UK study reveals ethnic differences in obstetric anesthesia care

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New research published in *Anaesthesia* shows that Black pregnant women in the UK are much more likely than white women to be given general anesthesia during cesarean section births, while some Black and south Asian women having vaginal births are less likely than white women to receive an epidural (a type of anesthetic used to provide pain relief in labor).

The authors of the study include Dr. James Bamber, Consultant, Department of Anesthesia, Cambridge University Hospitals NHS Foundation Trust, Cambridge, UK; Dr. Nuala Lucas, Consultant, Department of Anesthesia, London North West University Healthcare NHS Trust, Harrow, UK; and Marian Knight, Professor of Maternal and Child Population Health at the National Perinatal Epidemiology Unit, University of Oxford, UK. They say that the reasons for these differences are unknown, but there should be further research to see if improvements can made to reduce any inequalities in the different types of pain relief and anesthesia that women can receive for childbirth.

With general anesthesia, a woman is unconscious during the cesarean birth of her baby and is at more risk of serious medical complications, compared to being awake with a spinal or epidural anesthetic. The quality of recovery after cesarean birth with a spinal or epidural anesthetic is better than after general anesthesia. Over 95% of women who have cesarean births in the UK have a spinal or epidural anesthetic and are awake during the delivery of their babies. For women who have planned, non-emergency cesarean births, less than 2% will have general anesthesia.

An epidural is a relatively safe intervention that can provide excellent pain relief for labor that can improve the parental birthing experience. The World Health Organization (WHO) has recommended epidural analgesia for healthy pregnant women requesting pain relief during labor, depending on a woman's preferences. Recent research has found that the use of epidural pain relief in labor has also been associated with less risk of severe complications for the mother during labor and delivery, and that babies born to women who had epidural pain relief may have better childhood developmental outcomes.

It is known that there are differences in maternal and neonatal outcomes for women from different ethnic groups in the UK. The maternal death rate in Black women is four times that of white women and there is a higher incidence of stillbirth, preterm labor and fetal growth restriction in South Asian and Black women compared with white women. Minority ethnic women reported a poorer maternity care experience than white women. However, until now, there has been no published study of the relationship between ethnicity and obstetric anesthetic care in the UK.

In this new study, using routine national maternity data for England (hospital episode statistics admitted patient care) collected between March 2011 and February 2021, involving data for 2,732,609 births, the authors investigated ethnic differences in obstetric anesthetic care adjusting for any differences between ethnic groups for maternal age; geographical residence; deprivation; year of delivery; number of previous deliveries; and pre-existing health conditions including obesity.

This study found that Black Caribbean -British women in the UK were 58% more likely than white women to receive general anesthesia during elective cesarean births, and Black African British women were 35% more likely. For emergency cesarean births, Black Caribbean British women are 10% more likely than white women to have general anesthesia.

Compared to white women who had vaginal births, Bangladeshi British women were 24% less likely to have an epidural, while Pakistani British women were 15% less likely and Black Caribbean women 8% less likely.

Other studies that have found differences in obstetric anesthesia care between ethnic or racial groups have mostly come from the U.S., where access to healthcare maybe determined by insurance or economic status. The authors say, "In contrast to other published studies of obstetric anesthetic care by ethnicity, the care of the women in our dataset was provided within an integrated national healthcare system, where care is provided free at the point of access and where a woman's access to obstetric care and her anesthesia choices should not be limited by her personal financial circumstances."

Another finding in the study was that Black women were 40% less likely to have an assisted (forceps/ventouse) vaginal delivery compared to white women, but instead were more likely to have an emergency cesarean birth.

The authors note the limitations of their study, which include that it is observational and therefore cannot explain the reasons for the differences found. In addition, the study analysis depended on the accuracy of the data collected by hospitals. Furthermore, there may be other unknown factors, not collected in national statistics, about how a woman's labor and delivery was managed, that were not accounted for in the analysis and may have contributed to the differences found in the study.

The authors discuss how differences in the maternity care given to women with different ethnicity may arise from barriers to information and knowledge, as well as barriers to choosing how and where care is provided. There can also be empathy biases from healthcare professionals, for example the interpretation of the labor pain experience

of women from different ethnic groups.

The authors conclude, "Ethnic disparities may reflect different cultural attitudes in different ethnic communities and arise from positive maternal preferences and choices. However, it behooves health professionals and providers to ensure any differences in anesthesia rates are not due to inequities in the access, delivery or quality of care before they are attributed to personal or cultural preferences. To ensure that obstetric anesthetic care is equitable, the information provided in maternity care on the choices for anesthesia and analgesia must be easily accessible in terms of availability, language and readability, and should be culturally cognizant. There is a need to listen better to women from ethnic minorities so as to avoid health professional misconceptions and presumptions about women's expectations and experiences of their perinatal care."

More information: A national cohort study to investigate the association between ethnicity and the provision of care in obstetric anaesthesia in England between 2011 and 2021, *Anaesthesia* (2023). doi.org/10.1111/anae.15987

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