Pelvic floor trauma after delivery-Correlation of morphologic and functional results

Summary / Zusammenfassung
Introduction: Pelvic floor trauma is an important cause of maternal morbidity associated with vaginal delivery. Long-term consequences, such as urinary- or anal incontinence or pelvic organ prolaps contributed to the growing interest in the effects of childbirth on the pelvic floor.

Material and Methods
Pelvic floor anatomy was assessed in 161 primigravidae (C-section N=60, vaginal delivery N=101) during the first week postpartum with a commercially available 3-D ultrasound (Kretz Combison 530). Images of the anal morphology were acquired by a vaginal sonography, the paraurethral fixation of the vagina and the urethral structures by a transrectal sonography. Images of the anterior pelvic floor were calculated from the information stored in the volume block.

Paravaginal defect is defined as a descent of the lateral vaginal wall under the suburethral part of the vagina. Damage to the anal sphincter is present when thickness of the anterior part is = then 50% of the posterior part. Furthermore we checked wether there is damage to the external sphincter.

6 months and 1 year after delivery we control the pathological findings with sonography and filled out a questionnaire.

Results: We could not find any defects in the patients after C-section besides the five patients of 34 after second stage caesarean which showed an anal defect.
61 of 101 women after vaginal delivery turned out to have a defect of the sphincter or of the levator ani. The influence of the fetal weight, the maternal BMI or the type of delivery on the pelvic morphology have to be worked out.

Conclusion: With the 3-D ultrasound we are able to study morphological changes of the pelvic floor after vaginal delivery and C-section

Weitere Informationen unter http://www.usz.uzh.ch/geburt

Publications / Publikationen
Wisser J, Schär G, Kurmanavicius J, Huch R, Huch A.
Use of 3-D ultrasound as a new approach to assess obstetrical trauma to the pelvic floor.

Postpartale Harn- und Stuhlinkontinenz.
gynaekol prax 1999;23:47-54.

Ultrafast MR Imaging of Pelvic Floor Continence Mechanisms
Ochsenbein N, Kurmanavicius J, Huch R, Huch A, Wisser J.
Volume sonography of the pelvic floor in nulliparous women and after elective cesarean section.

Keywords / Suchbegriffe
primigravidae, delivery, pelvic floor trauma, ultrasound

Project Leadership and Contacts / Projektleitung und Kontakte
Prof. Dr. med. Josef Wisser (Project Leader) josef.wisser@usz.ch
Prof. M. Fried (Project Leader) michael.fried@usz.ch

Funding Source(s) / Unterstützt durch
Grant Kretz Foundation

In Collaboration with / In Zusammenarbeit mit
PD Dr. M. Thumshirn, Klinik für GAstroenterologie, USZ Switzerland
PD Dr. D. Perrucchini, Klinik für Gynäkologie, USZ Switzerland
Dr. Bogumila Kielbasa Austauschstipendiat SNF Poland

Duration of Project / Projektdauer
Jan 2004 to Dec 2006