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WITHDRAWAL OF ANGIOTENSIN RECEPTOR BLOCKER FROM TRIPLE NEUROHORMONAL THERAPY PARTIALLY RESTORES SYMPATHETIC ACTIVITY IN CHRONIC HEART FAILURE

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Background. Subset analysis of ValHeft Trial (VHT) suggests that triple neurohormonal blockade (NHB) [Beta Blocker (BB), ACE Inhibitor (ACE-I), Angiotensin Receptor Blocker (ARB)] increases mortality secondary to loss of sympathetic/parasympathetic (S/P) balance. **Hypothesis.** Withdrawal of ARB from triple NHB may restore sympathetic activity as measured quantitatively with Heart Rate Variability (HRV). **Methods.** Pts receiving triple NHB were studied, and baseline HRV was performed on ANSAR HRV system. ARBs were then discontinued (d/c) as suggested by VHT. HRV was repeated after an average one-month washout period. Baseline S/P tone, and sympathetic response to standard physiologic stress (standing) was compared before and after d/c of ARB. Pts on BB & ACE-I served as controls. **Results.** 8 pts (age 64 ± 11 years, 4 women, LVEF $46 \pm 12\%$, 4 CAD, NYHA Class I-III) on triple NHB were included. Alteration in baseline S/P balance was observed, with higher abnormal resting parasympathetic tone, both on triple and dual NHB (7/7 pts). Abnormal baseline S/P balance and lack of appropriate response to standing was observed consistently in pts taking triple NHB (7/7 pts). Improvement in baseline and increases in pts sympathetic response to standing was observed after d/c of ARB (7/7 pts). **Conclusion.** Triple NHB results in profound blockade of adrenergic system producing significant loss of sympathetic tone and disruption of S/P balance and may explain the observed adverse outcome of such pts in VHT. D/c of ARB results in improvement in s/p balance in CHF pts on triple NHB.

Comparison of Autonomic Nervous System Parameters

NHB	Sympathetic		Parasympathetic	
	Baseline	Standing	Baseline	Standing
Triple	0.01*	0.05*	0.07	0.22
Dual	0.07	0.20	0.21	0.21
Control	0.23	0.40	0.81	0.14
* p less than 0.05 compared with Dual NHB.				