Pentazocine Withdrawal in a Bahraini Neonate

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A case of pentazocine withdrawal syndrome is described in a 5 days old Bahraini newborn whose mother had been taking pentazocine (Sosegon) for sickle cell disease vaso-occlusive crises. The diagnosis was made on clinical grounds after and ruling out other causes of neonatal seizures and jitteriness by appropriate tests. The baby was managed successfully with phenobarbitone over a 6 week period. Follow up at 9 months of age showed normal growth and development. High prevalence of sickle cell disease in Bahrain and wide spread use of analgesics warrants awareness of possible withdrawal syndrome in infants of mothers who are on sedatives and analgesics such as pentazocine during pregnancy and labour.

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During the late seventies, studies of drug use by pregnant women in the USA revealed that 25% used sedatives or analgesics[1]. Among narcotics, pethidine is commonly used for labour pains[2]. There are no published figures about the frequency use of narcotics and analgesics during pregnancy and labour in Bahrain. However, in a study of drug dependency in an inpatient population, 2.5% were found to be adult females[3]. We report a case of pentazocine withdrawal syndrome in a newborn whose mother received repeated pentazocine injections during pregnancy.

THE CASE

One day old Bahraini male was admitted to the Neonatal Intensive Care Unit for excessive jitteriness and seizures. He was born at term to 35 year old, gravida 3, para 2, sickle cell disease mother. The mother had received 108 ampoules of pentazocine (Sosegon, 30mg/amp) for sickle cell disease vaso-occlusive crises, until shortly before delivery. There was no family history of seizures or of any neurological disease. Delivery was via cesarean section which was indicated for cephalopelvic disproportion and two previous ceasarian sections. Apgar scores were 9 and 9 at 1 and 5 minutes respectively. On examination, the baby had a normal phenoptype. His weight, height and head circumference were within normal percentiles. His heart rate 160/M, respiration rate 60/M, temperature 37/C and blood pressure 80/50mmHg. The baby was excessively jittery both spontaneously and on handling. He had fisting of the hands and curling of the toes. Clonic seizures were also noted with hypertonicity and exaggerated primitive reflexes. There was no diaphoresis. Ophthalmic examination was normal.

There was abnormal skin pigmentation. Other systemic examination was normal. Arterial blood gases, white blood count, blood urea and sugar, serum calcium, magnesium and electrolytes, brain sonogram and electroencephalogram were normal.

The diagnosis of pentazocine withdrawal syndrome was suspected because of maternal history of pentazocine intake. The baby remained tachycardiac and tachypnoeic for 4 days with excessive jitteriness and clonic seizures. He was not able to feed. Pyridoxine (Vit B6) 40 mg was given I.M. for a possibility of pyridoxine deficiency as a cause of seizures, with no notable response. At this stage the baby was commenced on phenobarbitone 5 mg/kg with dramatic improvement. Three days after starting phenobarbitone the jitteriness and clonic seizures abated and the baby started sucking normally. This therapy was continued for one month and tapered off over 2 weeks. A follow up review at one month of age showed normal weight gain, development and neurological status. Growth percentiles, physical and mental assessment were normal when he was seen last at 9 months of age.

DISCUSSION

The diagnosis of pentazocine withdrawal was considered on the basis of maternal history, clinical features and response to phenobarbitone. Other causes of neonatal seizures and

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jitteriness were excluded by previous investigations. Sickle cell disease is widely prevalent in Bahrain. The incidence of sickle cell disease reported by Mohammed et al in 1985 was 2.1% [4]. During 1996, 71 expectant mothers with sickle cell disease delivered in the Ministry of Health hospitals from total deliveries of 94026. This gives an incidence of 0.75% of expectant mothers with sickle cell disease.

