

Effect of Perineal Self-Acupressure on Constipation: A Randomized Controlled Trial

Ryan Abbott, MD, JD, MTOM^{1,2,4}, Ian Ayres, PhD, JD³, Ed Hui, MD¹, and Ka-Kif Hui, MD¹

¹Department of Medicine, Division of General Internal Medicine and Health Services Research, David Geffen School of Medicine at University of California, Los Angeles, CA, USA; ²Southwestern Law School, Los Angeles, CA, USA; ³Yale Law School, New Haven, CT, USA; ⁴Department of Medicine, University of California, Los Angeles, CA, USA.

BACKGROUND: The efficacy of perineal self-acupressure in treating constipation is uncertain.

OBJECTIVE: We aimed to evaluate whether perineal self-acupressure would improve patient reports of quality of life and bowel function at 4 weeks after training.

DESIGN: A randomized, parallel group trial was conducted.

SETTING: The study took place at the UCLA Department of Medicine.

PATIENTS: One hundred adult patients who met Rome III criteria for functional constipation participated.

INTERVENTION: The control group received information about standard constipation treatment options, while the treatment group received training in perineal self-acupressure plus standard treatment options.

MEASUREMENTS: Primary outcome was the Patient Assessment of Constipation Quality of Life (PAC-QOL). Secondary outcomes included patient assessments of bowel function (as measured by a modified Bowel Function Index (BFI)), and health and well-being (as measured by the SF-12v2).

RESULTS: The mean PAC-QOL was improved by 0.76 in the treatment group and by 0.17 in the control group (treatment-effect difference, 0.59 [95% CI, 0.37 to 0.81]; $p < 0.01$). The mean modified BFI was improved by 18.1 in the treatment group and by 4.2 in the control group (treatment-effect difference, 13.8 [95% CI, 5.1 to 22.5]; $p < 0.01$). The mean SF-12v2 Physical Component Score was improved by 2.69 in the treatment group and reduced by 0.36 in the control group (treatment-effect difference, 3.05, [95% CI, 0.85 to 5.25]; $p < 0.01$); and the mean SF-12v2 Mental Component Score was improved by 3.12 in the treatment group and improved by 0.30 in the control group (treatment-effect difference, 2.82, [95% CI, -0.10 to 5.74]; $p < 0.07$).

LIMITATION: The trial was not blinded.

CONCLUSION: Among patients with constipation, perineal self-acupressure improves self-reported assessments of quality of life, bowel function, and health and well-being

Trial Registration: [ClinicalTrials.gov: NCT01867944](http://ClinicalTrials.gov/NCT01867944).

Electronic supplementary material The online version of this article (doi:10.1007/s11606-014-3084-6) contains supplementary material, which is available to authorized users.

Received August 11, 2014

Revised September 10, 2014

Accepted October 14, 2014

Published online November 18, 2014

relative to providing standard constipation treatment options alone.

KEY WORDS: perineum; constipation; acupressure.

J Gen Intern Med 30(4):434-9

DOI: 10.1007/s11606-014-3084-6

© Society of General Internal Medicine 2014

Table 1. Baseline Patient-Reported Outcome Data

Baseline demographic data	Control	Treatment	p Value
	(N=50)	(N=50)	
Male, no. (%)	8 (0.16)	17 (0.34)	0.04
Age, mean (SD)	44.5 (17.2)	47.6 (18.2)	0.39
Race and ethnicity			
American Indian, no. (%)	4 (0.08)	4 (0.08)	1.00
Asian, no. (%)	11 (0.22)	7 (0.14)	0.30
Black, no. (%)	10 (0.20)	11 (0.22)	0.81
White, no. (%)	32 (0.64)	31 (0.62)	0.62
Hispanic, no. (%)	9 (0.18)	11 (0.22)	0.84
Primary outcomes			
Patient assessment of constipation PAC-QOL (scale: 0-4)			
Physical discomfort	2.30	2.45	0.35
Psychosocial discomfort	1.43	1.67	0.15
Worries and concerns	2.15	2.30	0.36
Satisfaction	0.66	0.86	0.13
All	2.17	2.29	0.38
Secondary outcomes			
Bowel function index score	68.20	68.95	0.83
Hemorrhoid score	0.59	0.82	0.16
SF-12v2			
Physical component score	50.49	46.39	0.03
Mental component score	41.44	41.60	0.93

* Race totals do not add up to the total in each group because nine patients marked more than one race

