
Reply

We thank Drs Demers and Roberge for their interest in our work¹. Several randomized controlled trials (RCTs) have been published so far on uterine closure during Cesarean delivery (CD). Most of them evaluated short-term maternal outcomes, such as postpartum hemorrhage, and only a few focused on long-term outcomes or included follow-up in subsequent pregnancies. Therefore, even in meta-analyses of RCTs, core clinical outcomes, including incidence of placenta previa and accreta or uterine rupture in a subsequent pregnancy, are underpowered to detect any differences among Cesarean closure techniques¹.

Our meta-analysis showed that double-layer uterine closure is associated with greater residual myometrial

thickness (RMT) than single-layer closure, but no statistically significant difference was found in the incidence of uterine dehiscence or rupture, or even in the incidence of uterine scar defect detected on ultrasound, which was the primary outcome of our study¹. Therefore, based on Level-1 data, our conclusion was that single- and double-layer uterine closure of a Cesarean uterine incision are associated with similar incidences of uterine scar defect, as well as uterine dehiscence or rupture in a subsequent pregnancy. We also noted that, given the rarity of the occurrence of uterine dehiscence and uterine rupture, based on current randomized trials we cannot yet recommend a specific technique for uterine closure, with larger trials needed. Based on Level-1 data on uterine closure at CD, no different conclusion could be drawn, at least as studied so far.

We agree with Drs Demers and Roberge that larger RCTs are needed on this topic, and this was also stated in our manuscript. Moreover, our conclusion was the same as the one drawn by Roberge *et al.* in a prior meta-analysis on the same topic². In this study, the authors concluded that ‘current evidence based on randomized trials does not support a specific type of uterine closure for optimal maternal outcomes and is insufficient to conclude about the risk of uterine rupture’. The authors also observed that single-layer uterine closure and locked first layer are possibly coupled with thinner RMT².

The assumption of Drs Demers and Roberge, that the higher the RMT the lower the risk of uterine rupture, is indeed plausible and even based on some non-RCT studies, but more data are needed to prove that a thicker RMT would indeed prevent future uterine rupture during trial of labor after Cesarean (TOLAC). We also agree with the authors that double-layer and unlocked closure may be safer in terms of a future TOLAC compared with single-layer and locked closure, but again, the data are not based on large RCTs. We should always be

cautious when appealing to common sense in medicine, as many interventions based on common sense have not worked in the past. For example, bed rest, historically recommended universally for women at risk of preterm labor, was shown to increase the risk of preterm birth when studied in high quality RCTs³.

We look forward to many more studies on these issues by the group of Drs Demers and Roberge and their colleagues, who have been wonderful research leaders in this area.

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