

RANDOMIZED CLINICAL TRIAL: EFFECTS OF PELVIC PHYSIOTHERAPY PRE AND POST OPERATIVE IN THE EARLY URINARY CONTINENCE AND QUALITY OF LIFE AFTER RADICAL PROSTATECTOMY - PRELIMINARY RESULTS

Hypothesis / aims of study

Incidence rates of urinary incontinence (UI) after radical prostatectomy (RP) has been reported between 0.5 and 87%. This discrepancy between incidences is partly due to the variability of definitions for UI, as well as the postoperative period in which this evaluation was done.¹ Some studies have shown that training of the pelvic floor muscles pre and/or postoperative period may improve early and late urinary continence rates after PR.² Few studies have used pelvic floor training associated with biofeedback or assessed quality of life (QoL) and rates of erectile dysfunction (ED).³ We decided to evaluate the effects of pelvic physiotherapy pre and postoperative associated with the use of biofeedback for urinary continence, QoL and DE in the third month after PR.

Study design, materials and methods

we randomly assigned candidates for PR subjects into two groups: group physiotherapy - training with two preoperative sessions and guidance (verbal and written) to keep the exercises postoperatively until the third month after RP OR control group - usual pre and postoperative care. In both groups have conducted assessments with electromyographic biofeedback (Biofeedback Miotec ®) pre and postoperatively, as well as we applied general questionnaires of anthropometric, DE and QoL data.

Results

This study describes preliminary results, considering that we have not reached the calculated "n" (sample size 38 patients in total). The baseline characteristics of the two groups were similar (t test, $p > 0.05$). There is a tendency of physiotherapy group has better outcomes in terms of improving continence, erectile function (Table 4), QoL and electromyographic activity by biofeedback (Tables 2, 3, 4 and 5). However, it is necessary to increase the sample size so that possible statistical correlations could be measured or observed and the efficacy of the method can be proved.

Interpretation of results

This protocol with two preoperative sessions and verbal recommendation to keep the exercises in the postoperative period is a simple protocol, unpublished and can greatly improve the quality of life of patients undergoing RP, at least in the early postoperative period.

Concluding message

New physiotherapy treatment protocol is simple, objective and easy to be implemented in public system health, with tendency to obtain good functional results.

Table 1. Baseline characteristics of the two groups

Characteristics (mean \pm standart deviation)	Group		P
	Control (n=7)	Physiotherapy (n=8)	
Age (years)	61,5 \pm 8,3	68,5 \pm 5,8	0,082
Weight (kg)	90,2 \pm 23,2	75,2 \pm 9,0	0,151
BMI (Kg/m ²)	30,0 \pm 6,8	25,7 \pm 3,3	0,164
Hip circumference (cm)	105,5 \pm 13,9	98,8 \pm 2,5	0,254
PSA (ng/dl)	9,7 \pm 3,6	11,0 \pm 8,7	0,82
IIEF	18,7 \pm 5,5	13,8 \pm 7,8	0,196

BMI - body mass index, PSA - prostatic specific antigen, IIEF - International index of erectile function

Table 2. Frequency of postoperative symptoms

Symptoms	Control (%)	Physiotherapy (%)
SUI	83,3	75
Type of SUI		
Constant	0	0
Drip	83,3	75
Daily period of SUI		
Daytime	50	62,5
Daytime and nightly	33,3	12,5

SUI - stress urinary incontinence

Table 3. Number of pad per day in postoperative period and variation of the IIEF in the two groups

Group	Pad/day (mean \pm standard deviation)	p	IIEF change (% mean \pm standard deviation)	p
Control	1,33 \pm 1,21	0,746	68,4 \pm 38,9	0,212
Physiotherapy	1,13 \pm 1,12		42,6 \pm 34,2	

Table 4. Impact of UI in the QoL assessed by King's Health Questionnaire (KHQ) applied after RP

Domain of KHQ (% mean \pm standard deviation)	Group		p
	Control (n=6)	Physiotherapy (n=8)	
Q1	25,0 \pm 15,8	34,3 \pm 12,9	0,245
Q2	44,4 \pm 45,5	29,1 \pm 21,3	0,472
Q3	5,5 \pm 13,5	4,1 \pm 11,7	0,841
Q4	16,6 \pm 40,8	2,07 \pm 5,86	0,424
Q5	11,1 \pm 27,1	6,93 \pm 13,1	0,710
Q6	26,6 \pm 43,4	13,8 \pm 16,6	0,599
Q7	22,2 \pm 28,0	14,2 \pm 17,7	0,549
Q8	2,76 \pm 6,77	12,4 \pm 17,7	0,444
Q9	14,4 \pm 16,5	10,8 \pm 14,65	0,673

Domains of KHQ: Q1 - saúde, Q2 - impacto global, Q3 - Role limitations, Q4 - Physical limitation, Q5 - Social limitation, Q6 - Personal relationships, Q7 - Emotions, Q8 - Sleep/Energy, Q9 -Severity measures

Table 5. Mean values of electromyographic activity in biofeedback

Biofeedback (μ V)	Group control (n= 7)		Group physiotherapy (n= 8)	
	pré-PR	pós-PR	pré-PR	pós-PR
Maximal voluntary contraction	12,43	7,11	10,77	12,0
Sustained contraction	20,58	13,41	19,93	24,98

References

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Disclosures

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