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LEVATOR ANI AVULSION AMONG NON-INSTRUMENTALLY DELIVERED PRIMIPARAE: AN ULTRASOUND STUDY

Hypothesis / aims of study
To estimate the risk of levator ani and perineal trauma in low-risk deliveries.

Study design, materials and methods
Retrospective cohort study

Follow-up questionnaire included in another study protocol. All women included in mentioned study were invited for a pelvic exam and pelvic floor ultrasound.
Singleton primiparae, delivered at term by midwifes. The women were originally included in a previous experimental intervention study using a cohort study design. 600 women were divided into two groups of different managements of labour. There was a one-year follow-up questionnaire in which they were invited to the current study.
Participants were examined by one investigator, blinded to delivery chart, questionnaire, and present-day symptoms. A pelvic exam using Pelvic Organ Prolapse Quantification (POP-Q) to describe the anatomy, and Modified Oxford Scale (MOS) to describe muscle strength was performed. 2D perineal ultrasound, 3D linear endovaginal and endoanal ultrasound (BK Ultrasound machine) was used for measurements. A 2D perineal probe was used to obtain perineal body dimensions, urethra-pubic bone and urethra-puborectal distance at rest and Kegel, and anorectal angle. Two 3D linear endovaginal probes (2052, 8838) were used to assess the (possible) extent on levator ani avulsion, and the different dimensions of the levator ani hiatus. An endoanal 3D linear probe (2052) is used to assess the anal sphincters and perineal muscles.

Results
140 women accepted the invitation to be examined. Preliminary results include 40 women with levator ani avulsion; 12 total avulsions, and 28 with different degrees of partial avulsions. 82 women were assessed with defect of the transverse perineal muscle. No occult OASIS defect was discovered (3). As follow-up is voluntary, there is a possible selection bias if only symptomatic women agree to participate. There is also a large loss of participants, possibly due to the time lapse from delivery to examination. It is also possible that the time gap has allowed a second pregnancy in original participants, thus excluding them from the study.

Interpretation of results
Levator ani trauma is not exclusive to traumatic delivery. It may present as partial or total avulsion from the ramus inferior of the pelvic bone, or as an overdistension of the levator hiatus.

Concluding message
Levator ani trauma is not exclusive to traumatic delivery. It is also common in this low-risk setting. However, the connection of ultrasound findings and symptomatology need to be further studied.

References
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Disclosures
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