STAGE OF LABOUR AT TIME OF CAESAREAN SECTION DELIVERY AND SUBSEQUENT PRETERM BIRTH RISK

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BACKGROUND
One potential risk factor for spontaneous preterm birth (sPTB) that has not been studied extensively is prior second-stage caesarean section. It is hypothesized that injury to the cervix during a cesarean delivery and trauma from a prolonged second stage could affect cervical integrity. This study aimed to determine the effect of stage of labour at caesarean section on the risk of subsequent sPTB.

METHODS
This was a retrospective cohort study of nulliparous women with a singleton term delivery at ≥37 weeks followed by a subsequent singleton delivery between 2014 and 2018. Women with risk factors for cervical insufficiency and fetal aneuploidy were excluded. Women were classified into groups: first-stage caesarean section, second-stage caesarean section and a vaginal delivery control cohort. The primary outcome was sPTB. χ² and Fisher extract tests were used for categorical variables. Student T-test and Kruskal-Wallis test were used for continuous variables.

RESULTS
410 women met inclusion criteria. The rate of caesarean section was 37%, with 14% (58/410) first-stage and 23% (93/410) second-stage caesarean sections. 63% (259/410) of women had vaginal deliveries. Women with first-stage caesarean sections were older (31.5 vs 29.9 vs 29.2, P<0.001). There was no difference in smoking, diabetes or hypertension between the cohorts. The gestational age at subsequent delivery was lower for women with a first-stage caesarean section (38.6 vs 39.2 vs 39.3, P<0.01). However, there was no significant difference in subsequent sPTB between cohorts (1.7% vs 3.2% vs 3.1%, P=0.8).

CONCLUSION
1. In nulliparous women, second-stage caesarean section was not associated with increased risk of subsequent sPTB. This finding is in contrast with one previous study, with a relatively small number of second-stage caesarean sections.
2. Further analysis will examine cervical dilation prior to caesarean as a continuous variable and the role of the duration of second-stage.

REFERENCES