

Previous prelabor or intrapartum cesarean delivery and risk of placenta previa

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Objective

The purpose of this study was to examine the association between previous cesarean delivery and subsequent placenta previa while distinguishing cesarean delivery before the onset of labor from intrapartum cesarean delivery.

Study Design

We conducted a retrospective cohort study of electronic medical records from 20 Utah hospitals (2002-2010) with restriction to the first 2 singleton deliveries of nulliparous women at study entry ($n = 26,987$). First pregnancy delivery mode was classified as (1) vaginal (reference), (2) cesarean delivery before labor onset (prelabor), or (3) cesarean delivery after labor onset (intrapartum). Risk of second delivery previa was estimated by previous delivery mode with the use of logistic regression and was adjusted for maternal age, insurance, smoking, comorbidities, previous pregnancy loss, and history of previa.

Results

Most first deliveries were vaginal (82%; $n = 22,142$), followed by intrapartum cesarean delivery (14.6%; $n = 3931$), or prelabor cesarean delivery (3.4%; $n = 914$). Incidence of second delivery previa was 0.29% ($n = 78$) and differed by previous delivery mode: vaginal, 0.24%; prelabor cesarean delivery, 0.98%; intrapartum cesarean delivery, 0.38% ($P < .001$). Relative to vaginal delivery, previous prelabor cesarean delivery was associated with an increased risk of second delivery previa (adjusted odds ratio, 2.62; 95% confidence interval, 1.24–5.56). There was no significant association between previous intrapartum cesarean delivery and previa (adjusted odds ratio, 1.22; 95% confidence interval, 0.68–2.19).

Conclusion

Previous prelabor cesarean delivery was associated with a >2-fold significantly increased risk of previa in the second delivery, although the approximately 20% increased risk of previa that was associated with previous intrapartum cesarean delivery was not significant. Although rare, the increased risk of placenta previa after previous prelabor cesarean delivery may be important when considering nonmedically indicated prelabor cesarean delivery.