LETTERS

The authors reply to “The end of forceps deliveries?” and “Beware selection bias”

We thank Dr. Pairaudeau¹ and Dr. Barrett and colleagues² for their interest and expert commentary on our article.³

The high rates of severe perinatal and maternal morbidity reported in our analyses may or may not be reflective of adverse outcome rates following midpelvic operative vaginal deliveries carried out by highly experienced obstetricians. It should be noted, however, that our study did not attempt to characterize the best possible outcome following such procedures. The rates observed in our study reflect current rates of severe perinatal and maternal morbidity following all midpelvic operative vaginal deliveries in Canada. We did investigate potential modification of the effect of operative vaginal delivery by institutional volume: there was no significant difference in severe perinatal and maternal morbidity following such intervention in high- versus medium- versus low-volume centres.³

Although our study restricted cesarean deliveries to those that occurred in the second stage of labour, it is possible that some of these deliveries occurred before the fetal head reached zero station. However, the frequency of such deliveries is likely to have been low because fewer than 10% of women have an unengaged fetal head at the onset of the second stage of labour.⁴ In fact, we may have underestimated the adverse effects of midpelvic operative vaginal delivery because some cesarean deliveries in the second stage of labour would have been carried out with the fetal head below midpelvic station.^{5,6} Furthermore, if the safest choice between a cesarean delivery and an attempt at operative vaginal delivery is clear, then how can an increase in operative vaginal delivery be used as a strategy to reduce the rate of cesarean delivery?⁷

Both the concern that our paper could lead to the abandonment of forceps delivery and the criticism that our study was compromised by selection bias are mis-

placed. Currently, there is little evidence to suggest that midpelvic operative vaginal delivery is a safer option than cesarean delivery for mothers or babies. The studies cited by Barrett and colleagues² did not provide any comparative evidence on the effects of midpelvic operative vaginal delivery versus cesarean delivery: Bailit and colleagues⁸ did not include midpelvic deliveries in their analysis, and the study by Burke and colleagues⁹ was a case series of 144 deliveries by Kielland forceps in one specialized tertiary care centre.

The highest rates of severe perineal laceration in our study were 19% after midpelvic forceps and 20% after sequential instrumentation for dystocia.³ Yet Barrett and colleagues² arguments that recommend better training of residents in midpelvic operative vaginal delivery are supported by citation to a study showing severe perineal laceration rates of 28% among attending-only deliveries and 32% among deliveries involving residents after low or outlet forceps application.¹⁰ Given these high rates of obstetric trauma, we strongly agree that specialized training courses are needed if we expect these deliveries to be carried out safely. The onus is on senior obstetricians with leadership responsibilities to ensure that the results of this training on perinatal and maternal outcomes are carefully evaluated before continuing to assert the safety of midpelvic operative vaginal delivery.

Undoubtedly, midpelvic operative vaginal deliveries carried out by experienced obstetricians have saved the lives of countless babies over the last several decades. However, improvements in surgery and anesthesia, and changes in fecundity in countries such as Canada appear to have altered the relative safety profile of cesarean delivery versus operative vaginal delivery at midpelvic station. Quantification of the relative risks and benefits of different modes of delivery at midpelvic station, through studies such as ours, will help women make informed choices that optimize their health and the health of their babies.

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