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An Approach to Prevention of Urinary Incontinence

---Effectiveness of Guidance on Training of Pelvic Floor for Pregnant Women---

Aim of study : About 30% of Japanese adult women and about 50% of the multiparae have experienced urinary incontinence. In the aging society of today, not only the treatment and care but also prevention of urinary incontinence has an important meaning. In Japan, however, no attempt at preventing urinary incontinence is made, with priority given to the treatment of it and development of incontinence aides such as diapers and pads. For the prevention of urinary incontinence in adult women, we gave a guidance on the pelvic floor exercise from the middle stage of pregnancy, compared the group given the training and the group not trained as to the postpartum state of urinary incontinence, contractile force of the pelvic floor and their awareness of it, and evaluated how effective the pelvic floor exercise is for the prevention of urinary incontinence.

Methods : The subjects included 109 pregnant women (24~42 years of age) who had no sign of abortion and were following a normal course of pregnancy. A total of 55 women consisting of 29 primiparae and 26 multiparae given the pelvic floor exercise were used as the guidance group. A total of 54 women consisting of 28 primiparae and 26 multiparae given no training were used as the control group. In the guidance group, a midwife gave guidance on the pelvic floor exercise while making an internal examination from the 24th week of gestation at the beginning of the stable phase with the placenta formed. For the two groups, the contractile force was evaluated with an internal examination scale at 24 weeks, 36 weeks of gestation, 5 days and 1 month of puerperium. Additionally, the state of urinary incontinence and awareness were evaluated by interview. At 2 months, 3 months and 6 months after childbirth, a follow-up investigation by telephone was done to evaluate the state of urinary incontinence and how the pelvic floor exercise is carried out.

Results : By 24 weeks of gestation 63.5% of the primiparae and 74.1% of the multiparae experienced urinary incontinence. Abdominal pressure-induced urinary incontinence when coughing,

sneezing and vomiting due to morning sickness was found most frequently. As to their awareness of urinary incontinence, many expressed "anxiety of postpartum urinary incontinence" regardless of whether they had experience of urinary incontinence. Eighty-four percent of the pregnant women with the experience of urinary incontinence replied, "I haven't consulted with anyone." by the reasons: "I feel ashamed" and "I had no idea with whom to consult."

Pregnant women showed a high interest in the pelvic floor exercise, and 78% of the replied, "I would very much like to know" about the pelvic floor exercise. Impressions given were: "My participation in the training was rewarding."; "I felt relieved because I was able to talk about it." The pelvic floor exercise is carried out continuously during and after pregnancy. At 36 weeks' gestation, 50.0% of the pregnant women replied, "I practice it everyday", 29.6% said, "I do it once every 2 to 3 days." and 1.9% remarked, "Not at all." At 6 months of the puerperium, 22.0% of the pregnant women replied, "I practice it everyday.", 42.0% said, "I do it once every 2 to 3 days." and 12.0% remarked, "Not at all." During pregnancy, the proportion of pregnant women saying, "I practice the training at a fixed time such as before going to bed and when rising from bed was high at 62.3%, while after childbirth the training becomes customary and those 57.7% saying, "I do it when I have recalled it." accounted for %. The contractile force of the pelvic floor tended to increase more significantly after guidance than before guidance in the guidance group compared to the control group ($P = 0.8$). The number of women with the experience of urinary incontinence in the puerperium tended to be significantly smaller in the guidance group than in the control group ($P = 0.55$).

Conclusions: Our study has made clear that there are many women who experienced urinary incontinence for the first time during pregnancy but cannot talk with a person about it while feeling a surprise and anxiety. Pregnant women's awareness of urinary incontinence was high, which was substantiated by the anxiety over urinary incontinence in the puerperium and menopause. Particularly, their expectation is great on the pelvic floor exercise as a means to prevent urinary incontinence, and the pregnant women in the guidance group expressed their feeling of relief and satisfaction from undergoing the training for prevention of urinary incontinence.

The pelvic floor exercise is effective only when it is carried out continuously by a proper method. Many pregnant women experienced urinary incontinence for the first time in the first trimester, and were able to grasp it as their own problem, which presumably made it possible for them to continue the training.

Judging from the decrease in the number of experiences with urinary incontinence and the increase in the contractile force of the pelvic floor in the puerperium in the guidance group, the pelvic floor exercise during pregnancy was considered effective.