

Induction Of Labour Increases Risk of Amniotic of Amniotic-Fluid Embolism

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A Canadian population-based cohort study has revealed that medical induction of labour increases the risk of amniotic-fluid embolism. The study was led by Dr. Michael Kramer, Canadian Institutes of Health Research (CIHR) Senior Investigator from McGill University, and will be published in the October 21st issue of *The Lancet*.

Amniotic-fluid embolism (AFE) is a rare, but serious and even fatal maternal complication of delivery. While its cause is unknown, it is one of the leading causes of maternal mortality in developed countries, accounting for seven of 44 direct maternal deaths in Canada in the period 1997-2000.

This population-based study examined the association of AFE and medical induction of labour in a cohort of three million hospital births in Canada, for the twelve fiscal years 1991-2002.

“AFE remains a rare occurrence,” said Dr. Michael Kramer, principal investigator of the study and Scientific Director of CIHR’s Institute of Human Development, Child and Youth Health. “Of the 180 cases of AFE we found, 24 or 13% were fatal. AFE arose almost twice as frequently in women who had medical induction of labour as in those who did not; fatal cases arose 3 1/2 times more frequently.”

“Dr. Kramer's research has resulted in a discovery that will benefit physicians who look after pregnant women as they will now be aware of this potential complication should they induce labour”, said Dr. Joseph

Shuster, Interim Scientific Director of the MUHC. "This is an example of how academic university teaching hospitals improve the quality of patient care."

The research team also found several other factors to be associated with higher rates of AFE, including multiple pregnancy, older maternal age (35 years or older), caesarean or instrumental vaginal delivery, eclampsia (a serious complication of pregnancy characterised by convulsions), polyhydramnios (too much amniotic fluid), abnormal placental position or separation, and cervical laceration or uterine rupture.

"Our findings confirm the hypothesis that medical induction of labour is related to an increased risk of AFE," added Dr. Kramer. "Although the absolute risk increase of AFE for women is very small (four or five total cases and one or two fatal cases per 100,000 women induced) and is unlikely to affect the decision to induce labour in the presence of compelling clinical indications, women and physicians should be aware of this risk if the decision is elective."

Dr. Kramer worked with Drs. K.S. Joseph and Thomas F. Baskett at Dalhousie University as well as with Mr. Jocelyn Rouleau at the Public Health Agency of Canada (PHAC). The research was conducted for the Maternal Health Study Group of the Canadian Perinatal Surveillance System, a program under PHAC auspices.

Source: Canadian Institutes of Health Research

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