

Older mothers more likely than younger mothers to deliver by caesarean

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Researchers funded by the National Institutes of Health have found that older mothers with normal, full-term pregnancies—particularly first-time older mothers—were more likely to undergo Caesarean delivery than were younger women with similarly low-risk pregnancies.

The researchers arrived at their finding after examining birth certificates from 8 million U.S. births, for children born between 1995–2000.

Because the researchers were limited solely to information from birth certificates, they were unable to ascertain why older mothers were more likely to undergo cesarean delivery than were mothers who were younger.

“Until we learn why older mothers with low-risk pregnancies have a disproportionately high rate of Caesarean delivery, the utmost caution is needed in evaluating older mothers as candidates for the procedure,” said Duane Alexander, M.D., Director of the NICHD, the NIH Institute that conducted the study. “Although older mothers share certain risk factors in common, each woman is a unique individual and the potential benefits and risks of Caesarean delivery should be evaluated for her specific case.”

The researchers undertook the study to evaluate the risks of pregnancy complications—including Caesarean delivery—associated with advancing maternal age among women pregnant with a single child.

Overall, older mothers (over age 35) were more likely than were younger

women to experience complications during pregnancy and delivery.

The study authors found that the risk of delivery complications increased with the mother's age, as did the risk of premature birth and infant death. Such complications include excessive bleeding during labor, prolonged labor lasting more than 20 hours, and dysfunctional labor that does not advance to the next stage.

In addition, older pregnant women were more likely to have diabetes and hypertension during pregnancy.

The study was published online in Human Reproduction.

Barbara Luke, Sc.D., M.P.H., R.N., R.D., Professor of Nursing, Obstetrics, and Pediatrics at the University of Miami School of Nursing and Health Studies, and Morton B. Brown, PhD, Professor of Biostatistics, School of Public Health, University of Michigan, conducted the study.

Using birth data from the National Center for Health Statistics, the researchers compared information on the mothers' medical risk factors, pregnancy complications, and mode of delivery. Mothers in three age groups—35 to 39, 40 to 44, and 45 and older—were compared to mothers age 30 to 34 years old.

After adjusting for race and smoking status, researchers found that older women were at much higher risk for complications during pregnancy and delivery. Whether or not the women had previously given birth also affected their risk of certain complications.

Women giving birth at age 45 or older were also the most likely to have high blood pressure and diabetes while pregnant. The oldest mothers were also at greatest risk for excessive bleeding during labor, premature

delivery (before 32 weeks), and Caesarean delivery.

The study authors found that the chance of Caesarean delivery in all pregnancies increased with the women's age. The chance of Caesarean delivery increased with age even in those deemed low risk because the mother had carried to term and had no complications due to excessive bleeding or to the baby's positioning.

The researchers found that, regardless of their age, women giving birth for the first time were much more likely to deliver by Caesarean. First-time mothers were six times more likely to have a Caesarean delivery than were women who had given birth before, and even when their pregnancies were low risk (full-term, infants without birth defects, with a normal, head-down presentation, and in the absence of any bleeding complications).

Although the study authors couldn't identify reasons for the increased Caesarean delivery rate from the birth certificate data they analyzed, Dr. Luke explained that several factors could underlie the increase. Dr. Luke theorized, first, that physicians' concerns of potential malpractice could be one cause of the increased number of Caesareans for older and first-time mothers. She added that the mother's weight could also be a factor. Women tend to get heavier as they age and with each subsequent pregnancy. Obesity and overweight are known to complicate pregnancy and labor. Moreover, some of the Caesarean deliveries among older women may be elective procedures, with women opting for the procedure over conventional labor, Dr. Luke said.

Members of an independent panel weighed the merits of patient-requested Caesarean deliveries at an NIH-sponsored conference in March 2006. Panel members noted that there were benefits and risks involved with each mode of delivery. Ultimately, the panelists could not make a recommendation for or against elective Caesarean deliveries

(http://www.nih.gov.nihrecord/04_21_2006/story01.htm).

The number of women giving birth at age 30 and older has shown a marked increase in the last two decades. The National Center for Health Statistics reported that, between 1980 and 2004, the number of women in the United States giving birth at age 30 or older has doubled and at age 35 and older has tripled. The number of mothers giving birth at age 40 or older has nearly quadrupled. The study authors attribute the trend of more women giving birth at an older age, in part, to the increased use of fertility-enhancing therapies.

Citing statistics from the U.S. Centers for Disease Control and Prevention, the study authors noted that more than half of all in vitro fertilization (IVF) cycles between 1998 and 2003 were among women 35 years and older. The authors noted that several studies have found that women who had conceived with the help of fertility therapies were significantly more likely to have pregnancy complications than those who had conceived without assistance. These included complications involving the placenta and vaginal bleeding.

The study authors do not know the reasons for the increased risk of complications in assisted pregnancies but theorize that the older maternal age and underlying causes of infertility might account for the increased risk.

In the current study, researchers were unable to identify which women had conceived with the help of fertility treatments.

Dr. Luke said that birth certificates now in use will ascertain if other methods of delivery were attempted before the Caesarean delivery. She added that this new information might provide insight into why the Caesarean delivery rate has increased among older mothers.

Source: National Institute of Child Health and Human Development

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