

## DOES VACUUM EXTRACTION INCREASE THE RATE OF OBSTETRIC ANAL SPHINCTER INJURIES IN PRIMIPAROUS WOMEN AT TERM?

### Hypothesis / aims of study

The aim of this study was to evaluate the real impact of vacuum extraction on obstetric anal sphincter injuries (OASIS) in a high-risk population : primiparas at term.

### Study design, materials and methods

This was a retrospective cohort study comparing the rate of OASIS after spontaneous vaginal delivery versus assisted vaginal delivery by vacuum at our teaching hospital. We included all primiparous with cephalic single live fetuses that delivered after 37 weeks from January 2010 to December 2014. We excluded extraction by forceps, delivery outside the maternity. Univariable analysis was used to determine risk factors of OASIS. Main outcome measure was incidence of OASIS.

### Results

We included 3552 patients: 2489 vaginal deliveries (70.27%) and 1056 vacuum extractions (29.72%). There were 20 OASIS (0.56%): 7 (0.26%) after spontaneous vaginal deliveries and 13 (1.21%) after vacuum extractions respectively ( $p < 0.0001$ ): OR=4.5 IC 95% [1.91-10.29]. During the study, episiotomy rate was 1.90% (n=66), respectively 22 in the vaginal birth group (0.90%) and 44 in vacuum extraction group (4.20%),  $p < 0.0001$ . Other risk factors were: birthweight (>4000g) OR=8 IC 95% [2.87-22.32], maternal age (>30 years) OR=2.67 IC 95% [1.1-6.64], and duration of expulsion (>20 min) OR=3.2 IC 95% [1.32-7.75].

### Interpretation of results

Although episiotomy rate upon vacuum extraction was low (<5%), OASIS occurred in only 1.2% of cases in this group of patients at high risk for perineal tears because of high fetal birthweight and longer duration of expulsion.

### Concluding message

Vacuum extraction increased the rate of OASIS in this high-risk population (primiparas at term) . However this risk seems to be acceptable (incidence≈1%).

### Disclosures

**Funding:** None **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Besancon University Medical Centre Ethics Committee **Helsinki:** Yes **Informed Consent:** Yes