

S. Meyer, P. Hohlfeld, P. De Grandi, A. Megalo
Urogynecology Unit, CHUV, Lausanne, Switzerland
IS PELVIC FLOOR REEDUCATION AFTER VAGINAL DELIVERY EFFECTIVE ? A PROSPECTIVE DOUBLE-BLIND RANDOMIZED STUDY IN PRIMIPARAE

Aim of Study: to assess the usefulness of pelvic floor reeducation after vaginal delivery on the different pelvic floor parameters in primiparae.

Methods: 107 primiparae (29±4 years of age) were investigated on three occasions: during pregnancy (BT1), two months (BT2) and 10 months (BT3) after vaginal delivery. Following parameters were considered: history of stress incontinence/ decreased sexual vaginal response/ fecal incontinence, pelvic floor contraction digitally determined, bladder neck (BN) position and mobility determined with perineosonography, urethral stress pressure profile parameters in the standing position, intra-vaginal and intra-anal pressures during pelvic floor (PF) squeezing. After BT2 examination, the patients were randomly assigned to two groups: group 1 (n= 56) patients received no reeducation until BT 3 examination; after BT2 examination, group 2 (n= 51) patients had 12 sessions of biofeedback and electrostimulation performed by physiotherapists trained for pelvic floor reeducation. The incidence of forceps deliveries (Group 1:16%, Group 2: 30%, p:0.1) and epidural analgesia (Group 1: 51%, group 2: 70%, p:0.08) as well as the weight of the babies (Group 1: 3280±450 gr, group 2: 3260±370 gr, p:0.8) were comparable in both groups. The effects of pelvic floor reeducation were determined with comparison of the different pelvic floor parameters measured in both groups.

Results: stress urinary incontinence (SUI) was present in 9 patients (16%) in group 1 and in 26 patients (51%) of group 2 at BT 2 examination. Ten months after delivery, at BT 3 examination, 8 patients of group 1 (14%) had still SUI whereas 20 patients of group 2 had been cured of SUI : only 6 patients (11%) of group 2 had persistent SUI (p:0.009). 18 patients (32 %) of group 1 and 12 patients (23%) of group 2 complained of diminished sexual vaginal response after delivery. At BT3 examination, there was no difference between the two groups : 13 patients (23%) of group 1 and 5 patients (10%) of group 2 had persistent diminished sexual vaginal response (p: 0.1) The incidence of fecal incontinence was similar in both groups when compared at BT3 (3 patients in group 1, 2 patients of group 2, p: 0.9).

The incidence of weak pelvic floor, i.e. grading score ≤ 3 , was also the same at BT3 in both groups (group 1: 11%, group 2: 8%, p:0.7) .

After pelvic floor reeducation, 29 patients of group 2 described a « great improvement » with reeducation, 11 a « moderate improvement », whereas 11 did not notice any effect on their pelvic floor functions, i.e. urine continence control mechanisms, and/or sexual vaginal response, and/or pelvic floor muscle awareness.

BN position in the standing position (group 1: 27±5 mm, group 2 : 27±4 mm,p:0.9), BN mobility during Valsalva (group 1: 15±6mm, group 2:14±5 mm, p:0.5), or BN elevation during pelvic floor contraction (group 1: 8±4mm, group 2: 9±4 mm, p:0.3) showed no significant difference between group 1 and 2 when compared at BT 3 examination.

In the standing position, functional urethral length (group 1: 31±7 mm, group 2: 30±6mm, p:0.5) on resting profile, maximal urethral closure pressure (group 1: 89±30 cmH₂O, group 2: 83±23 cmH₂O, p:0.2), pressure transmissio ratio in the middle third of urethral functional length (group 1: 77±27 %, group 2: 81±23 %, p:0.6) and residual area of continence at stress on the stress profile (group 1: 588±328 mm², group 2: 616±300 mm², p: 0.4)

showed no significant differences when compared in both groups at BT3. Intra-vaginal pressures (group 1: 41 ± 27 cmH₂O, group 2: 34 ± 22 cmH₂O, p:0.1) and intra-anal pressures (group 1: 43 ± 24 cmH₂O, group 2: 36 ± 20 cmH₂O, p:0.1) measured during pelvic floor contractions were also not significantly modified by reeducation.

