Popular fetal monitoring method leads to more c-sections

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Pregnant women in labor, upon arriving at the hospital, will often have their baby's heart rate monitored to assess the baby's wellbeing. A new research review suggests that the use of one popular method of monitoring does not improve maternal and fetal outcomes and makes women more likely to have cesarean sections.

Upon admission to many hospitals, a laboring woman's baby's heart rate commonly is checked by listening with a fetal stethoscope or a hand-held Doppler ultrasound device, known as intermittent auscultation, or with an electronic fetal monitoring machine that provides a printout of the baby's heart rate and mother's contractions, known as cardiotocography (CTG).

The new review, published in *The Cochrane Library*, looked at how each type of monitoring affected women admitted to the hospital in labor with low-risk pregnancies and found there was no benefit of using the CTG at admission. However, women who had an admission CTG were about 20 percent more likely to have a caesarean section compared to those monitored by intermittent auscultation.

Researchers and clinicians thought the introduction of CTG would help to detect fetal distress and reduce the incidences of cerebral palsy or fetal and neonatal death. “The problem with the CTG is that its use in maternity care became widespread before any high-quality evaluations of the benefits and risks it might bring for women and their infants had been conducted,” said Declan Devane, professor of midwifery in the School of Nursing and Midwifery at National University of Ireland Galway and lead reviewer.

“By the time the evidence arrived, its use in many units in many parts of the world had become ingrained in practice.”

According to the review, about 79 percent of maternity wards in the United Kingdom, 96 percent in Ireland and all of the labor units in Sweden employ an admission CTG.

The review included four studies of more than 13,000 women randomized to receive either CTG or intermittent auscultation upon their admission with signs of labor.

“Our findings support recommendations from professional bodies in some countries that state the admission CTG not be used for low-risk women,” said Devane.

Lee Learman, M.D., chair of the department of obstetrics and gynecology at Indiana University School of Medicine, said the findings

of the review do not apply to obstetrical care settings at his hospital or others in the U.S.

“We do not perform an admission cardiotocograph for low-risk women and then switch to intermittent auscultation, as they did in the European studies,” he said. “Instead, we perform continuous monitoring for women of all risk groups when they are in labor.”

Learman added that investigators in the U.S. have come to the same conclusion regarding the risk of using continuous electronic fetal heart rate monitoring.

“We now know that this form of monitoring has not improved clinical outcomes,” he explained. “Instead, because of its inherent limitations, this form of monitoring leads to many ‘false alarms’ that are resolved by performing cesarean delivery.”

More information: Devane D., Lalor J.G., et al. (2012). Cardiotocography versus intermittent auscultation of fetal heart on admission to labour ward for assessment of fetal wellbeing. *The Cochrane Library*, Issue 2.

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