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Title: CAN ANTENATAL PELVIC FLOOR EXERCISES PREVENT POSTNATAL INCONTINENCE

Aims of Study

The incidence of urinary incontinence after child birth is quoted to be up to 33% (1). Pelvic floor exercises can improve or cure the symptoms of urinary incontinence (2, 3) but one third of women are unable to perform an adequate pelvic floor contraction even after verbal instruction (4). A prospective randomised controlled study has been carried out to investigate whether teaching women pelvic floor exercises by a physiotherapist during the antenatal period will reduce the symptoms of urinary incontinence postpartum.

Materials and Methods

Nulliparous women, recruited at 20 weeks gestation into the Antenatal Pelvic Floor Exercise Study had their pelvic floor squeeze assessed by digital examination by one assessor and graded on a scale 0-5 (Oxford scoring). Each women was then randomised, using computer generated numbers, into a Control group, who received no formal advice about pelvic floor exercises, or a Physiotherapy group who attended a pelvic floor exercise teaching session led by senior Obstetric Physiotherapists between 22-25 weeks gestation. This session involved small group teaching (maximum 6 women) and one to one individual tuition, including the use of a perineometer. In addition, these women were also given written instructions of pelvic floor exercises and a regime to be followed daily both antenatally and postnatally. All women were asked to complete the Bristol Female Urinary Tract Symptom questionnaire (BFLUTS) (5) at 26 and 36 weeks gestation and at three and six months postpartum. Logistic regression was used to assess the odds ratio (OR) and 95% confidence intervals (95%CI) of experiencing the symptoms urinary incontinence.

Results

1169 women were randomised into the study, 584 into the Control group and 585 into the Physiotherapy group. 23% of women had a “poor pelvic squeeze” at the time of recruitment as defined by 0 or 1 on the scale 0-5, (40% if include 0, 1 and 2). The response rates for the questionnaires were: 26 week questionnaire 84%, 36 week questionnaire 76% and the 6 month questionnaire 68%. Delivery data was not available for seven women.

Table 1. Demographic data and delivery details.

Detail	Control group n=584	Physio. group n=585
Mean Maternal age (years)	27.5	27.6
Mean BMI	23.5	23.2
Mode of delivery- normal	318	305
- instrumental	136	156
- Caesarean	126	120
Epidural analgesia	307	310
Birth weight (kg)	3.36	3.30
Head circumference (cm)	34.0	34.5

Table 2. Frequency table of symptoms and calculated odds ratios.

Symptom	A/N control	A/N physio.	OR(95%CI)	P/N control	P/N physio.	OR(95%CI)
Stress incontinence	66%	61%	**0.78** (0.59-1.04)	38%	36%	**0.90** (0.64-1.28)
Urge incontinence	46%	45%	**0.93** (0.71-1.23)	27%	30%	**1.04** (0.72-1.52)
Spontaneous incontinence	25%	22%	**0.87** (0.63-1.21)	8%	10%	**1.33** (0.77-2.30)
Frequency of leakage≥ occas.	65%	64%	**0.97** (0.73-1.29)	36%	37%	**1.21** (0.61-1.29)
Amount of leakage≥ drop	69%	66%	**0.85** (0.63-1.14)	40%	39%	**1.06** (0.77-1.46)
Incontinence affects physical activity	24%	20%	**0.83** (0.56-1.16)	7%	8%	**1.21** (0.65-2.22)

Conclusion

This large prospective randomised controlled study, carried out in a clinical setting, has not been able to show that pelvic floor exercises taught by a physiotherapist have reduced the incidence of urinary incontinence at 6 months postpartum.

References

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4.BMJ 1999; 318: 487-493. 5. Br J Urol 1996;77: 805-812.