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Sektionen för Obstetrik & Gynekologi*

Disputation

doktorsexamen i Medicinsk vetenskap, annan klinisk medicin

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Perineal tears after vaginal delivery – Investigation of risk factors, prediction of risk and prevention of injury.

Handledare:

Professor Karin Källén Lunds universitet

Bihandledare:

Docent Andrea Stuart, Lunds universitet

Ordförande: Docent Claes Ignell, Lunds universitet

Opponent

Professor Stig Norderval, Norges arktiske universitet

Lokal: Medicinhistoriska museet, Bergaliden 20, Helsingborg

Zoom:

<https://lu-se.zoom.us/j/67908826610>

VÄLKOMNA!



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Abstract

Background

Obstetric anal sphincter injuries (OASIS) are the leading cause of female anal incontinence and can affect quality of life. Established risk factors for OASIS include instrumental delivery, primiparity and macrosomia. Few preventative strategies have been found to reduce the risk of OASIS.

Aims

To investigate risk factors of OASIS, develop a prediction model for risk of OASIS and to investigate if a perineal protection device could reduce perineal tearing.

Methods

The study population in study I, II and IV consisted of births between 2005–2016 from the Swedish Medical Birth Registry. Modified Poisson regression analysis was used to calculate risk of OASIS. Study III was a randomised controlled trial where risk of grade 2–4 tear with a perineal protection device was calculated. In study IV model performance was examined by receiver operating characteristic (ROC) curves and area under the curve (AUC).

Results

Study I: Primiparity, increasing maternal age, low maternal BMI, short maternal height, instrumental delivery, and increasing birth weight increased the risk of OASIS. Smoking and shorter maternal educational reduced the risk.

Study II: Maternal origin from Sub-Saharan Africa and East/Southeast Asia was associated with increased risk of OASIS. Origin from South/Central America reduced the risk.

Study III: The use of a perineal protection device lowered the risk of grade 2–4 tears and labial tears as compared to routine care.

Study IV: The developed and validated prediction model for estimating the risk of OASIS was able to predict risk of OASIS up to 24% with moderate accuracy.

Conclusions

Several important risk factors for OASIS were identified and used to develop a prediction model. Use of a perineal protection device resulted in a reduction of perineal tears. Increased understanding of underlying risk factors of OASIS, combined with preventative strategies, can lead to modified management and decreased maternal morbidity.