

PELVIC FLOOR FUNCTION IN PRIMIPAROUS WOMEN IN EARLY PREGNANCY AND 4-12 MONTHS AFTER DELIVERY.

Aims of study

The first pregnancy and delivery seems to be of critical importance for the risk to develop urinary incontinence (1,2). Dysfunction of the pelvic floor was found to be associated with urinary incontinence and could be induced by traumatic events related to childbirth in predisposed women (3). The aims of this study was to investigate a) the function of the pelvic floor/vaginal muscles with vaginal EMG, pressure and palpation in primiparous women during early pregnancy and at various times post partum for up to one year b) the possible correlation between changes in EMG with the presence of lower urinary tract symptoms (LUTS).

Patients and methods

Of 78 women initially included, 50, 45 and 48 agreed to follow-up at four, eight and twelve months after delivery. Fourteen (29%) of the 48 women who completed the study at 12 months follow-up were classified in the traumatic delivery group, meaning in this study rupture grade 2-4. Vaginal surface EMG, pressure and palpation were recorded in early pregnancy and repeated at various times after delivery for up to one year. A questionnaire regarding LUTS, control of the lower urinary tract, other disorders and life style was given to all participants. Women who reported incontinence were asked to do a 48 h pad test.

Results

Primigravidae with a traumatic delivery had a significantly reduced pelvic floor function ($p < 0.05$, < 0.01 and $p = 0,056$) measured both with vaginal surface EMG, pressure and palpation at 4, 8 and 12 months after delivery as compared to women with a non-traumatic delivery (Fig. 1). Women with traumatic delivery only returned to the original EMG level at 12 months, while those with a non-traumatic delivery increased their values significantly above the originally recorded values ($p < 0,05$). This increase was probably a consequence of pelvic floor exercises. Women over 30 years of age with and without a traumatic delivery had a 71 and 33% risk for LUTS during the follow-up period, respectively. Caesarean section seemed to be protective for the pelvic floor both in terms of decreased EMG activity and risk for LUTS.

Conclusions

Primigravidae with traumatic delivery had significantly decreased vaginal surface EMG-values, pressure and findings at palpation of the pelvic floor muscles 4-8 months after delivery compared to women with non-traumatic delivery. Women above 30 years had a two-fold increased risk for LUTS compared to those below 30 years of age. The risk for pelvic floor lesions with engagement of the lower urinary tract should probably be allowed to have an influence on the choice of obstetric methods, especially in women who are about to deliver their first child after the age of 30.

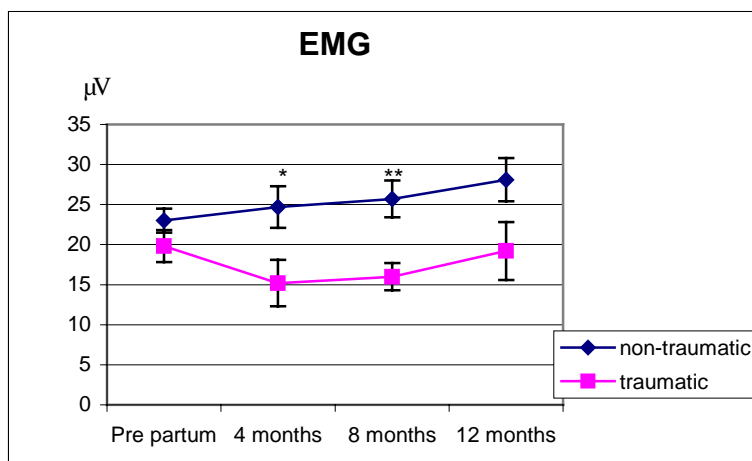


Figure 1. Vaginal EMG in primigravidae with subsequent non-traumatic (n=34) and traumatic delivery (n=14).

Women with traumatic delivery had significantly lower values 4 and 8 months post partum. Mean±SEM.

References:

1. Obstet Gynecol 2001;97(3):350-6
2. Neurourol Urodyn 2002;21(1):2-29
3. Neurourol Urodyn 1999;18(6):613-21