

Heart Rhythm Society Scientific Sessions 2018
*New Tools for Electrophysiologists:
The Treatment of Central Sleep Apnea
in Heart Failure Patients*



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The Patient

71 year old man with a past medical history of single vessel CABG, ischemic cardiomyopathy s/p Bi-V ICD, bicuspid AV s/p mechanical AVR, coarctation of the aorta s/p repair, HTN, HLD, pAF, CVA and newly diagnosed central sleep apnea.

Past History

- Family Hx: Mother – HF, DM; Father MI, DM2, prostate CA
- Social Hx: gin socially
- Allergies: Azithromycin

Medications

- Amiodarone 200mg daily
- Atorvastatin 20mg daily
- Carvedilol 25mg twice daily
- Furosemide 80mg twice daily
- Sacubitril-Valsartan 49-51mg twice daily
- Spironolactone 25mg daily
- Warfarin 1mg daily except Sunday take 2mg
- Aspirin 81mg daily

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 - Non-restful sleep, loud snoring, fatigue and witnessed apneas
- Sleep Study

Physical Exam

- BP 116/82, HR 74, RR 14, height 1.7m, weight 79kg
- Constitutional: Oriented and well appearing
- Eyes: EOMI, PERRL
- Neck: No carotid bruit, prominent appearance of neck muscles
- Cardiovascular: RR, S1 and S2 normal and normal heart sounds, no gallop, rub or murmur, collateral veins on chest wall
- Pulmonary: Effort normal, breath sounds normal, no wheezes, no rales
- Abdomen: Soft, non-tender, non-distended, no masses, no organomegaly, bowel sounds active
- Musculoskeletal: No edema, no abnormalities of the joints
- Neurological: Normal gait, cranial nerves grossly normal
- Skin: Warm and dry, without rashes or lesions
- Psychiatric: Normal affect.

Polysomnography

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- 33 hypopneas
- AHI: 52 events/hour

Polysomnography

Recommendations: “Nasal CPAP therapy. Overnight polysomnography with nasal CPAP titration is necessary to determine the effective level of positive airway pressure. If central events persist on CPAP then the patient should change to adaptive servo-ventilation.”

Referral

- Referred by his electrophysiologist for evaluation for the remedē System investigational study (Pivotal Trial)
- Met with Pivotal Trial electrophysiologist and agreed to participate

Back to Our Patient

Baseline Polysomnography

Apnea and Hypopnea	315	48.3/h
Obstructive Apnea	16	2.5/h
Central Apnea	161	24.7/h
Mixed Apnea	59	9.1/h
Hypopnea	79	12.1/h
Oxygen Desaturation Events	305	46.8/h
Number of Awakenings	36	

	Baseline		24 Months	
Apnea and Hypopnea	315	48.3/h	78	13.2/h
Obstructive Apnea	16	2.5/h	8	1.4/h
Central Apnea	161	24.7/h	22	3.7/h
Mixed Apnea	59	9.1/h	2	0.3/h
Hypopnea	79	12.1/h	46	7.8/h
Oxygen Desaturation Events	305	46.8/h	72	12.2/h
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- MLHFQ Score
 - Baseline: 75
 - 12 months: 10

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- Recently underwent device generator change out for battery depletion