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The association between intrapartum synthetic oxytocin (synOT) use and autism and ADHD in children: A systematic review

Ragnheiður Ragnarsdóttir, RN, RM, MSc¹, Bryndís Sunna Jóhannesdóttir, RN, RM, MSc¹
Berglind Hálfhánsdóttir, RN, RM, PhD, Associate professor of midwifery²

¹National University Hospital of Iceland

²Faculty of nursing and midwifery, University of Iceland

Introduction: Childbirth interventions can interfere with physiological processes and increase the risk of complications. Labor induction and other use of synthetic oxytocin (synOT) in labor is frequent and increasing. Increasing evidence suggests that synOT may negatively influence socio-psychological and neurological outcomes. The aim of the study was to examine the possible negative effects of intrapartum synOT on child development. The purpose of the study was to promote informed decision-making on synOT use in labor and support further development of evidence based intrapartum care.

Methods: The study is a systematic review of quantitative studies published 2007-2022. A systematic search was conducted in the databases PubMed, CINAHL, PsycInfo and ProQuest and further data was identified by snowballing. The review design is based on recommendations from the Joanna Briggs Institute (JBI) and presented according to the PRISMA-statement. Included articles were read and evaluated with JBI published critical appraisal tools. Data was synthesized using matrix analysis and presented narratively.

Results: There were 12 studies that met the inclusion criteria of the systematic review. Five studies of eight (62.5%) showed some association between the use of synthetic oxytocin and the development of autism in children, but it was stronger among boys. Two of five studies (40%) revealed some association between the use of synthetic oxytocin and the development of ADHD in children.

Conclusions: Expectant parents should be informed about the possible negative effects of intrapartum synOT in child development. National and institutional guidelines on synOT should include the latest evidence on this issue.

Keywords: Oxytocin, synthetic oxytocin, childbirth, autism, ADHD, midwifery