PELVIC FLOOR MUSCLE TRAINING USING BIOFEEDBACK THERAPY VERSUS BILATERAL POSTERIOR TIBIAL NERVE STIMULATION FOR TREATMENT OF OBSTRUCTED DEFECATION A RANDOMISED CONTROLLED TRIAL

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INTRODUCTION

Obstructed defecation syndrome (ODS) is a type of constipation characterized by two or more of the following symptoms in more than 25 percent of defecation trials: straining, lumpy or hard stools, urgency, sense of incomplete evacuation, pelvic heaviness and manual maneuvers to promote defecation.

obstructed defecation is of two basic types: functional and mechanical. The functional type involves idiopathic megarectum, anismus (pelvic floor dys-synergy), and descending perineal syndrome, while the mechanical type includes rectocele, enterocele, internal rectal intussusception and overt rectal prolapse.

An excessive straining is likely to be the "primummovens", causing tissue weakness and organ descent, and often is due to longterm anxiety, muscle tension and resulting in non-relaxing puborectalis muscle. The increased straining causes pudendal nerve stretch which may lead to a pudendal neuropathy which affects the rectal sensations.

ODS has been also defined as an "iceberg syndrome", as the two most frequent lesions, i.e., rectocele and rectal internal mucosal prolapse, present in more than 90% of patients with ODS, are easily detectable and may be considered "emerging rocks", whereas the "surgical ship" is likely to "sink" due to the "underwater rocks", i.e., the occult lesions.

AIM OF THE WORK

The aim of this study is to compare biofeedback-guided pelvic floor exercise therapy (BFT) with bilateral posterior tibial nerve stimulation (bi-PTNS) in treatment of obstructed defecation syndrome (ODS).

As regard: 1-Wexner constipation score. **2-** Quality of life score.

SUBJECTS AND METHODS

PATIENTS:

60 Patients diagnosed with obstructed defecation syndrome who fulfilled Rome 4 criteria, of functional constipation syndrome referred to General Surgery Departments of Alexandria Main university Hospitals**.**

METHODS:

Study design:

This study is a prospective randomized clinical trial. An interventional study as it is the most suitable design to achieve the aim of the present study.

RESULTS

Group I: BIOFEED Back group

Group II: Bilateral Posterior tibialneuro modulation group

Table 1: Comparison between the two studied groups according to wexner score

Wexner score	Group I (n = 30)	Group II (n = 30)	t	p
Initial				
Min. – Max	11.0 – 19.0	10.0 – 20.0		
Mean ± SD.	15.73 ± 1.91	15.67 ± 2.63	0.112	0.911
Median (IQR)	16.0 (14.0 – 17.0)	16.0 (14.0 – 18.0)		
Post treatment				
Min. – Max	4.0 – 12.0	2.0 – 9.0		
Mean ± SD.	8.40 ± 2.36	5.33 ± 1.94	5.506*	<0.001*
Median (IQR)	8.0 (6.0 – 10.0)	5.0 (4.0 – 7.0)		
p_1	<0.001*	<0.001*		
% of decrease	47.36 ± 10.44	66.66 ± 8.44	7.872*	<0.001*

Table 2: Comparison between the two studied groups according to patient assessment –constipation quality of life score

Patient assessment –constipation quality of life score	Group I (n = 30)	Group II (n = 30)	t	p
Initial				
Min. – Max	54.0 – 81.0	55.0 – 83.0		
Mean ± SD.	66.27 ± 6.31	66.53 ± 6.90	0.156	0.876
Median (IQR)	66.0 (62.0 – 70.0)	66.0 (62.0 – 70.0)		
Post treatment				
Min. – Max	29.0 – 50.0	20.0 – 32.0		
Mean ± SD.	38.17 ± 6.35	26.23 ± 2.81	9.415*	<0.001*
Median (IQR)	37.50 (32.0 – 45.0)	27.0 (25.0 – 28.0)		
p_1	<0.001*	<0.001*		
% of decrease	42.59 ± 6.25	60.41 ± 4.03	13.124*	<0.001*

Table 3: Comparison between the two studied groups according to improvement of stool frequency and overall satisfaction

	Group I (n = 30)		Group II (n = 30)		χ^2	p
	No.	%	No.	%		
Improvement of stool						
No	14	46.7	9	30.0	1.763	0.184
Yes	16	53.3	21	70.0		
Over allSatisfaction						
No	14	46.7	7	23.3	3.590	0.058
Yes	16	53.3	23	76.7		

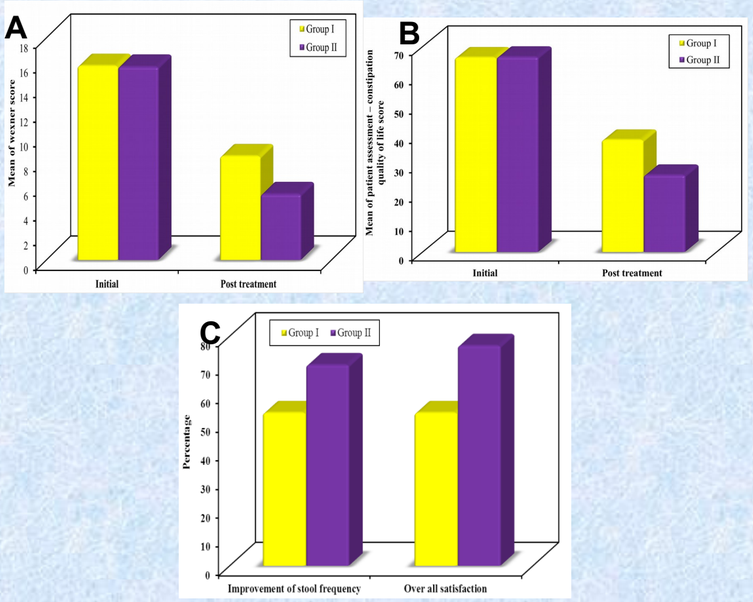

Figure:

A: Comparison between the two studied groups according to Wexner score.

B: Comparison between the two studied groups according to patient assessment –constipation quality of life score.

C: Comparison between the two studied groups according to improvement of stool frequency and overall satisfaction

CONCLUSION

Posterior tibial nerve stimulation is a non-invasive safe procedure which can improve patients with non-anatomic causes of obstructed defecation and has a great impact on the quality of life of these patients.