Disparities in Anticipated Epidural Analgesia Utilization

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Introduction: Evidence shows racial/ethnic disparities in the use of epidural analgesia for labor pain relief exist. However, it is unknown whether these disparities are due to patient, provider, or system level factors. Previous retrospective studies have not evaluated whether disparities exist in anticipated epidural analgesia use in patients of differing racial and ethnic backgrounds.

Methods: Retrospective cross-sectional study. Electronic medical record data on all index vaginal deliveries over a 3-year period at Northwestern Memorial Hospital were extracted. On admission, patients self-identified their race and ethnicity and anticipated analgesic use for labor. Extracted data included age, race/ethnicity, primary language, insurance status, parity, anticipated, and actual analgesic use. We conducted initial bivariate analyses and estimated a multivariable logistic regression model of anticipated analgesic use after univariable selection using a P<0.1 for model entry.

Results: 21,803 women met inclusion criteria. 56% of the women were White, 16% Hispanic, 10% African American, 4% Asian, <1% were Native American, and 13% chose not to identify their race or ethnicity. White women were older, more likely to be married, and have private insurance than the other groups (P<0.001 for all). The rate of anticipated epidural analgesia use varied with race/ethnicity, with 77% of White patients, 46% of Hispanics, 65% of African Americans, and 75% of Asian women anticipating epidural analgesia use (P<0.001). The rates of actual epidural analgesia use were highest among the White and Asian women (90% and 89%, respectively) compared to 70% for Hispanic women and 84% for African American women (P<0.001).

In univariate analysis, race/ethnicity, language, insurance status, age and marital status were all significantly associated with anticipated epidural analgesia use. In multivariable analysis, controlling for the factors listed above, only women of Hispanic ethnicity were less likely than White women to anticipate epidural analgesia use (aOR 0.56, 95% CI: 0.51-0.62). Similarly, non-English speakers had an adjusted odds ratio of 0.09 (95%CI 0.08-0.10) compared to English speaking women for anticipated epidural analgesia use. Women who were uninsured, non-married, and younger were also less likely to anticipate epidural analgesia use.

Conclusions: A racial/ethnic disparity in anticipated labor epidural utilization exists, that mirrors that of actual epidural analgesia use. Factors associated with not anticipating epidural analgesia use include Hispanic ethnicity, speaking a primary language other than English, younger age, lack of private insurance, and being unmarried. Further work is necessary to ensure that patients who do not anticipate epidural analgesia use understand all their options and that lack of knowledge of analgesic options is not driving the racial/ethnic disparity seen in epidural analgesia use.

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