

Breastfeeding in Neonatal Abstinence Syndrome: A Word of Caution

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BACKGROUND

Neonatal Abstinence Syndrome (NAS) attributable to maternal opiate dependency during pregnancy is one of the most challenging issues currently faced by neonatal health professionals.

The incidence of NAS in infants born to substance using mothers ranges from 21-94%¹. Symptoms seen in infants with NAS can be varied, the most significant being neurological. They include irritability, jitteriness, myoclonic jerks and most worryingly seizures.

Respiratory	Neurologic	G.I. Dysfunction	Autonomic Signs
Tachypnoea	Tremors Irritability	Poor feeding Poor weight gain	Sweating Nasal stuffiness
	Hypertonicity Seizures	Vomiting Diarrhoea	Fever Mottling



Breast milk is well known to confer significant lifelong benefits^{2,5}. In addition, in infants at risk of NAS, recent studies have shown that breastfeeding significantly reduces the severity of NAS^{3,4,5}.

Despite the added benefits in this particularly vulnerable group of infants, breastfeeding rates among methadone-maintained women are extremely low⁶.

We report an interesting case of an infant who developed seizures following the abrupt cessation of breast milk.

CLINICAL PRESENTATION

Baby LB was born at term in good condition to a mother maintained on methadone. He was admitted to the neonatal unit for observation and possible treatment of NAS as per local guidelines. LB's mother was receiving 30ml of methadone daily, but was known to have taken heroin in the weeks prior to delivery. She denied further use after delivery. LB was fed expressed breast milk via bottle.

LB developed symptoms of opiate withdrawal on day 2 of life, evidenced by increasing scores on the Leeds Opiate Withdrawal Score. Oral morphine, the standard treatment for symptomatic NAS was commenced with a good response. Oral morphine was gradually weaned and stopped following symptomatic improvement.

The Leeds Opiate Withdrawal Score		Date:
Signs / Symptoms		Time →
High pitched cry	2	
Sleep	Sleeps <1 hr after feed	3
	Sleeps <2 hrs after feed	2
Markedly hyperactive Moro reflex	2	
Moderate to severe jitteriness only when observed	2	
Moderate to severe jitteriness when at rest	3	
Increased muscle tone	2	
Soft bottom or loose stools	2	
Seizures	Myoclonic jerks	3
	Convulsions	5
Fever	37.5-38.4 °C	1
	38.5 °C or above	2
Mottling of skin	1	
Neck stiffness / sweating	2	
Excessive sucking (e.g. fist sucking ++)	2	
Excessive vomiting	2	
TOTAL SCORE		
Initials of scorer		

Record scores 4 hourly. If scores >8 score 2 hourly. If 2 scores of >8 confirmation by a second observer is required prior to starting morphine.

At 3 weeks of age, LB developed generalised seizures with recurrence of symptoms of withdrawal. This coincided with an abrupt cessation of breast milk. Further investigations including cranial imaging, septic screen and EEG, did not reveal any other cause for the seizures. Oral morphine was recommenced along with Phenobarbitone, the standard second line treatment for symptomatic NAS. No further seizure activity was noted. Medications were weaned as per protocol and the baby was discharged home to foster care.

In the absence of other etiology and appropriate response to treatment, abrupt discontinuation of breast milk was thought to be the most likely cause of seizures and recurrent symptoms.

DISCUSSION

There is limited literature regarding the concentration of methadone secreted through breast milk to date^{6,7}. Concentrations of methadone in breast milk were found to be small, ranging from 21 to 314ng/ml⁶ but in sufficient amount to reduce clinical symptoms of NAS. Methadone concentration in breast milk was also found to increase over time due to increase fat content in milk⁶. Several studies have concurred that infants who were fed predominantly on breast milk had significantly reduced mean NAS scores, delayed onset of withdrawal, a decreased need for treatment and shorter hospitalisation^{3,4}. The skin to skin contact offered during

breastfeeding also soothes agitated infants thus ameliorating the effects of withdrawal⁴.

In summary, in addition to the well-established nutritional and immunological benefits, breast milk offers a reduction in the severity of symptomatic NAS often ameliorating the need for pharmacological treatment.

Women who are methadone users should be encouraged and supported to sustain breastfeeding and avoid abrupt cessation of breast milk in order to prevent the likely risk of rebound withdrawal.

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