

Improvements in obstetric care: analysis of 18 years of real-world data on the reduction of obstetric anal sphincter injuries during instrumental deliveries

Kathrine Fodstad¹, Katariina Laine², and Sari Räisänen³

¹Vestre Viken HF

²Oslo universitetssykehus

³Laurea-ammattikorkeakoulu Tutkimus Kehitys ja Innovaatiot

August 17, 2024

Abstract

Objective To determine the prevalence and secular trends of obstetric anal sphincter injuries (OASIS) in vacuum and forceps deliveries in Norway, both with and without episiotomy. **Design** Population-based prospective real-world data collected during 2001-2018. **Setting** Medical Birth Registry Norway. **Population or Sample** Nulliparous women with singleton fetuses in a cephalic presentation delivered by either vacuum or forceps (n=70,783). **Methods** Logistic regression analyses were applied to the OASIS prevalence in six 3-year time periods. Both crude odds ratios and adjusted odds ratios (aORs) with 95% confidence intervals (CIs) were determined. **Main Outcome Measures** OASIS prevalence. **Results** The OASIS prevalence in vacuum and forceps deliveries decreased from 14.8% during 2001–2003 to 5.2% during 2016–2018. The overall reduction between the first and last 3-year time period was 61% (aOR=0.39, 95% CI=0.35–0.43). The only exception to this decreasing trend in OASIS was found in forceps deliveries performed without an episiotomy. The OASIS prevalence was approximately twofold higher in forceps compared to vacuum deliveries (aOR=1.92, 95% CI=1.79–2.05). Performing either a mediolateral or lateral episiotomy was associated with a 45% decrease in the prevalence of OASIS relative to no episiotomy (aOR=0.55, 95% CI=0.52–0.58). **Conclusions** Opting for vacuum rather than forceps delivery in conjunction with a mediolateral or lateral episiotomy could significantly lower the OASIS prevalence in primiparous women.

Hosted file

Improvements in obstetric care- analysis of 18 years of real-world data on the reduction of obstetric anal sphincter injuries during instrumental deliveries available at <https://authorea.com/users/815196/articles/1216131-improvements-in-obstetric-care-analysis-of-18-years-of-real-world-data-on-the-reduction-of-obstetric-anal-sphincter-injuries-during-instrumental-deliveries>

Hosted file

Figure 1.docx available at <https://authorea.com/users/815196/articles/1216131-improvements-in-obstetric-care-analysis-of-18-years-of-real-world-data-on-the-reduction-of-obstetric-anal-sphincter-injuries-during-instrumental-deliveries>

Hosted file

Table 1.docx available at <https://authorea.com/users/815196/articles/1216131-improvements-in-obstetric-care-analysis-of-18-years-of-real-world-data-on-the-reduction-of-obstetric-anal-sphincter-injuries-during-instrumental-deliveries>

Hosted file

Table 2.docx available at <https://authorea.com/users/815196/articles/1216131-improvements-in-obstetric-care-analysis-of-18-years-of-real-world-data-on-the-reduction-of-obstetric-anal-sphincter-injuries-during-instrumental-deliveries>

Hosted file

Table 3.docx available at <https://authorea.com/users/815196/articles/1216131-improvements-in-obstetric-care-analysis-of-18-years-of-real-world-data-on-the-reduction-of-obstetric-anal-sphincter-injuries-during-instrumental-deliveries>