Conclusions: patients with pelvic floor reeducation have a significant lower incidence of SUI after delivery, but the incidence of diminished sexual response and fecal incontinence is not modified after reeducation. BN position, mobility and elevation during PF contraction are not influenced by PF reeducation. The same is true for urodynamic parameters such as the stress profile in standing position. Surprisingly the incidence of weak pelvic floor clinically tested, and the intra-vaginal or intra-anal pressures during PF squeezing are the same in both groups when measured ten months after delivery.

38A

KE Højberg *, JD Salvig*, NA Winsløw*, G Lose**, NJ Secher*
* Perinatal Epidemiological Research Unit, Dept of Obstetrics And Gynaecology, Aarhus University Hospital, and ** Glostrup County Hospital, Denmark.
PREVALENCE AND RISK FACTORS OF URINARY INCONTINENCE AT 16 WEEKS OF GESTATION.

Aims of Study

The prevalence of urinary incontinence in women aged 18 to 44 years varies between 9% and 45% (1,2), it increases during pregnancy, especially after 20 weeks of gestation (3), and has been reported as high as 30-50%. The exact role of pregnancy and delivery in the development of urinary incontinence is, however, still controversial; furthermore the effect of obstetric factors and increasing parity is not clear.

This study aimed to evaluate the prevalence of urinary incontinence at 16 weeks of gestation and to identify possible maternal and obstetric risk factors.

Population and Methods

Cross-sectional study: All women attending routine antenatal care from 1993 to 1996 were asked to complete a questionnaire at 16 weeks of gestation; a total of 7795 (96%) women answered the questions about urinary incontinence. This cross-sectional study was used to describe the prevalence of urinary incontinence and to identify maternal risk factors.

Cohort study: A sub-group of 1781 pregnant women from the cross-sectional study with one previous delivery at our department between 1989 and the index pregnancy. From 1989, the obstetric records of all deliveries have been prospectively registered; thus we were able in this cohort to evaluate obstetric risk factors for developing urinary incontinence at 16 weeks of gestation.

Urinary incontinence was defined as involuntary loss of urine within the last year. For the analyses about maternal and obstetric risk factors we included only those with stress or mixed incontinence at least once a week. The questions about urinary incontinence had previously been calibrated through in-depth interviews; and repeatability also had been assessed. Bivariate associations between possible risk factors and urinary incontinence were tested by the χ^2 -test. Multiple logistic regression analyses were performed to identify independent maternal as well as obstetric risk factors.

Results

Prevalence: The prevalence of urinary incontinence within the preceding year was 8.9% among women at 16 weeks of gestation: nulliparous, 3.8%, para 1, 13.8%, para 2+, 16.2%. Stress or mixed incontinence occurred at least weekly in 3% of all the women. Maternal risk factors: After adjusting for age, parity, BMI, smoking, previous abortions, and previous lower abdominal or urological surgery in a logistic regression model, primiparous who had delivered vaginally had an increased risk of stress or mixed urinary incontinence than nulliparous (OR=5.7; 95% CI 3.9-8.3). Subsequent vaginal deliveries did not increase the risk significantly. Young age, BMI >30, and smoking were possible risk factors for developing urinary incontinence. Obstetric factors: Mediolateral episiotomy in combination with birth weight > 4000 g increased the risk of urinary incontinence (OR=3.5; 95% CI 1.2-10.2), and also newborn weight > 4000 g increased the risk (OR=1.8; 95% CI 1.0-3.5). A number of other intrapartum factors did not increase the risk of urinary incontinence.

Conclusions

The first vaginal delivery was a major risk factor for developing urinary incontinence; subsequent vaginal deliveries did not increase the risk significantly. Weight of the newborn > 4000 g alone and in combination with episiotomy also increased the risk.

References:

- 1: BMJ 1990;281:1243-1245.
- 2: J Epidemiol Community Health 1981;35:71-74.
- 3: Obstet Gynecol 1992;79:945-949.