To the Editor: Placenta accreta (accreta, increta, or percreta) is challenging: effort to reduce its incidence is of paramount importance. We already know well that cesarean section (CS) increases the risk of accreta in the subsequent pregnancy; however, we do not know well what sort of CS is more/less likely to cause accreta. We read with great interest the article by Shi et al.,[4] CS without labor onset (elective) is more likely to cause placenta previa accreta than that after labor onset (emergent). We have some clarifications.

First, their study design was better than that of the previous study. To the best of our knowledge, Kamara et al.’s study[5] was the largest that focused this issue. First, the study number of accreta cases was 141 and 65 in Shi et al.’s and Kamara et al.’s study, respectively. Shi et al. studied much more patients. Second, while Kamara et al. involved “at least one” previous CS, Shi et al. confined the study population to women with “one” previous CS. In fact, Kamara et al.’s study involved only 30 women with “one” previous CS. The number of previous CS is considered to affect accreta occurrence; and, thus, “only one” previous CS has made things simple. Then, we are impressed the strong similarity of odds ratio that both studies showed: 3 (95% confidence interval of 1.47–6.12) in Kamara et al.’s study and 3.32 (1.68–6.58) in Shi et al.’s study. This study confirmed that the prior elective CS (labor −) is three times more likely to cause placenta previa accreta than the emergent CS (labor +).

Second, although Shi et al. suggested several reasons for this phenomenon, their context is a little complicated. The lower uterine segment, the site to be cut, becomes thinner after labor onset. In elective (labor −) CS, hysterotomy is made more cephalad and it incises “thick” uterine portion, whereas in emergent (labor +) CS, hysterotomy is made more caudal and it incises “thin” portion: “cephalad and thick” versus “caudal and thin” characterizes the hysterotomy in elective versus emergent CS. In the former, the hysterotomy might “much more destroy” the uterine integrity, whereas, in the latter, it only makes “small opening” of the elongated lower segment. More simply, elective CS, compared with emergent CS, “scars the uterus much more.” Pregnant women with prior labor (−) CS, compared with those with prior labor (+) CS, were more likely to have placenta previa[6] and also thinner lower uterine segment[7] in the subsequent pregnancy. More simply, “thick” incision, i.e. the higher degree of “scar,” may more distort uterine integrity, and is more likely to cause thinner lower uterine segment and placenta previa. Similarly, placenta accreta is more likely to occur at the “severer scar.” In labor (−) CS, the greater the “scar” is, the greater its effect in the subsequent pregnancy might become.

Finally, we suggest some possible strategies to reduce the occurrence of accreta after elective CS. First, the timing of elective CS should be delayed after labor onset. However, this might increase the incidence of off-time (nighttime) emergent CS, which might cause some difficulties for institutes without 24 h/7 day-cover. An alternative is to perform oxytocin administration (or some controllable uterine contraction procedures) before CS and thereby change labor (−) CS to labor (+) CS. This has already been performed to reduce the neonatal respiratory adverse events associated with labor (−) CS: oxytocin infusion <8 h before elective CS significantly reduced it.[8] How long and how strong uterine contractions are actually required to elongate the lower uterine segment has yet to be determined. Second, in elective CS, the incision should be more “caudal” than usual. In elective CS, we sometimes cut the upper edge of the lower segment or even the lowest end of the uterine body. More caudal incision might decrease the uterine damage. However, too much bladder separation might cause extra bleeding and might increase the incidence of bladder injury. These two are theoretical but might be reasonable, and, thus, might be worthy of further discussion.

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Conflicts of interest
There are no conflicts of interest.

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First, we want to thank the readers for their comments about our study design. Their opinions about the possible reasons why elective (labor −) cesarean section (CS) leads to higher risk of placenta previa accreta are really valuable and make good sense. Second, we are quite impressed by their strategies to reduce the occurrence of accreta after elective CS. The first strategy is to delay the timing of CS or perform oxytocin administration to change labor (−) CS to labor (+) CS. This strategy is in consistent with lowering the incidence of nonmedically indicated CS. However, there are still many precautions in oxytocin administration before CS. Some patients may not respond well and still lack uterine contractions after oxytocin administration. On the other hand, induction of labor by oxytocin should be based on strict medical indications, not all patients are indicated to oxytocin, some patients are even contraindicated.

Moreover, oxytocin has been shown to have side effects on women such as tachycardia, chest pain, palpitations, dyspnea, and nausea.

Our current results are not sufficient to draw the conclusion that oxytocin is applicable to all patients before CS. However, this might provide valuable reference for clinicians. Moreover, as mentioned by the readers, the effect of uterine contractions on the lower uterine segment is not determined yet, and still need further investigation. In short, oxytocin administration before CS is still controversial but worth further investigation.

The second strategy is to make more “caudal” lower incision in lower segment which might decrease the damage to uterus. To verify this conception, more clinical and ultrasonic data are required to prove that more “caudal” lower incision leads to thinner lower uterine segment afterwards.

In summary, we still need more exploration and further discussion for these two strategies.

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