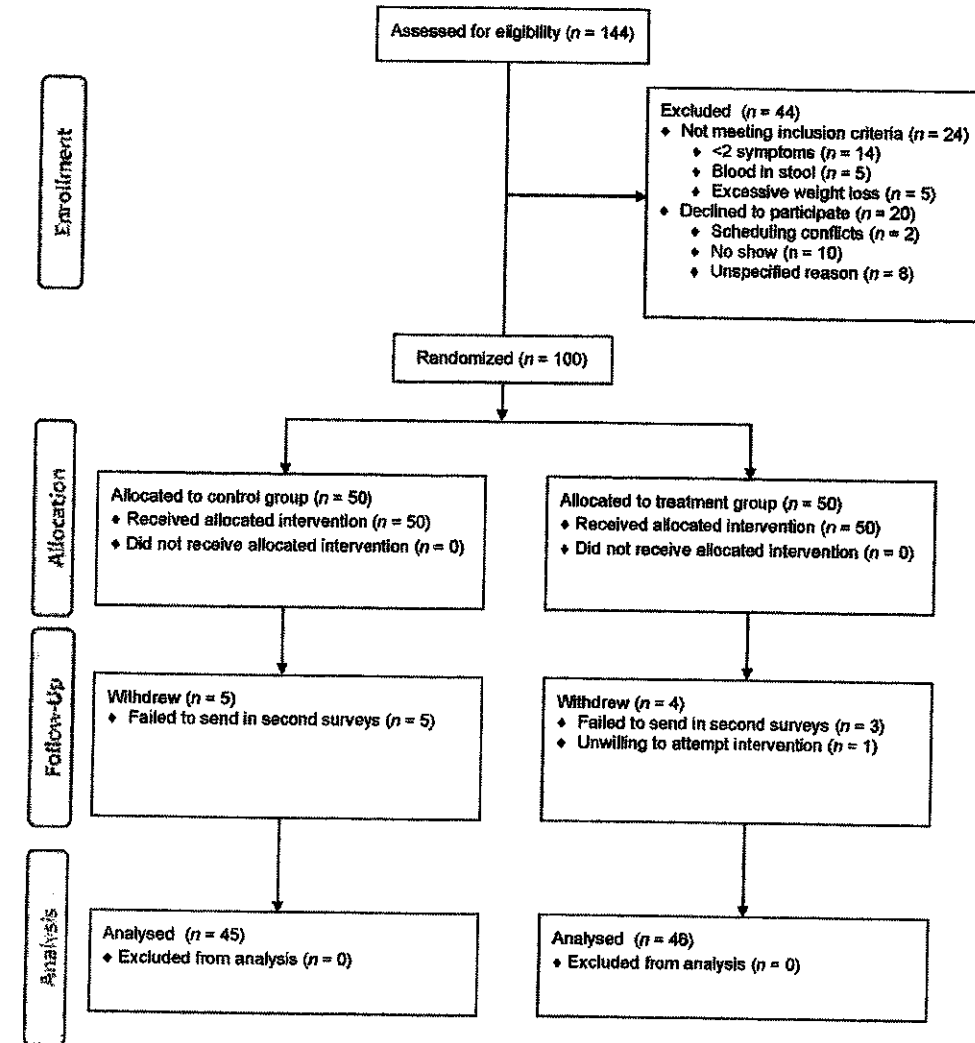


Figure 1. Participant enrollment and follow-up.

Table 2. Treatment Effects for Perineal Self-Acupressure

Variable	Mean change from baseline		Tr. effect	(95% Confidence interval)		p value
	Control	Treatment		Low	High	
Treatment effects on physical and psychological outcomes after 4 weeks*						
Primary outcomes						
Patient assessment of constipation						
Physical discomfort	-0.23	-0.84	-0.61	-0.88	-0.34	< 0.001
Psychosocial discomfort	-0.15	-0.63	-0.48	-0.74	-0.22	0.001
Worries and concerns	-0.14	-0.82	-0.68	-0.95	-0.40	< 0.001
Satisfaction	0.21	0.77	0.56	0.22	0.89	0.001
All	-0.17	-0.76	-0.59	-0.81	-0.37	< 0.001
Secondary outcomes						
SF-12v2						
Physical component score	-0.36	2.69	3.05	0.85	5.25	0.008
Mental component score	0.30	3.12	2.82	-0.10	5.74	0.061
Modified bowel function index	-4.2	-18.1	-13.8	-22.5	-5.1	0.002
Hemorrhoid symptom score	-0.03	-0.43	-0.40	-0.63	-0.17	0.001

* Values are the mean change from the baseline for the treatment and control groups using a Last Observation Carried Forward (LOCF) method for dealing with the nine missing values. All data included. ITT analysis. p values based on heteroskedastic robust standard errors