

A Retrospective Comparison of Neonatal Outcomes for Infants Born to Mothers Using Opioid Analgesics for Chronic, Non-obstetric Pain in Pregnancy and Implications for Clinical Practice



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PURPOSE

The purpose of this study was to evaluate neonatal outcomes for infants born to mothers taking opioid analgesics during pregnancy for chronic pain, and to make recommendations for safest clinical practice.

INCLUSION CRITERIA

1. The mother had a diagnosis of chronic nonmalignant, non-obstetric pain prior to the initiation of prenatal care.
2. The mother was not on opiate substitution therapy during pregnancy and had not been treated for addiction to opiates.
3. The mother required use of oxycodone, hydrocodone, or codeine at any dosage at least three times a week during all three trimesters of pregnancy for management of chronic pain.
4. There were no drug screens conducted during pregnancy which were positive for illicit substances, or for any substances not prescribed to the mother by an obstetric care provider, primary care provider, or other specialist to whom she had been referred.
5. The infant was from a singleton pregnancy, and born full term- defined as 37 completed weeks gestation, or with fetal lung maturity documented by amniocentesis.

NEONATAL OUTCOMES

Of the 31 neonates nine (9) required NICU admission.

- Length of NICU stay ranged from 2 to 10 days (average of 5 days)
- Six of the nine were admitted for Transient Tachypnea of the Newborn (TTN)
- One of the nine was admitted with a diagnosis of poor feeder
- Two of the nine were admitted for with a diagnosis of NAS, and required medical management with Methadone

Data indicate no association between NICU stay and agent used, nor between specific dosages or use of more than one agent.

Results demonstrated no significant incidence of Neonatal Abstinence Syndrome in neonates born to mothers prescribed opioid analgesics used at moderate dosages throughout pregnancy.

Data support the judicious use of opioid analgesics in women with chronic pain refractory to other therapies.

SUMMARY

- Study was limited by small sample size
- No statistically significant correlations between specific agents and dosing with neonatal outcomes
- Results in general indicate that opioid analgesics can be safely used when well managed at the minimum effective dosing.

BACKGROUND

Setting: Participants for the study received antepartum care at Savannah Perinatology Associates or University OB High Risk Clinic and delivered at Memorial University Medical Center between January 1, 2009 and May 31, 2012.

Sample: 31 mothers during the 36 month period met criteria for inclusion in the study.

MATERNAL CHARACTERISTICS

Maternal Diagnoses and Medications	
Chronic Pain Diagnosis	Sickle Cell Disease= 9 Back Pain= 11 Other skeletal/joint= 9 Other nonskeletal= 2
Primary Opioid Analgesic Agent	Codeine= 4 Hydrocodone= 7 Oxycodone= 20
Secondary Opioid Analgesic Agent	Codeine= 3 Hydrocodone= 6 Oxycodone= 2
Co-medications	SSRI= 3 Sedative= 5 opioid analgesic= 11 Muscle relaxant= 5 Other non-narcotic analgesic= 5

MATERIALS & METHODS

- A retrospective chart review was conducted:
- Charts for every patient delivered by the perinatology practice for the specified time frame were individually reviewed for appropriateness for the study.
 - Data was manually gathered onto an individual data sheet and de-identified.
 - Once all charts were reviewed and data collected, data was coded and entered into a spreadsheet.
 - Data was analyzed for trends in neonatal outcomes using descriptive statistics.



RECOMMENDATIONS FOR PRACTICE

1. Be educated in the responsible use of opioid analgesics in the chronic pain population and the specific mechanisms of action in the pregnant woman
2. Select appropriate patients based on national pain management guidelines
3. Secure informed consent and patient agreement
4. Transition from extended release to immediate release agents
5. Provide thorough patient education and continued monitoring
6. Refer for neonatal consultation prior to delivery

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