

Induction with prostaglandin and risk of uterine rupture in multiparous women: a national population-based cohort study

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Abstract

Objective To assess whether prostaglandin among multiparous women have an increased risk of uterine rupture compared to primiparous and women with one previous delivery. **Design** Retrospective observational population-based cohort study. **Setting** All maternity wards in Sweden **Population** Women that have undergone induction with prostaglandin between May 1996 and December 2019, (n=59,019). **Methods** The study cohort was obtained by using data from the Swedish Medical Birth Register, which contains information from maternity and delivery records. Results are presented as odds ratios with 95% confidence intervals. **Main Outcome Measures** Uterine rupture **Results** Multiparous women without a previous caesarean section giving birth after induction with prostaglandins had an increased absolute risk (0.11%) of uterine rupture compared to primiparous (0.03%) (crude OR 3.57; 95% CI 1.49-8.59, p-value 0.004). Multiparous women without a previous caesarean section had a lower absolute risk (0.04%) of uterine rupture compared to women with a previous caesarean section (1.62%). Multiparous women with one previous caesarean section, had a decreased risk (0.83%) of uterine rupture compared to women with one previous delivery with caesarean section (2.02%) (crude OR 0.4; 95% CI 0.21-0.78, p-value 0.006). **Conclusion** Our study implies that multiparity is a risk factor for uterine rupture when induced with prostaglandin in women with no previous caesarean section and this should be taken into account when deciding on the appropriate method of induction.

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