

## More on Labor Induction and Risk for Autism

October 26, 2016

I forgive readers if they don't remember the last time I commented on an association between induced labor and development of autism spectrum disorders in children; I had forgotten about it myself, until I saw this month's article in AAP Grand Rounds. The loop surrounding this possible association is coming to a close.

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**Source:** Oberg AS, D'Onofrio BM, Rickert ME, et al. Association of labor induction with offspring risk of autism spectrum disorders. **JAMA Pediatrics** 2016; **170(9):e160965**. doi:10.1001/jamapediatrics.2016.0965. See **AAP Grand Rounds commentary by Dr. Daniel Doherty** (subscription required).

Swedish investigators utilized data from a national registry to put together a cohort study to look at possible links of induced labor with subsequent development of autism spectrum disorder (ASD) in children. They were able to track data long enough to have outcome information on children at ages 8 - 21 years. A very key part of this study was that the identified siblings and cousins to serve as a control population. This is an important research strategy particularly when research long-term neurodevelopmental outcomes, because it helps mitigate potential environmental and genetic factors clouding any association found. As with most registry studies performed in countries with an organized national health service, the sample size was enormous: 1,362,950 births, of which 22,077 children were ultimately diagnosed with ASD. The researchers found that, before sibling comparisons were factored in, a small but statistically significant association was found between labor induction and offspring ASD (hazard ratio 1.19, 95% confidence interval 1.13 - 1.24). However, when the sibling controls were factored in, this difference disappeared (HR 0.99, 95% CI 0.88 - 1.10).

My **prior commentary** was in January 2014, and I advised caution in accepting the conclusions of a 2013 cohort study suggesting a link between labor induction and ASD. I also mentioned that, even if this link was true, it needed to be put into perspective of potential health benefits of labor induction. I think this was lost in some of the media hype surrounding the 2013 study.

This new Swedish study illustrates the limitations of cohort studies in general, especially the difficulty in controlling for all risk factors. Clearly, the etiology of ASD is complex and likely multifactorial, with genetic predisposition playing a major role.

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