

Incidence of and risk factors for perineal trauma: a prospective observational study

[Lesley A Smith](#)¹, [Natalia Price](#)², [Vanessa Simonite](#)³ and [Ethel E Burns](#)¹

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Abstract

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Background

Our aim was to describe the range of perineal trauma in women with a singleton vaginal birth and estimate the effect of maternal and obstetric characteristics on the incidence of perineal tears.

Methods

We conducted a prospective observational study on all women with a planned singleton vaginal delivery between May and September 2006 in one obstetric unit, three freestanding midwifery-led units and home settings in South East England. Data on maternal and obstetric characteristics were collected prospectively and analysed using univariable and multivariable logistic regression. The outcome measures were incidence of perineal trauma, type of perineal trauma and whether it was sutured or not.

Results

The proportion of women with an intact perineum at delivery was 9.6% (125/1,302) in nulliparae, and 31.2% (453/1,452) in multiparae, with a higher incidence in the community (freestanding midwifery-led units and home settings). Multivariable analysis showed multiparity (OR 0.52; 95% CI: 0.30–0.90) was associated with reduced odds of obstetric anal sphincter injuries (OASIS), whilst forceps (OR 4.43; 95% CI: 2.02–9.71), longer duration of second stage of labour (OR 1.49; 95% CI: 1.13–1.98), and heavier birthweight (OR 1.001; 95% CI: 1.001–1.001), were associated with increased odds. Adjusted ORs for spontaneous perineal trauma were: multiparity (OR 0.42; 95% CI: 0.32–0.56); hospital delivery (OR 1.48; 95% CI: 1.01–2.17); forceps delivery (OR 2.61; 95% CI: 1.22–5.56); longer duration of second stage labour (OR 1.45; 95% CI: 1.28–1.63); and heavier birthweight (OR 1.001; 95% CI: 1.000–1.001).

Conclusions

This large prospective study found no evidence for an association between many factors related to midwifery practice such as use of a birthing pool, digital perineal stretching in the second stage, hands off delivery technique, or maternal birth position with incidence of OASIS or spontaneous perineal trauma. We also found a low overall incidence of OASIS, and fewer second degree tears were sutured in the community than in the hospital settings. This study confirms previous findings of overall high incidence of perineal trauma following vaginal delivery, and a strong association between forceps delivery and perineal trauma.

Keywords: Vaginal delivery, Perineal trauma, OASIS, Prospective study