

## EFFICACY OF PHYSIOTHERAPY AFTER RADICAL PROSTATECTOMY

### Hypothesis / aims of study

to assess the quality of life after physiotherapy and the efficacy of this treatment in men with stress urinary incontinence after radical prostatectomy

### Study design, materials and methods

After a radical prostatectomy, if after eight weeks incontinence was confirmed, after receiving information, men were asked for participation in our study. In- and exclusion criteria were checked, like previous radiotherapy, anterior transurethral resection, diabetics mellitus and urethral obstruction after surgery. Medical history was taken, a micturition diary combined with pad test was obtained, and physical examination was performed. The data at the end of this period formed the baseline values. Next, single blind randomization was done using colored cards. In the control group interventions consisted of verbal instruction and information about a home maintenance program of pelvic floor muscle exercises to strengthen the pelvic floor and information on life style changes including personal hygiene and voiding habits. The intervention group received the same instructions and interventions of the control group with addition of 15 physiotherapy sessions consisting of intensive pelvic floor muscle exercises with biofeedback and electrical stimulation. Outcome measures were the Incontinence Quality of Life (I-QoL, worst-best 22-88) questionnaire, the 1 hour ICS pad-test, and a visual analogue (VAS)-scale for assessment of severity of incontinence (0=no incontinence, 10=extreme severity of incontinence). Outcome measures were taken before start of treatment, directly after and after 6 months of treatment. The Mann-Whitney U-, Student t- and Chi-square tests were performed to investigate any statistical differences between groups. We used the Statistical Package for the Social Sciences (SPSS), 11.0 version.

### Results

After Medical Ethical Committee's approval, and after signing informed consent, between March and September 2005 76 men (median age 63,7 years, range 46 –83) were randomized with 32 in the control group and 44 men in the intervention group. Baseline characteristics showed no difference between both groups. Directly after treatment, the I-QoL showed a significant difference ( $p=0.018$ ) between groups in favour of the intervention group. Mean (sd) of the I-QoL was 44.23 ( $\pm 14.61$ ) in the intervention group and 37.53 ( $\pm 9.94$ ) in the control group. At 6 months post treatment this was 80.32 ( $\pm 7.01$ ) and 51.69 ( $\pm 16.17$ ) ( $p=0.001$ ). Pad test results in the intervention group showed mean urine loss before treatment of 54.2 g and after treatment 8.8 g ( $p > 0.001$ ). Before treatment VAS was 9.3, after treatment 1.3 ( $p > 0.001$ ).

### Interpretation of results

Our principal objective was to assess quality of life of men undergoing radical prostatectomy. Comparing I-QoL between the intervention and the control group, there was a significant difference in favour of the intervention group. Unfortunately, we were not able to collect adequately the results of the pad test and the VAS in the control group after treatment. So, comparison between groups of these data was not possible. However, we feel that in this study the main objective, i.e., to demonstrate a difference between groups regarding quality of life, directly after treatment and after 6 months, could be reached.

### Concluding message

In this study physiotherapy in a combination of pelvic floor muscle exercises, biofeedback and electrical stimulation seems to be effective for improvement of quality of life in men after radical prostatectomy. After 6 months effects were still apparent. More research is required to further evaluate the effects of physical therapies used to treat urinary incontinence after radical prostatectomy.

<b><i>Specify source of funding or grant</i></b>	<b>None</b>
<b><i>Is this a clinical trial?</i></b>	<b>Yes</b>
<b><i>Is this study registered in a public clinical trials registry?</i></b>	<b>No</b>
<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>Yes</b>
<b><i>Specify Name of Ethics Committee</i></b>	<b>Medical Ethical Committee of Nossa Senhora das Graças Hospital in Curitiba, Brazil</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>Yes</b>