Research Article

Prevalence of Narcotics Abuse and their Complications in Pregnant Women Referring to the Obstetric Department of Valiasr Hospital, Birjand

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Abstract:

Introduction:
Nowadays, substance abuse has crossed many social, economic and geographical boundaries, presenting itself as a major health challenge. It affects many demographic groups, including pregnant women, rendering them susceptible to maternal and fetal complications. The aim of the present study is to investigate the prevalence of narcotics abuse in pregnant women, as well as the ensuing maternal and fetal outcomes.

Material and Methods:
This is a descriptive-analytic study conducted on all pregnant women referring to the obstetric department from October 2006 to December 2007. Data were collected using questionnaires, and analyzed with SPSS software.

Results:
The prevalence of addiction was 0.69% in women admitted for delivery. The mean age of addicted women was 29.4 ± 1.32 years and the most frequent age subgroup (45.5%) pertained to ages 20-29 years. In the women studied, we found 11.4% placental abruption, 10% stillbirth, and 37.6% fetal distress. The mean gestational age was 34.6 ± 1.34 weeks, with addicted women having a significantly higher prevalence of premature delivery (p≤0.01). The odds ratio (OR) for premature delivery was 5.96 times higher for addicted women.

Conclusion:
Despite the small number of pregnant addicts, they constitute a high-risk population in terms of perinatal outcomes. Therefore, the educational programs during pregnancy must focus on rehabilitation or substitution of narcotics with safer drugs.

Keywords: Pregnancy, Prevalence, Narcotics Addiction, Premature Delivery, Fetal Outcome

Introduction:
Nowadays, addiction to narcotics is presenting as a major mental and social health-related challenge of modern societies (1, 2). Substance abuse is among potential menaces threatening different demographic groups, including pregnant women. It is a high-risk behavior with untoward complications and outcomes for both mothers and fetuses. As previous studies have indicated, substance abuse in women has been rising considerably during the last
two decades, and most of the victims are
dwomen in fertility age (3).
Certain conditions threatening children’s,
and even adults’, health begin in utero (4).
One such condition is substance abuse
during pregnancy which not only
compromises fetal growth, but also threatens
other stages of life and imposes tremendous
economic-social costs on societies (5).
William et al. reported 7.3% of pregnant
women in their study to be substance
abusers (6). The prevalence of narcotic
abuse among pregnant women in Tehran is
1.4%, as reported by Ramezanzadeh et al
(7). Drug addicts are mostly individuals of
the lower socioeconomic classes who hardly
refer for pregnancy cares, are underweight
and suffer from anemia; thus, complications
of pregnancy are often frequent among
them. These complications include low birth
weight, premature delivery and placental
abruption (8, 9). The treatment costs of
neonates born to addict mothers are almost
twice the normal neonates, due to numerous
fetal complications such as low birth weight,
short length, low head circumference, risk of
fetal brain injury, intrauterine growth
retardation, placental insufficiency, fetal
distress and intrauterine demise (5).
Considering the relatively easy access to
narcotics in Iran, and the pivotal role of
mother and infant health in maintaining the
society’s health, we conducted the present
study to investigate the outcomes of narcotic
abuse in pregnant women.

Material and Methods:
This is a descriptive-analytic study on 35
pregnant narcotic abusers among 4647
pregnant women who referred to the
obstetric department of Valiasr Teaching
Hospital, Birjand for delivery or pregnancy-
related problems from October 2006 to
December 2007. Data were collected using
questionnaires. For this purpose, all the
patients admitted to the obstetric department
were initially inquired about their age, last
menstruation period, order of pregnancy and
delivery, systemic diseases and narcotic
abuse, according to the routine protocol of
the hospital. Patients who mentioned
narcotic abuse were then interviewed by a
midwife expert, who was trained about
establishing rapport with patients, in order to
complete the questionnaire of the present
study. Prior to the interview, the patient was
provided some information about the
objective of the study, method of data
collection and use, anonymity of
questionnaires and confidentiality of
personal information. If the patient
expressed her consent, she would be
included in the study. We used the 4th
edition of diagnostic and statistical manual
of mental disorders (DSM-IV) to verify
narcotic dependence. All patients who were
thus diagnosed with narcotic dependence
were considered drug addicts (10).
The questionnaire collected data regarding
gestational age, amniotic fluid color, fetal
heart sound, route of delivery, newborn’s
length, weight and head circumference, first
and fifth minute Apgar scores, and any
neonatal anomalies. Data pertaining to
obstetric history and previous outcomes of
pregnancy were confirmed with the
information available from obstetric records.
Data were analyzed using descriptive
statistics, statistical tests and logistic
regression on SPSS software.

