

SUPPLEMENTAL MATERIALS

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Propranolol decreases tachycardia and improves symptoms in the Postural Tachycardia Syndrome (POTS): Less is More

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Supplemental Table 1. Orthostatic Diastolic Blood Pressure Values in Protocol #1

(propranolol 20mg and placebo) and Protocol #2 (low dose [20 mg] vs. high dose [80

mg] propranolol) in patients with Postural Tachycardia Syndrome.

	Pre	2 Hours Post	4 Hours Post	RM ANOVA
	Mean ± SD	Mean ± SD	Mean ± SD	P Value
Protocol #1 (n=54)				
Delta (Standing-Seated)				
DBP (mmHg)				
Propranolol 20mg	5.9 ± 7.7	5.1 ± 9.2	5.7 ± 7.8	
Placebo	6.3 ± 12.0	3.1 ± 9.1	3.1 ± 9.6	
P value (between drugs)	NS	NS	NS	0.148 (P _{Drug})
Standing DBP (mmHg)				
Propranolol 20mg	74.4 ± 8.1	70.8 ± 7.8	72.0 ± 8.3	
Placebo	73.8 ± 12.8	72.4 ± 9.6	73.9 ± 9.8	
P value (between drugs)	NS	NS	NS	0.037 (P _{Drug})
Sitting DBP (mmHg)				
Propranolol 20mg	68.5 ± 8.4	65.6 ± 9.2	66.3 ± 9.1	
Placebo	67.5 ± 8.4	69.4 ± 8.9	70.8 ± 8.8	
P value (between drugs)	NS	<0.001	<0.001	<0.001 (P _{Drug})
Protocol #2 (n=18)				
Delta (Standing-Seated)				

DBP (mmHg)				
Propranolol Low Dose	5.7 ± 8.9	3.3 ± 7.6	5.9 ± 6.8	
Propranolol High Dose	4.7 ± 10.1	5.2 ± 9.9	4.1 ± 7.4	
P value (between drugs)	NS	NS	NS	0.465 (P _{Drug})
Standing DBP (mmHg)				
Propranolol Low Dose	72.9 ± 9.2	69.9 ± 10.1	74.1 ± 8.0	
Propranolol High Dose	72.8 ± 12.5	70.7 ± 10.2	68.9 ± 7.9	
P value (between drugs)	NS	NS	0.043	0.080 (P _{Drug})
Sitting DBP (mmHg)				
Propranolol Low Dose	67.3 ± 9.4	66.7 ± 9.6	68.2 ± 8.9	
Propranolol High Dose	68.1 ± 6.5	65.4 ± 7.2	64.8 ± 7.1	
P value (between drugs)	NS	NS	NS	0.125 (P _{Drug})

RM ANOVA – Repeated measures analysis of variance; SD – standard deviation; DBP – diastolic blood pressure; NS – not significant. RM ANOVA was used to determine the P value for the overall change between the study drugs and paired comparisons were made using within model contrasts. P<0.05 was considered significant.

Supplemental Table 2. Change in total and component symptom scores from baseline to 2 hours following propranolol dose: Differential effects of low dose (20 mg) and high dose (80 mg) propranolol in patients with Postural Tachycardia Syndrome (n=18).

	Low Dose		High Dose	
	Propranolol		Propranolol	
	Mean ± SD	P Value	Mean ± SD	P Value
Total Score	-11.0 ± 12.3	0.003	-5.7 ± 12.6	0.074
Mental Clouding	-1.2 ± 1.3	0.002	-0.2 ± 1.5	0.653
Visual Disturbance	-0.8 ± 1.8	0.097	-0.6 ± 1.5	0.126
Short of Breath	-1.9 ± 2.0	0.002	-1.1 ± 2.6	0.106
Palpitation	-2.6 ± 2.6	0.001	-1.8 ± 2.3	0.005
Tremulousness	-1.4 ± 1.9	0.009	-1.3 ± 2.4	0.031
Chest Pains	-0.6 ± 1.5	0.155	-0.1 ± 2.0	0.813
Headache	-0.7 ± 1.5	0.072	0.1 ± 1.4	0.868
Lightheadedness	-1.6 ± 2.1	0.008	-0.3 ± 2.3	0.577
Nausea	-0.4 ± 1.1	0.130	-0.4 ± 1.3	0.177

SD – standard deviation. Comparisons between each study dose and “no change” were made using a 1 group t-test. P<0.05 was considered significant.