AIMS For a better birth...

Research Roundup

By Gill Boden and Nadine Edwards

AIMS Journal 2014, Vol 26, No 2

Perinatal Pitocin as an early ADHD biomarker: neurodevelopmental risk?

AIMS Comments

Administering synthetic or artificial oxytocin during childbirth may be the most common labour inter vention in the world. If it is, then it is crucially important to know about any unintended harmful effects. A study published in 2011 by Kurth and Haussmann strongly suggests a link between increases in the use of pitocin (an artificial oxytocin, known as syntocinon in the UK) around the time of birth and subsequent childhood attention deficit hyperactivity disorder (ADHD). The authors looked at the birth records of 172 children aged between three and 25 and considered obstetric complications, family incidence of ADHD and gender. They found that perinatal pitocin exposure was a strong predictor of ADHD diagnosis which occurred in 67% of those children exposed to pitocin and in 35.6% of those who were not. This work was done as part of a PhD.

The sample is not representative and the proportion of ADHD in this sample is above what you might expect to come across in a general population, but the finding is so clear that further research is needed. There are already concerns about correlations between pitocin use and autism (see www.sarawickham.com/research-updates/inductionaugmentation- and-autism/), as well as an increase in postnatal bleeding, so in my view we must press for more research to clarify these relationships, but in the meantime far more caution should be exercised before using this powerful drug.

Reference

- Perinatal Pitocin as an early ADHD biomarker: neurodevelopmental risk? Kurth L, Haussmann R. Journal of Attention Disorders 2011 Jul;15(5):423-31. doi: 10.1177/1087054710397800. Epub 2011 Apr 28.

Safe prevention of the primary cesarean delivery

In February 2014, the American College of Obstetricians and Gynecologists and the Society for

Maternal-Fetal Medicine issued a joint consensus statement, Obstetric Care Consensus Statement: Safe Prevention of the Primary Cesarean Delivery.

What the consensus says

By 2011 one in three women had caesarean sections in the US, but 'the rapid increase in cesarean birth rates from 1996 to 2011 without clear evidence of concomitant decreases in maternal or neonatal morbidity or mortality raises significant concern that cesarean delivery is overused.' Evidence of potential short-term and long-term harms from the overuse of caesareans is cited, particularly for women and babies in subsequent pregnancies, due to increased placental problems.

As in the UK, wide variations in caesarean rates are documented - between states (23% to 40%) and between hospitals (7.1% to 69.9% overall, and 2.4% to 36.5% for women deemed 'low risk').

Main reasons for women having caesareans included: first baby, slow labour, concerns about fetal heart rate tracings, fetal malpresentation, twins or more and suspected large baby.

The statement looks at these and other issues, and makes recommendations for practice which could decrease the caesarean section rate. For example:

- 'Slow but progressive labor in the first stage of labor should not be an indication for cesarean delivery', suggesting that more time should be given before deciding that interventions are needed. It is also recommended that the active phase of labour should not be diagnosed until the woman is 6cms dilated.
- 'A specific absolute maximum length of time spent in the second stage of labor beyond which all women should undergo operative delivery has not been identified.' For healthy women and babies, the statement recommends at least two hours in second stage for women who have had a baby and three hours for women having their first babies, but that this could be longer if progress is being made,before considering interventions.
- changing the mother's position, which might resolve concerns about the baby's wellbeing if decelerations in the baby's heart rate are thought to be due to cord compression.
- advising induction of labour for medical reasons only before 41 weeks and 7 days of pregnancy. At and after this time induction is recommended in order to reduce the risk of caesarean delivery and perinatal mortality and morbidity.
- offering cervical ripening methods for induction in women with an unfavourable cervix.
- 'Suspected fetal macrosomia is not an indication for delivery and rarely is an indication for cesarean delivery.' Thus caesareans should only be offered to women with babies over 5000g (4500g for women who have diabetes), though 'estimates of fetal weight, particularly late in gestation, are imprecise' and ultrasound to estimate the baby's weight in the third trimester of pregnancy should be used sparingly.
- 'Perinatal outcomes for twin gestations in which the first twin is in cephalic presentation are not improved by cesarean delivery.' It is recommended that women expecting twins, where one or

both are head down, should be advised to plan vaginal births, but that skilled practitioners are needed.

- 'Published data indicate that one of the most effective tools to improve labor and delivery outcomes is the continuous presence of support personnel, such as a doula'

The statement concludes by acknowledging that changing obstetric culture and practice is remarkably difficult and numbers of suggestions are made for change, including controversial tort reform.

AIMS comment

This consensus statement has been described as a 'game changer' (www.scienceandsensibility.org/?p=7958) and would certainly be a departure from usual current practice in the US. It is important because it acknowledges both the short and long-term risks of caesarean sections for mothers and babies, and sets out the known evidence (and rates this evidence) with a view to reducing the numbers of first caesareans. Some of the main recommendations are to allow more time for labour and birth, to wait longer before diagnosing 'failed induction', to expand normality, and to retain or improve clinician training and skills (such as rotating the baby's head manually when it is posterior or to the side during the second stage of labour, offering operative vaginal deliveries as a safe alternative to caesarean section, and offering external cephalic versions to women with breech babies near or at term). It also accepts that continuous support is beneficial for women and reduces the need for interventions.

Of course, this statement remains within a medical framework, using medical language, and describes a largely medicalised philosophy and practices. A consensus for reducing the numbers of caesareans might look rather different if it were based on midwifery knowledge and informed by what we know about the physiology of birth and the benefits of continuous support from a trusted midwife. This could include, for example, taking a much more individualised approach to induction, generally avoiding arbitrary time limits (rather than just extending them), encouraging healthy women to birth in community settings, providing environments that least disturb the woman in labour and encouraging women to move as they want during labour and birth, thus reducing stress and the likelihood of fetal distress which could reduce the need for the recommended medical procedure of amnioinfusion for some instances of fetal heart rate decelerations.

References

1. Safe prevention of the primary cesarean delivery. Obstetric Care Consensus No. 1. American College of Obstetricians and Gynecologists. Obstet Gynecol 2014;123:693-711 www.acog.org/Resources_And_Publications/Obstetric_Care_Consensus_Series/Safe_Prevention_of_the_Primary_Cesarean_Delivery