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Dumoulin C[1], Morin M [1], Bourbonnais D[1], Lemieux M[1], Gravel D[1]
1. Université de Montréal

EFFECT OF ADDING DEEP ABDOMINAL MUSCLE TRAINING TO PELVIC FLOOR MUSCLE TRAINING TO TREAT STRESS URINARY INCONTINENCE: A ONE-YEAR FOLLOW UP

Hypothesis / aims of study

Women involved in a single-blind randomized control trial of pelvic floor muscle training with and without deep abdominal muscle training for persistent postnatal incontinence showed similarly significant cure rates on pad testing (76% and 77%) as well as a significant improvement in quality of life, a reduction in subject's perceived burden of incontinence and symptoms [1]. However, no statistically significantly greater benefit was obtained from one training program as compared to the other immediately after treatment. The aims of the present study are to a) examine the effect of pelvic floor muscle training programs on persistent postnatal incontinence one year after the end of treatment and b) to compare the benefit of the two training programs one year after the end of treatment.

Study design, materials and methods

This was a prospective single blind randomized control trial. Fifty-seven postnatal women with clinically demonstrated persistent stress urinary incontinence three months and more after delivery participated in eight weeks of either pelvic floor muscle training (PF) (n = 28) or pelvic floor muscle training + deep abdominal muscle training (PF/A) (n =29). They were contacted by telephone one year after the end of treatment and invited to participate in a follow-up study. They were asked to complete a postal questionnaire, which included the Incontinence Impact Questionnaire [2], the Urinary Distress Inventory [2] and the subject's perceived burden of incontinence on a Visual Analog Scale [3]. Baseline, post–treatment and one-year follow-up scores from all outcome measures were compared for each training group using nonparametric Friedman and Wilcoxon tests. The change scores (pre scores – one year follow-up scores) of both groups were compared using a Mann-Whitney test.

Results

Of 57 initially randomized subjects, 44 (77%) responded, 20 from the PF group and 24 from the PF/A group. Among the 13 non-responders, five had changed phone numbers, six did not return the questionnaires and two were excluded because of pregnancy. The clinical characteristics of responders and non-responders were not significantly different.

There were significant statistical differences in all outcome measures between baseline and post-treatment as well as between baseline and follow-up in each group. However, no significant differences were found in any of the outcome measures between post-treatment and one-year follow up in either group. (Table 1).

Table 1. Results of the IIQ, UDI and VAS in the 44 subjects

	Baseline		Post-treatment		One-year follow-up		P*	P**	
IIQ	PF	24.34 (15.08)	PF	12.74 (13.41)	PF	15.78 (14.81)	0.013	(B-PT)	0.001
								(B-F)	0.042
	PF/A	18.12 (14.45)	PF/A	12.70 (12.90)	PF/A	10.10 (12.90)	0.011	(B-PT)	0.048
								(B-F)	0.009
UDI	PF	12.94 (6.28)	PF	7.56 (5.74)	PF	6.95 (5.32)	0.002	(B-PT)	0.002
								(B-F)	0.000
	PF/A	9.65 (6.03)	PF/A	5.65 (5.10)	PF/A	6.30 (7.01)	0.028	(B-PT)	0.030
								(B-F)	0.033
VAS	PF	7.23 (1.77)	PF	4.31 (2.91)	PF	3.95 (2.61)	0.000	(B-PT)	0.000
								(B-F)	0.000
	PF/A	6.17 (2.71)	PF/A	3.65 (2.62)	PF/A	3.05 (2.13)	0.001	(B-PT)	0.001
								(B-F)	0.001

* Friedman test, ** Wilcoxon test, B = baseline, PT = post-treatment, F = follow-up

There were no statistically significant differences between the change scores (pre scores – one year follow-up scores) of both training groups in the IIQ, UDI and VAS (Table 2).

Table 2. Results of the IIQ, UDI and VAS change scores (pre scores– one year follow-up scores) in 44 subjects

	PF (n = 24)	*PF/A (n = 20)*	*P**
IIQ	8.75 (22.37)	7.40 (11.44)	0.587
UDI	5.75 (7.04)	3.25 (7.80)	0.246
VAS	2.91 (3.90)	3.15 (3.11)	0.859

*Mann-Whitney *U* test

Interpretation of results

Pelvic floor muscle training programs for persistent postnatal incontinence have resulted in long-lasting improvement in the quality of life, the reduction of the subject's perceived burden of incontinence and a reduction of symptoms. However, added benefit from the deep abdominal training program was not demonstrated one year after the end of treatment.

Concluding message

The benefits of pelvic floor muscle training are still present one year after treatment. Further evidence is needed before adopting a combined pelvic floor/abdominal training program as it offers no added effect over pelvic floor training alone.

References

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