Withdrawal syndrome in the newborns of mothers on illicit drugs like heroin, methadone, phenobarbitone etc, antenatally is well documented[1,7,8]. Typically the symptoms start 1 to 2 days after birth[7]. In our case the symptoms appeared on the 5th postnatal day, probably due to chronic use of pentazocine during the pregnancy till the end of her confinement and due to the long half life of pentazocine in neonates [9]. Initially, pentazocine was considered to be a potent non-addicting analgesic[10]. Later, drug dependence and withdrawal syndrome were reported in adults.[10]. Goetz and Bain were first to report pentazocine neonatal withdrawal[5]. Phenobarbitone has been an effective treatment of withdrawal syndrome due to various narcotics and analgesic drugs including pentazocine[7]. In addition to phenobarbitone some authorities have used chloropromazine and paregoric to treat the jitteriness and irritability[5,8,11,12]. In our case, the withdrawal syndrome was controlled over 6 weeks period, but others reported that symptoms might last up to 6 months[5,8,11,12]. This case exhibited most of the signs reported earlier [5,7,8]. Vomiting and even sudden infant death syndrome has been reported [5].

CONCLUSION

This case highlights the risk of adverse effects of maternal drug ingestion on the neonate. The prevalence of sickle cell disease in our community and the extensive use of analgesics including pentazocine to control painful vaso-occlusive crises warrants critical appraisal of its use in the late stage of the pregnancy and to also maintain a high index of suspicion of drug withdrawal syndrome in jittery neonates. To our knowledge this is the first case to be reported in Bahrain.

REFERENCES

1. Kaul AF, Harsfield JC, Osathanoudh R, et al. Retrospective analysis of analgesics and sedatives hypnotics in hospitalized obstetrical and gynecological patients. Drug Intll Clin Pharmacol 1978;12:95.
2. Ritchie KJW. Analgesia and Anaesthesia in labour, obstetrics for the neonatologists. In: Roberton NRC, ed. Textbook of Neonatology. 1st ed. Edinburgh: Churchill Livingstone,. 1986:80.
3. Al-Haddad MK, Kamel CA, Horn D. Profile of the psychiatric in-patient population in Bahrain,1983-1987. Bahrain Med Bull 1991;13:25-29.
4. Mohammed AM. Al-Hilli F, Nadkarni KV, et al. Hemoglobinopathies and Glucose-6-phosphate Dehydrogenase Deficiency in Hospital Births in Bahrain. Ann Saudi Med 1992; 12:536-9
5. Goetz RL, Bain RV. Neonatal withdrawal symptoms associated with maternal use of pentazocine. J Pediatr 1974;84:887-8.
6. Rajab KE, Annual statistical report for 1996. Department of Obstetrics and Gynecology. Salmaniya Medical Complex, Ministry of Health, Bahrain:9-10.
7. Rosen TS. Heroin, Methadone, Alcohol, Marijuana, Cocaine, Phenylcyclidine, Amphetamines, Phenobarbitone. In: Fanaroff AA, Martin RJ, eds. Neonatal-Perinatal Medicine. Disease of the fetus and infants. 5th ed. St. Louis: Mosby year book, 1992:574-81.
8. Preis O, Choi ST, Rudolph N. Pentazocine withdrawal syndrome in the newborn infant. Am J Obstet and Gynecol 1997;127: 205-6.
9. Wu WH Teng RJ, Shin YS. Neonatal Pentazocine Withdrawal Syndrome- A Case Report with Conservative Treatment. Chin Med J 1988 ;42:229-32.
10. Jaffe JH, Martin WR. Narcotic analgesics and antagonists. In: Goodman LS, Gilman A, eds. The physiological basis of the therapeutics. 5th ed. New York: Macmillan, 1975:276-8.
11. Scanlon JW. Pentazocine and neonatal withdrawal symptoms. J Pediatr 1974;85:735-6
12. Dunn DW, Reynolds J. Neonatal withdrawal symptoms associated with ' T's and bluesí(pentazocine and tripelennamine). Am J Dis Child 1982 ;136:644-5