World Health Organization classification of drug use). The quantity of crack use was reported by the women in rocks (one rock of crack was estimated to be equivalent to 0.25 grams). Usual, maximum and minimum quantity and frequency of crack use were converted into the average number of rocks per day.

Structured interviews were conducted by medical residents in psychiatry and their supervisors during the drug treatment of these women, in the psychiatric unit. Data were collected from their medical records. Information was obtained about current and/or past (lifetime) use of a variety of other drugs: tobacco, alcohol, marijuana, solvents, inhaled cocaine, amphetamines, opiates, benzodiazepines and intravenous drugs. Demographic, lifestyle and psychological characteristics were also assessed, as well as seropositivity for HIV, hepatitis B or C, and syphilis, total number of pregnancies and history (lifetime) of perinatal death and/or major congenital malformations. Major malformations are those that have medical/social implications, often requiring surgical repair, such as: oral clefts, clubfoot, congenital heart anomalies, rectal atresia/stenosis, hip dislocation, hypospadia, *spina bifida*, hydrocephalus, microcephalus, anencephaly.

Furthermore, in case of referral to our outpatient service at discharge, whether or not the patient attended the consultations.

Statistical analysis was performed using the Epi Info 3.4.3, a free, public-domain software package developed by the US Centers for Disease Control. The level of significance was set at 0.05.

Categorical variables were expressed as absolute frequencies and percents. Continuous variables were expres-

sed as means and standard deviations or medians and amplitudes, depending on data distribution. Due to inequality of population variances (Bartelett's chi square), instead of using ANOVA procedures, statistical analysis of the association between duration of crack use (in months), as well as number of crack rocks smoked per day, robbery, imprisonment and trade of sex for money/drugs was performed using the Kruskal-Wallis H, a non-parametric equivalent to chi square.

RESULTS

Table 1 shows sociodemographic data of the 85 pregnant crack addicts that composed the studied sample.

The women had a median number of pregnancies of 3 (min-max = 1-12). Other clinical and obstetrical data can be observed in table 2.

History of drug use (other than crack) during the current pregnancy (prenatal use) and drug use in the past (lifetime use) by the patients is available in table 3.

More than 20% of the addicts smoked 20 or more crack rocks in a typical day of use (median = 10; min-max = 1-100). Age of onset of crack use varied from 11 to 35 years (min--max), with a median of 21 years old and the patients have been using crack for 2 to 101 months (median = 36).

According to the patients, the main reasons to use crack (other than craving) were: sadness or stress relief (35.3%), influence of a friend or partner who uses crack (31.8%); easy access/availability (14.2%).

Table 1. Sociodemographic data of pregnant crack addicts (n = 85)

Variables	n	%
Age (mean, SD)	25.4	4.8
Ethnicity (n, %)		
White	34	40.0
Black	29	34.1
Mulatto	21	24.7
Indian	1	1.2
Years of education (mean, SD)	6.7	3.1
Marital status (n, %)		
Single	41	48.2
Married/living with a partner	38	44.7
Separated/divorced	5	5.9
Widowed	1	1.2
Origin (n, %)		
Porto Alegre (city)	56	67.5
Grande Porto Alegre (region)	22	26.5
Other cities	5	6.0
Ocupation (n, %)		
Without ocupation	67	78.8
Formal ocupation	9	10.6
Informal ocupation	9	10.6
Religion (n, %)		
Without religion	42	49.4
Catholic	28	32.9
Evangelical	8	9.4
Spiritualist	1	1.2
Afro-Brazilian	6	7.1
Residence (n, %)		
Own	8	9.4
Granted	59	69.4
Homeless	18	21.2

SD: standard deviation.

Table 2. Clinical data of pregnant crack addicts (n = 85)

Variables	n	%
More than one prior psychiatric hospitalization	34	25.9
Depressive symptoms*	13	15.3
Anxiety symptoms*	16	18.8
Psychotic symptoms*	1	1.2
Family history of psychiatric disorder	59	70.2
Use of antipsychotics*	84	98.8
Use of antidepressants*	5	5.9
Use of anticonvulsants/mood stabilizers*	6	7.1
Use of anxiolytics*	2	2.4
HIV	13	15.3
Hepatitis B	1	1.2
Hepatitis C	5	5.9
Syphilis	7	8.2
History of fetal malformation or perinatal death	13	15.3
Personal history of physical abuse	15	17.6
Personal history of moral abuse	10	11.8
Personal history of sexual abuse	15	17.6

* During hospitalization for detoxification.

Table 3. Psychoactive drug use by patients, besides the crack (n = 85)

Psychoactive substances	Current use		Use in the past	
	n	%	n	%
Tobacco	76	89.4	3	3.5
Alcohol	54	63.5	4	4.7
Cannabinoids	44	51.8	28	32.9
Solvents	5	5.9	12	14.1
Inhaled cocaine	9	10.6	41	48.2
Amphetamines	2	2.4	0	0
Opiates	0	0	0	0
Benzodiazepines	2	2.4	0	0
Intravenous drug	0	0	1	1.2

Robbery, imprisonment experience, home desertion and trade of sex for money or drugs following crack addiction are shown in table 4.

