10. Overdose Risk in Young Children of Women Prescribed Opioids

Y Finkelstein¹, E Macdonald², A Gonzalea², A Kopp², MLA Sivilotti³, MM Mamdani², DN Juurlink²

¹Hospital for Sick Children, University of Toronto, Toronto, ON, Canada, ²Institute of Clinical Evaluative Sciences, Toronto, ON, Canada, ³Queen's University, Kingston, ON, Canada

Background: The United States is in the midst of a prescription opioid epidemic, resulting in more than 16,000 deaths annually. Whether children of parents prescribed opioids are at increased risk of overdose has not been systematically studied. Objective: To explore the risk of overdose in young children of mothers who were prescribed opioids.

Methods: We conducted a nested case-control study of children younger than 10 years whose mothers' prescription were insured under the Ontario Drug Benefit program. Cases were children who presented to an emergency department, were hospitalized or died of opioid overdose between 2002 and 2014. Each case was matched with up to 4 controls on age and sex. We linked children with their mothers using birth records. The primary analysis included cases and controls whose mothers filled a prescription for an opioid or a non-steroidal anti-inflammatory drug (NSAID) in the preceding year. We examined the risk of opioid overdose in children of women who received an opioid, with maternal receipt of a prescription NSAID as the reference.

Results: We identified 560 children treated in hospital and 6 who died of opioid toxicity. Of these, 83 were children of women prescribed an opioid (n=73) or NSAID (n=10). These cases were matched with 331 controls. Maternal opioid prescription was associated with a three-fold increase in the risk of pediatric opioid overdose (odds ratio 2.97; 95% confidence interval 1.95 to 4.52). Among cases, the most commonly implicated opioids were codeine, oxycodone and methadone.

Conclusion: Young children of women who are prescribed opioids are at increased risk of opioid poisoning.