92

Magalhães G M[1], Bezerra L R P S[2], Rodrigues L V[3], Regadas S M M[3], Regadas F S P[3], Vasconcelos Neto J A[4], M Vasconcelos C T[3], Karbage S A L[5], Augusto K L[4], Bilhar A P M[6], Frota I P R[4], Bombonato A[7]

1. *Faculdade Integrada Do Ceará (Fic),* ***2.*** *HOSPITAL GERAL CESAR CALS, Universidade Federal do Ceará (UFC),* ***3.*** *Universidade Federal do Ceará (UFC),* ***4.*** *Hospital Geral de Fortaleza,* ***5.*** *Universidade de Fortaleza (UNIFOR),* ***6.*** *Universidade Federal de Sào Paulo (UNIFESP),* ***7.*** *Universidade de São Paulo (USP)*

DIET AND BEHAVIOR THERAPY ALONE OR COMBINED WITH PELVIC FLOOR ELECTROSTIMULATION FOR TREATMENT OF PARADOXICAL CONTRACTION OF THE PUBORECTALIS MUSCLE IN WOMEN

Hypothesis / Aims of study:
This study was conducted to evaluate the effects of high fiber diet associated plus behavioral therapy (HFD+BT) alone or combined with Pelvic floor electrostimulation (EE) in treating women with constipation and symptoms of obstructed evacuation with paradoxical puborectalis muscle contraction at anorectal eletromanometry.

Study design / Materials and Methods:
20 women were evaluated in August 2010 to July 2012 period, with mean age 52.4 (±10,2) years, who fulfilled the Rome III Diagnostic Criteria for Functional Gastrointestinal Disorders and presented at the eletromanometric examination result of paradoxical puborectalis muscle contraction after defecation maneuver. All women were counseled on defecation dynamics, including the time and proper positioning on the toilet to assist in defecation process. The diet consists of food intake around 20-30 g (Fiber Mais ®) plus 1.5 to 2 liters of fluid a day and use of an emollient laxatives (mineral oil) at daily dosage of 30ml in the evening. They were randomized into two groups: group A, treatment of constipation only with HFD+BT; group B treatment of constipation with HFD+BT associated with EE (50Hz frequency with a pulse width of 500µs, contractions of 5 seconds intervals of relaxation for 5 seconds) once a week for a total of 10 sessions. We evalueted Subjective parameters (Scoring System for constipation of Wexner, scale to Bristol stool consistency - BSFS (Bristol StoolForm Scale) and a visual and numerical evaluation of facial-VAS) and objective parameters of anorectal function (anorectal electromanometry) before and six weeks after the treatment. Data were analyzed using Epi-Info statistical program, with less than 5% ($p < 0.05$) significance. The Student t test for paired data (normal distribution), and the Wilcoxon test without normal distribution were used for comparison of means between the initial and final values after treatment and within each group,

Results:
All patients demonstrated improvement in bowel satisfaction, stool frequency, effort and feeling of incomplete evacuation, stool-type modifications and improvement in quality of life ($p < 0.05$). (Table 1 and 2). The objective parameters (anorectal electromanometry) of anorectal function six weeks after the treatment we observed increase in mean squeeze pressure in group B (Table 3) and decreased sensitivity threshold in group B (Table 4). Only 5% (n=1) of women had normalization in dynamic defecation, however 95% (n=19) expressed clinical improvement and did not need instrumentation or manipulation to defecate.

Interpretation of Results:
Group A had clinical improvement similar to group B, but it was necessary to increase the use of laxatives in group A compared to B. The hypothesis is that the initial behavioral approach has favored greater relaxation of the pelvic floor muscles and therefore better awareness in defecation act. Furthermore, most women expressed fear and shame when you make the electromanometry. So, is believed to be possible any interference in electromanometric findings, since the physiological improvement is not consistent with the functional improvement in this study.

Concluding Message:
The conservative and functional approach to pelvic floor dysfunction has been an alternative to replace the aggressive and invasive treatment, allowing significative improvement in quality of life. EE and HFD+BT had significant subjective improvement in symptoms of obstructed defecation in women with paradoxical contraction of the puborectalis muscle, evaluated six weeks after treatment. This occurs regardless of the reversal of paradoxical contraction of puborectalis muscle at manometry. The two methods showed similar results, one must be cautious in asserting the efficacy of therapy over another. Randomized, controlled, long-term studies are needed to confirm the results.

Table 1: Subjectives parameter for Anorectal function (Scoring System for constipation of Wexner) in groups before and after six weeks of treatment.

	Group A		**Group B**	
Parâmetros	**Baseline**	**After 6 weeks**	**Baseline**	**After 6 weeks**
TOTAL SCORE	*14,0(6,0-21,0)*	7,0(0,0-11,0)*	14,0(6,0-21,0)	5,0(0,0-11,0)*
bowel frequency	1,5(0,0-2,0)	0,0(0,0-2,0)*	1,0(0,0-2,0)	0,0(0,0-2,0)*

straining	4,0(1,0-4,0)	0,0(0,0-3,0)*	4,0(1,0-4,0)	0,0(0,0-3,0)*
Sensation of incomplete evacuation	4,0(1,0-4,0)	1,5(0,0-4,0)*	3,0(1,0-4,0)	1,5(1,0-4,0)*
abdominal pain	1,0(0,0-4,0)	0,5(0,0-2,0)*	1,0(0,0-4,0)	0,0(0,0-2,0)*
Minutes in the lavatory	1,0(0,0-1,0)	1,0(0,0-1,0)	1,0(0,0-4,0)	0,0(0,0-2,0)*
Type of measure	1,0(0,0-2,0)	0,0(0,0-2,0)	1,5(0,0-2,0)	0,0(0,0-0,0)*
Unsuccessfully attempts to evacuate	0,5(0,0-2,0)	0,0(0,0-1,0)	1,0(0,0-1,0)	0,0(0,0-0,0)*

Wilcoxon test, ρ<0,05

Table 2 : Mediane analyses of Analogic visual scale (AVS) for symptoms in groups

Group	**AVS**		
	Baseline	**After 6 weeks**	**ρ**
Grupo A	8,0(8,0-9,0)	5,0(3,7-7,0)*	**0,005**
Grupo B	10,0(8,0-10,0)	3,5(2,0-5,0)*	**0,004**

Wilcoxon test, ρ<0,05

Table 3: Change in median stool by BSFS (Bristol Stool Form Scale) types in groups.

Group	**BSFS**		
	Baseline	**After 6 weeks**	**ρ**
Group A	1,0(1,0-1,0)	2,5(2,0-4,0)*	**0,004**
Group B	2,0(1,0-2,0)	4,0(3,7-4,0)*	**0,004**

Wilcoxon test, ρ<0,05

Table 4: Comparison of mean average contraction of anal pressure (mmHg) and the variation of average sensitivity threshold (ml of air), before and after six weeks of treatment

Group	**Limiar de sensibilidade**			**Pressão média de contração**		
	Baseline	**After 6 weeks**	**ρ**	**Baseline**	**After 6 weeks**	**ρ**
Group A	33,0(±8,2)	31,0(±7,3)	0,157	163,7(± 70,1)	180,7(± 78,7)	0,198
Group B	53,0(±18,8)	38,5(±16,6)*	**0,012**	124,6(± 42,2)	147,7(± 66,7)*	**0,043**

Wilcoxon test, ρ<0,05

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Disclosures

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