

759 – Evaluting Risk Factors Associated with the severity of Obstetric Anal Sphincter Injury (OASIS): a Retrospective Cohort Study

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Hypothesis / aims of study

Obstetric Anal Sphincter Injury (OASIS) is perineal trauma involving the anal sphincter that occurs during childbirth.

OASIS is the severe end of the spectrum of perineal trauma and is associated with anal incontinence (AI) and psychological morbidity. OASIS occurs in up to 2.9% of women and birthing people.

The reported rate of OASIS in England have tripled in recent years.

The *Royal College of Obstetricians and Gynaecologists* (RCOG) recommends perineal trauma caused by childbirth should be defined:

- first degree - injury to skin only;
- second degree - injury to the perineal muscles, but not the anal sphincter;
- third degree - injury to the perineum involving the anal sphincter complex (external and internal anal sphincter);
- fourth degree - injury to the perineum involving the anal sphincter complex and anal epithelium.

OASIS includes third and fourth-degree perineal tears.

The aim of this study is to assess and compare women and birthing people with OASIS to identify factors associated with the severity of perineal lacerations.

Study design, materials and methods

Women and birthing people with OASIS diagnosed with endoanal ultrasound from 2008 to 2023 were evaluated in this retrospective study conducted in a tertiary colorectal pelvic floor unit.

The analyses were restricted to women with a confirmed OASIS on endoanal ultrasound at 12 weeks post-delivery. Women with 1st or 2nd degree perineal tears were omitted from the analyses.

The assessed variables:

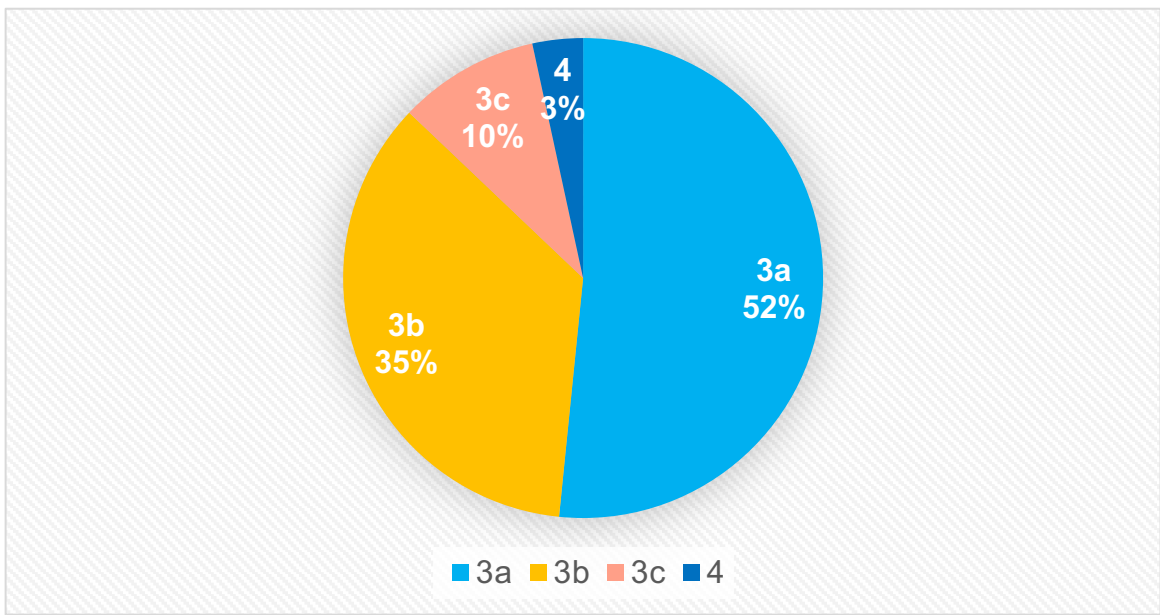
- Age
- Gravida
- Parity
- Previous episiotomy
- Ethnicity
- Birthweight
- Flatus incontinence
- Passive faecal incontinence
- Faecal urge incontinence
- St. Mark's incontinence score
- Stress and urge urinary incontinence
- Urinary frequency
- Level of deprivation and health/disability analysed using the 2019 English Indices of Deprivation measure (Index of Multiple Deprivation 2019), based on the patient's postcode.

