

COMPARISON OF THREE PHYSIOTHERAPY METHODS FOR TREATMENT OF STRESS URINARY INCONTINENCE: IMPACT IN QUALITY OF LIFE AND MUSCLE FUNCTION

Hypothesis / aims of study

Compare the impact of three different physiotherapy protocols on quality of life and function of the pelvic floor muscle

Study design, materials and methods

Participated in the project 156 women with symptoms of stress urinary incontinence (SUI), who gave informed consent to take part in the study and authorizing the collection of data. These participants, through simple randomization were divided into three groups of intervention, which were exclusive kinesiotherapy (GKines) with 51 participants, kinesiotherapy with vaginal cones (GKCone) with 55 and kinesiotherapy associated with perineometer with 50. Before the treatment was applied two questionnaires which were KHQ and a structured interview with personal information, clinical and obstetric information and about UI characteristics. Posteriorly was held evaluation of the pelvic floor muscle by perineometry. The standard protocol used by the three groups consisted of stretching, isolated rapid and sustained contractions of the pelvic floor muscles and at the end functional exercises with contraction of the same muscle group by differentiating just the use or not of associated instruments. The participants were submitted to 20 sessions of 45 minutes each, twice a week for 3 consecutive months. At the end of protocol the participants were submitted to the same assessment performed at beginning of treatment. The statistical analysis and the choice by comparison tests between variables and groups were performed according to the conditions determined by the results, characteristics and behavior of the variables of each study.

Results

Concerning the general characteristics of the sample homogeneity between the study groups was found, only the variable of active sexual activity was higher in group GKCone. In respect the variable KHQ was observed a significant intragroup improvement both in the initial and final time, as among groups at the final moment. By checking the values of the evaluation of pelvic floor through perineometer there was a significant intra-group difference in the initial and final time of treatment, but it was not noticed in the comparison among groups (Table 1). In the final evaluation it was found in the three GKinesio, GKCone and GKPer groups significant decrease in the number of incontinent participants intragroup compared with initial evaluation but there was no significant difference in incidence of SUI among groups when compared to the end ($p = 0.875$) (Table 2).

Interpretation of results

The results related to the profile of women who reported SUI corroborates with findings in national and international studies.^{1,2} The initial and final analysis of the questionnaire KHQ allowed to observe improvement in quality of life, these data corroborate with studies showing that about 60% of women treated with exercises AP improved the quality of life.^{21,22} Regarding the improvement of function of the muscles of the AP, articles published in 2007 and 2011 converge with this study.³ The results of the comparison of the protocols demonstrated that the three protocols analyzed had not significant difference in improvement between them, in most scores. Revealing as other studies that physiotherapy with kinesiotherapy, cone and / or perineometer are complementary and effective alternatives to treat SUI.³

Concluding message

The three protocols were effective for the treatment of SUI in relation to quality of life and muscle function. Therefore, was concluded that the effective treatment can rely on exclusive kinesiotherapy or associated with vaginal cone or perineometre. This choice should be made by careful evaluation of the patient and their clinic history.

Table 1 – Results intragroup and among groups of King's Health Questionnaire (KHQ) and muscle evaluations perineometer rapid and sustained contraction, Initial and Final, Groups kinesiotherapy (GKinesio) (n = 51), and kinesiotherapy with vaginal cone (GKCone) (n = 55) and kinesiotherapy with perineometer (GKPer) (n = 50).

Variable	Groups														P ¹ Among Groups	
	GKinesio					GKCone					GKPer					
	Initial		Final		P ini/fin	Initial		Final		P ini/fin	Initial		Final			P ini/fin
	Media	SD	Media	SD		Media	SD	Media	SD		Media	SD	Media	SD		
KHQ – 0 better^{2,3}	73.9 aA 91.1	17.9	43.1 bD 83.5	17.4	<0,001	62.0 aB 61.9	16.7	30.9 bE 48.9	8.3	<0,001	70.4 aA 83.9	21	50.2 bF 105.9	15,6	<0.001	Pinitial=0.002* Pfinal <0.001*
Perineometre Rapid contraction (mmHg)^{2,3}	21.6 aA 82,0	10.4	23.9 bB 79.8	9.6	<0,001	20.2 aA 78.8	8.4	23 7.8 bB 78.5	<0,001	19.3 aA 74.6	9,4	23.2 bB 77.2	8.8	<0.001	Pinitial=0,710 Pfinal=0.957	
Perineometre sustained contraction (mmHg)²	4.5 aA 77.4	3	5.7 bB 72.3	3.4	<0,001	4.2 aA 72.3	2.9	5.6 bB 73.6	2.7	<0,001	5.3 aA 86.4	3.5	6.7 bB 90.2	3.2	<0.001	Pinitial=0.262 Pfinal =0.081

¹p <0.05: significant result; ²Test of Wilcoxon intra-groups; ³Kruskal-Wallis among groups; ⁴For each category equal letters indicate that the results of columns (intragroup/ among groups) do not differ statistically and lowercase letters intra-group (initial; final); among groups uppercase letters (initial; final).

Table 2 - Occurrence of SUI before and after physiotherapeutic intervention on kinesiotherapy group (GKinesio) (n = 51), kinesiotherapy with vaginal cone (GKCone) (n = 55) and kinesiotherapy with perineometer (GKPer) (n = 50).

VARIABLES	GKinesio		GKCone		GKPer		p ¹
	n	%	n	%	n	%	
Incontinent	31	60.8	25	45.5	28	56	0.267
Continent	20	39.2	30	54.5	22	44.0	
Total	51	100.0	55	100.0	50	100.0	

¹Chi-square test: p <0.05: significant result;

References

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Disclosures

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