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Short Communication

Prevalence of cocaine and marijuana use in the last trimester of adolescent pregnancy: Socio-demographic, psychosocial and behavioral characteristics

Sandro Sendin Mitsuhiro [a,*,1], Elisa Chalem [a,1], Marina Carvalho de Moraes Barros [b,2], Ruth Guinsburg [b,2], Ronaldo Laranjeira [a,1]

[a] *Alcohol and Drug Research Unit (Uniad), Psychiatry Department, Federal University of São Paulo, Rua Botucatu, 394, 04023 061, Brazil*
[b] *Pediatrics Department, Federal University of São Paulo, Rua Diogo de Faria, 764, 04038 001, Brazil*

Abstract

Objective: To evaluate the prevalence of cocaine and marijuana use during the third trimester of pregnancy in a population of 1000 teenage women of a public hospital in São Paulo, Brazil using hair analysis in order to avoid underestimation of data that could happen by the use of self-report questionnaires and describe socio-demographic, psychosocial and behavioral characteristics of the drug users.

Results: Hair analysis has detected use of cocaine and/or marijuana in the third trimester of pregnancy in 6% of the patients: 4.0% used marijuana, 1.7% used cocaine and 3% used both drugs. They were about 17 years old, from low-income, poorly educated, unemployed, financially dependent and they had not planned the pregnancy. 10% of miscarriages have occurred in this population.

Conclusion: This study shows the psychosocial impairment associated to teenage pregnancy and use of cocaine and marijuana during gestation by this low-income population with reliable data of prevalence obtained through hair analysis.

 * Corresponding author. Rua Castro Alves, 612-ap. 21, Aclimação-São Paulo, 01532 000, Brazil. Tel.: +55 11 3486 9982; fax: +55 11 5584 5122.

    E-mail address: mitsuhiro@uol.com.br (S.S. Mitsuhiro).
 [1] Tel.: +55 11 5575 1708.
 [2] Tel.: +55 11 5579 1676.

The use of drugs by teenagers (Tavares, Béria, & Lima, 2001) is an important issue because there is consistent evidence in scientific literature about the obstetric complications that the substance abuse may cause to the baby and to the mother (Wolfe, Davis, Guydish, & Delucchi, 2004). Despite the relevance of the subject, few prevalence data is available and the studies on this matter are not supported by biological methods causing underestimation of data (Swartz, Swanson, & Hannon, 2003). Hair analysis is a reliable method to avoid this kind of bias (Huestis & Cone, 1998).

The purpose of this study is to evaluate the prevalence of cocaine and marijuana use, through hair analysis, during the third trimester of pregnancy in a low-income teenage population at the obstetric center of a public hospital in São Paulo, Brazil and to describe some socio-demographic, psychosocial and behavioral characteristics of theirs.

1. Materials and methods

A convenience sample of 1000 pregnant inpatient teenage (age between 11 and 19) women at the obstetric center of Mario de Moraes Altenfelder Silva Maternity Hospital were used. This is a public hospital located in the north region of the city of São Paulo, the largest city in Brazil, which caters mostly to local people from a low-income population who cannot afford private medical care. The data collection started on July 24, 2001 and finished on November 27, 2002. No patient refused to participate. The study was approved by the Ethical Committee of the Federal University of São Paulo.

The prevalence of use of cocaine and marijuana during the last trimester of the pregnancy was assessed by hair analysis through the combination of Enzyme-Linked Immunosorbent Assay (ELISA) and Gas Chromatography Mass Spectrometry (GCMS), methods, respectively, for tracing and confirmation (Huestis & Cone, 1998).

Socio-demographic, socio-economic, psychosocial and sexual behavior data were assessed by a questionnaire developed and adapted from the instrument used in Perinatal Needs Assessment—PNA (Zahnd, Klein, & Needell, 1997), with information about: age, address, place of birth, marital status, schooling, rate of school drop out, employment, professional training, family planning, birth control methods use, sexual habits, age at beginning of sexual activity and number of children. A Brazilian socio-economic classification has been used (ANEP, 1997), which is based on the head of the household's education, the number of domestic electric tools in the household and family income. It classifies individuals in 5 different categories (A to E) that were recoded to three larger ones: high (A and B), middle (C) and low (D and E).

Babies were weighed right after delivery by a pediatrician using a digital scale with a precision level of 10 g. Still-birth or infant death cases were also registered by them.

2. Results

Hair analysis detected the use of cocaine and/or marijuana in the third trimester of the pregnancy in 6% of the patients (marijuana: 4%, cocaine: 1.7% and both: 0.3%).

Table 1 shows demographic characteristics and data about social insertion and Table 2 shows data about characteristics of the sexual life and current gestation of the pregnant women that used drugs in the 3rd trimester.