References

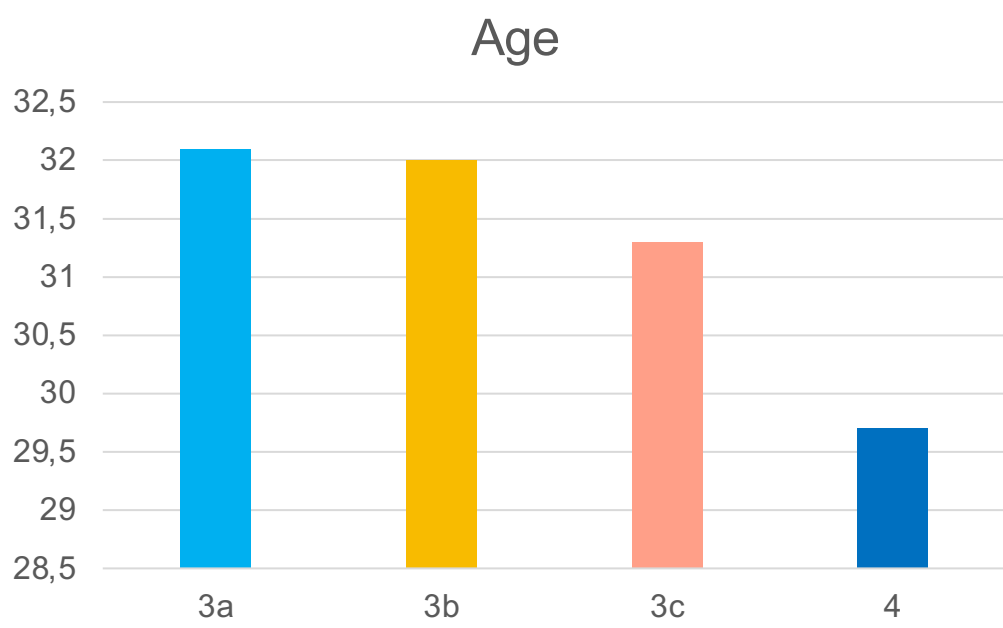
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Results and interpretation

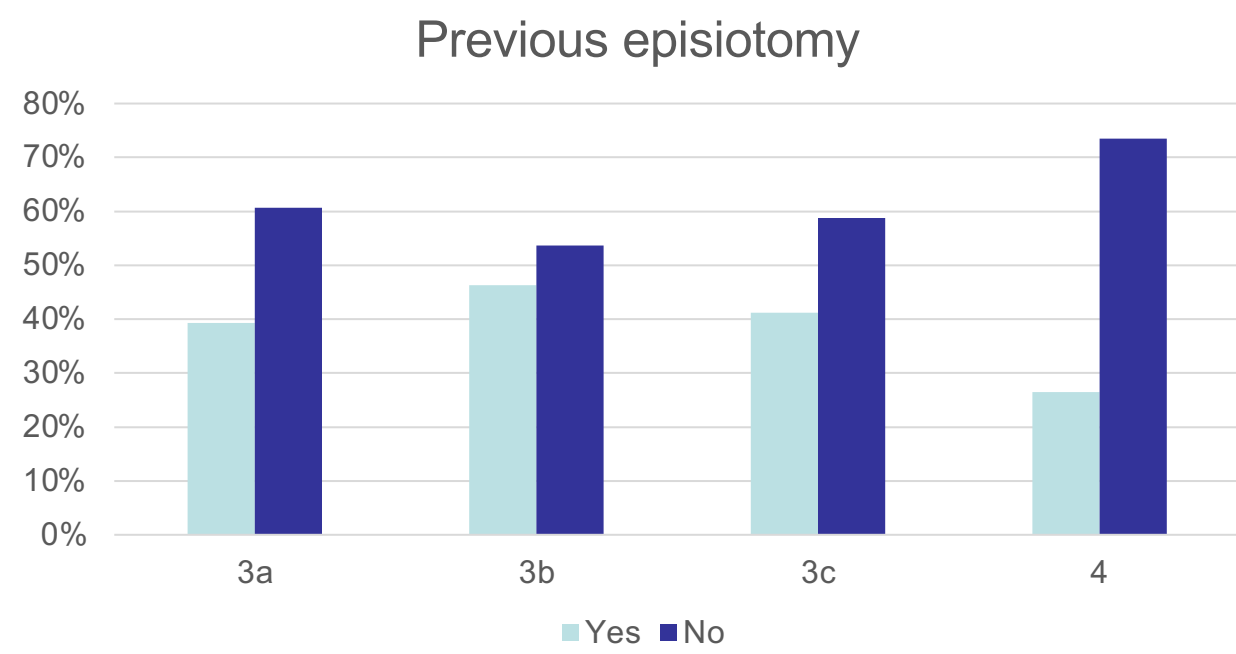
- Initially, 1497 women were considered for the study. However, 33 women were excluded due to incomplete data, and an additional 45 women were removed from the analysis because they had either first or second degree perineal tears. This led to a final sample size of 1419 women.
- The participants were categorised based on the severity of their perineal tears.



- Analysis was conducted to compare the differences between these groups.
- The findings indicated a statistically significant variation among the groups in terms of **age and history of episiotomy**.



- Women who sustained a 3a degree perineal tear were, on average, *the oldest*, with a mean age of 32.1 years.
- Women who experienced a 4th degree tear were *the youngest*, with an average age of 29.5 years.



- A significant variation was noted regarding the history of previous episiotomy among the groups.
- Interestingly, *the frequency of previous episiotomies was lowest in the groups at both ends of the severity spectrum*: those with the mildest classified tear (3a degree tear) and those with the most severe tear (4th degree tear).

There were some indication of differences in terms of the number of pregnancies (gravida), flatus incontinence, and St. Mark's incontinence score, but these did not achieve statistical significance.

This suggests that, while age and episiotomy history are relevant factors, their impact on the occurrence and severity of perineal tears does not follow a straightforward pattern.

Conclusions

This study has demonstrated a clear and statistically significant link between age and the varying degrees of perineal tears among women experiencing OASIS.

Interestingly, *a higher degree of tear correlated with a younger age in the affected women*. This result suggests that younger women are at a greater risk of experiencing more severe perineal tears during childbirth.