Association between duration of crack addiction and robbery, imprisonment or trade of sex for money/drugs wasn't found. An association between robbery and number of crack rocks smoked per day was found (p = 0.0342). After discharge from the psychiatric unit, only 25% of the sample followed the proposed treatment in our hospital´s outpatient unit.

Table 4. Robbery, imprisonment, home desertion and trade of sex for money/drugs, following crack addiction (n = 85)

Variables	n	%
Robbery	35	41.2
Imprisonment	21	24.7
Home desertion	33	38.8
Trade of sex for money/drugs	38	44.7

DISCUSSION

Most of the crack addicts were young (and started smoking crack early in their lives), had lower education level, were unemployed and many lived on the streets. These findings are consistent with other reports in the literature[4,13,14] and with the hypothesis that, because crack is cheaper than cocaine hydrochloride (powder), it spreads in low income populations, such as the studied patients. However, these results must be analyzed with caution given the fact that the study was conducted in a public hospital. Religion practice might be a protective factor against drug addiction[15] and almost half of the patients did not see themselves as religious people. Moreover, the high rates of concurrent use of other psychoactive substances (especially tobacco, alcohol and marijuana), as well as involvement in illegal activities and home desertion found in our sample are similar to those found in other researches[16-18] and show their chaotic lifestyles. Nevertheless, it is particularly concerning that the pregnant women considered crack very easy to obtain and this availability might disseminate this drug in our society, as well as its devastating consequences.

Almost half of the pregnant women were single, have been pregnant three or more times and reported having traded sex for money or drugs. This suggests a link between sexual promiscuity, unplanned pregnancies and prenatal cocaine exposure. International literature documents greater risky behaviors for sexually transmitted diseases among female crack users[7,8,19]. In our study, HIV seroprevalence in crack addicts was similar to the ones reported in other researches[20,21] (although these researches weren't conducted in pregnant women). An interesting fact to be added is that the risk of HIV acquisition rises during pregnancy, which might be attributable to immune responses or hormonal changes affecting the genital tract mucosa[22].

A review[23] of hepatitis C infection among non-injection drug users found prevalence rates ranged from 2.3% to 35.3% – median of approximately 14%. In our study the prevalence of HCV seropositivity was 5.9%. Is worth highlighting that intravenous drug use rate (current/prenatal or in the past) was very low and this could also influence the relatively low rate of hepatitis B or C found in this sample. We also expected even higher rates of syphilis, considering the prevalence of trade of sex for money/drugs.

Rates of major fetal malformations and perinatal deaths in this sample are increased compared with the general population[24], but the study methodology limits the conclusions that can be drawn from it. Besides, one recent study showed very few suggestions of positive associations between periconceptional illicit drug use and the occurrence of twenty birth defects categories[25].

While the obstetrical impact of in utero crack exposure[12,26] and pediatric impact of maternal crack use are still controversial themes, after approximately twenty years of research, not one single condition or disorder that could be labeled "crack baby" has been identified, nor is there evidence of the extent of harm that was predicted by physicians and by the media[27]. Singer *et al.*[11] reported increased risk for cognitive impairment at two years of age with prenatal cocaine exposure; meanwhile, recent cohort studies reported less frequent perinatal consequences of maternal cocaine use than the dramatic obstetrical, neonatal and developmental abnormalities reported during the 1980-90's[10,28-30]. Pregnant women who use crack also consume other psychoactive drugs and have very chaotic lifestyles, making it difficult to identify abnormalities caused by crack *per se*, even when using control groups and multivariate analysis. So, isolating the effects of crack from concomitant substance use, ethnicity, maternal age, inadequate access to medical care or poor use of health services (especially in impoverished communities) is no easy, though necessary measure to address the multifactorial nature of this problem.

The present study has several limitations. The sample, drawn from a group of women in a psychiatric inpatient unit, represents pregnant women in drug treatment rather than women from general population attending a prenatal service, hindering its generalizations. Besides, due to a number of methodological limitations, including retrospective data, lack of control group, small sample size and cross-sectional design, no inferences about cause and effect can be made.

CONCLUSION

Drug use during pregnancy is complicated by a host of additional social and medical conditions all of which may act in combination to affect the developing child. Greater risky behaviors for sexually transmitted diseases among female crack addicts, as well as high rates of maternal HIV and syphilis are significant

findings in this report. Moreover, the high rates of concurrent use of other psychoactive substances and involvement in illegal activities contribute to show their chaotic lifestyles.

Nevertheless pregnancy provides a unique opportunity for engaging these women in specific treatments in order to provide continuity of care and achieve positive outcomes for both mother and their children, before and after birth.

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CONFLICT OF INTEREST

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