



Case Report

Fetal solvent syndrome

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Introduction

Drug abuse is on the increase especially in the young. This adversely affects a pregnant woman and her child.

Case report

A 21 year old primigravida with history of 6 months amenorrhea was brought on 17th December, 2003 to the deaddiction clinic by her husband and parents with the complaint that she was inhaling petrol for the last 4 to 5 years. She was first introduced to the smell of petrol 5 years back when she was getting her two wheeler refilled at a petrol pump. She liked the smell and subsequently started inhaling petrol directly from the petrol tank of her vehicle. Over a period one year she found that she needed to inhale petrol more frequently to obtain the same level of euphoria and feeling of wellbeing. She then started sniffing from petrol soaked rags. Ten to twelve hours after cessation of sniffing she would experience irritability, nervousness and difficulty in sleeping. After her marriage, 2 years back, her husband

discovered her petrol-sniffing behavior and tried to stop her. In their efforts to prevent her from this behavior, both the husband and the family members had to face hostile and aggressive encounters and staunch resistance from her side.

On mental status examination the most striking feature was her irritability and her wanting to leave the room. There was no abnormality in perception, thought and cognitive functions. She perceived her addictive behavior to be a problem. However, she was not interested in undergoing any kind of therapeutic intervention. General and systemic examinations revealed no abnormality.

On obstetric examination, her uterine size corresponded to 22 weeks of gestation which was four weeks less than the size expected as per her period of amenorrhea. There was a single intrauterine fetus with normal cardiac activity in cephalic presentation. She was advised admission for deaddiction and antenatal care, which she refused. She did not come back and was subsequently lost to follow up.

On 12th February, 2004 she came to the hospital in active labor with established preterm labor pains at 34 weeks of gestation. Within an hour, she delivered vaginally a live male child weighing 1.9 kg. On examination, the neonate had small head circumference (28 cm) and left sided cleft lip. The neonate was provided intensive care

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and was observed for withdrawal symptoms. He showed no signs of distress or withdrawal and the early neonatal period was uneventful.

On the second postpartum day the mother developed tachycardia, hyperventilation, irritability and insomnia for which she was given benzodiazepine and supportive psychotherapy. Rest of the hospital stay was uneventful. Both the mother and the baby were discharged on the 21st February, 2004. The mother was counseled for rehabilitation at the time of discharge, which she is undergoing. She is being followed up every month by the psychiatrists in the deaddiction clinic. By December 2004 she had completely stopped sniffing petrol and had started working as a child minder.

Discussion

Inhalant abuse refers to deliberate inhalation of various volatile chemicals and gases to achieve desired intoxication. Currently, inhalant abuse is one of the most pervasive yet least recognized drug problems. In some studies it is found to be exclusively an adolescent problem^{1,2}. Our patient was 21 years old. The US National Institute on Drug Abuse recently reported the results from National Pregnancy and Health Survey which indicate that 12,000 pregnant women each year abuse inhalants³. In 1979 the first report on volatile substance abuse in pregnancy was published. This report recognized severe facial dysmorphism in a neonate whose mother had abused solvent⁴. It was suggested that the constellation of facial dysmorphism, small head size and low birth weight was comparable to that described after prenatal alcohol exposure, and the investigators proposed the term fetal solvent syndrome to describe it⁵. Since this initial report, very few cases have been described in the literature of fetuses being exposed to solvents in utero as a result of maternal solvent abuse^{6,7}. Clinical findings common to all included growth deficiency, microcephaly, craniofacial anomalies, and developmental delay. In 1989, Hersh⁸ described two children who were born prematurely, had low birth weight and exhibited a small head

circumference in addition to having malformations similar to the previously identified cases.

In the present case, the woman delivered a preterm neonate, which was small for gestational age, had microcephaly and cleft lip. All these findings concur with the findings of the previous published reports. Neonatal withdrawal was not observed in the present case. There is lack of adequate clinical experience in this particular area.

Clinicians should be alert to the possible problems in women who abuse inhalants during pregnancy. Apart from giving good care during pregnancy, labor and puerperium, the obstetrician must counsel and convince the women to undergo deaddiction program. They need a lot of motivation and great support from their spouses, family members, friends and physicians.

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