Results:
The findings of our study indicate that
among 35 pregnant women who abused
narcotics, the mean age was 29.4 ± 1.32
years, and the most frequent age subgroup
pertained to ages 20-29 years (45.5%). The
prevalence of addiction was 0.69% among
women admitted for delivery. The mean
parity count for these women was 3.88 ±
0.49 with a maximum of 13 pregnancies.
The greatest proportion of pregnant addicts
were having in their second pregnancy. The mean gestational age was 34.6 ± 1.34 weeks. Among our patients, 32 had term or premature deliveries, and 3 had abortions. 31.3% of pregnant women and 7.1% of non-addicts had premature delivery, indicating that premature delivery was significantly more frequent among pregnant addicts (p≤0.001). The odds ratio (OR) of premature delivery for addicted women was 5.96 times higher (95%CI: 2.8-12.7).

We found 8.6% abortion, 11.4% placental abruption, 10% stillbirth, and 37.6% fetal distress during delivery among pregant addicts in our study. Furthermore, we found 6.7% neural tube defects (e.g. anencephaly and spina bifida) in these neonates (Diagram 1).

The mean birth weight of newborns in our study was 2674.6 ± 142.03 g, ranging from 900 to 4250 g. 26.9% of these newborns had low birth weight. The mean head circumference of the newborns was 33.11 ± 0.48 cm. 6.7% of them had fifth minute Apgar scores of less than 7, and were therefore admitted to neonatal intensive care unit.

33.3% of narcotic addicts had C-section and 66.7% had normal vaginal delivery. Opium was the most frequently abused substance, and 5.7% abused crystal.

**Conclusion:** Substance abuse is a serious social health challenge, imposing enormous social and financial burdens on modern societies. According to the 1999 report of the World Health Organization, 3%-4% of world population use one or more narcotic substances, and the figures are rising in developing countries (11).

Narcotic abuse during pregnancy entails serious complications for both mother and fetus. Such complications include premature delivery, abortion, intrauterine growth
Prevalence of narcotics abuse and their retardation, low birth weight, intrapartum demise and placental abruption (6, 9-11). Few studies have addressed the prevalence of addiction during pregnancy. According to a report by the National Institute on Drug Abuse in 1992, the rate of substance abuse during pregnancy was 5.5% (12). William et al. reported that 7.3% of pregnant women abused substances, which is lower compared to non-pregnant women (8.3%) (6). Ramezanzadeh et al. studied 4317 pregnant women in Tehran and reported a prevalence of 1.4% for narcotic abuse (7).

Different substances are abused in different societies. Previous studies suggest that the complications of pregnancy related to substance abuse depend on the type of substances used. A study on 51 pregnant substance abusers in Hong Kong reported the most frequently used substance to be heroin, with 41% premature delivery, 27.5% low birth weight, and 13.7% hemorrhage during labor (13). Vucinovic et al. conducted a study on pregnant Croatian women over a 10-year period (1997-2007). They found 2% (85 individuals) to be substance abusers, heroin was the most commonly used substance (50%), and they observed 4.6% neonatal demise, 33% low birth weight, and 8% fifth minute Apgar scores of less than 7. Moreover, they reported that premature delivery was more frequent in substance abusers compared to non-addicts (21% vs. 6%) which is statistically significant (p<0.05) (14).

Hoskins studied cocaine abuse in 314 pregnant women to report 28% delivery under 36 weeks of gestation, 29% low birth weight, and considerable placental abruption in them (15). In our study, the prevalence of narcotic addiction is 0.69%; the discrepancy between our finding and that of Ramezanzadeh may be due to the cultural differences. Furthermore, we found 31.3% and 7.1% premature delivery in substance abusers and non-addicts, respectively. Our findings indicate that narcotic addiction increases the risk of premature delivery by 5.96-fold, which is consistent with findings of Hoskins and Vucinovic.

26.9% of neonates in our study had low birth weight, which is in line with previous studies. Thaithumyoon et al studied 211 pregnant substance users to find 23.3% abortion, 5.2% preeclampsia, 1.9% hemorrhage during labor, and 3.3% infection (16). Dombrowski et al (1991) compared 592 cocaine using pregnant women with 4687 pregnant women in the control group and observed that in cocaine users, birth weight and age of delivery are significantly lower and the risk of placental abruption is twice as much (17). Mayet et al conducted a cross-sectional study on 118 medical records pertaining to pregnant women who abused narcotics or were under treatment with methadone; they reported 20% premature delivery, 28% low birth weight, and 21% NICU admissions (18).

In the present study, fifth minute Apgar scores were lower than 7 in 6.7% of neonates, who were admitted to neonatal intensive care unit. This is in line with findings of Vucinovic, but inconsistent with those of Mayet. This may be due to the fact that in the latter, all newborns admitted to NICU for any reason (e.g. low Apgar scores, withdrawal syndrome) were accounted, while we considered only those newborns who were admitted to NICU because of low Apgar scores. We found 11.4% placental abruption, 10% stillbirth, and 37.6% fetal distress during labor in substance abusers in our study. Considering the maternal and fetal complications in women abusing narcotics, as well as the 5.69-fold increase in risk of premature delivery (a major cause of mortality for infants in their first year of life) in these women, it is recommendable that in addition to the general educations regarding
the detrimental impacts of substance abuse during pregnancy, addicted pregnant women must be provided with strictly regular and precise perinatal care to prevent heavy social and economic burdens on the society.

References: