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OBSTRUCTIVE SLEEP APNEA IN HEART FAILURE PATIENTS: EVIDENCE FOR PERSISTENT CONDUCTION DISTURBANCES OR SINUS NODE DYSFUNCTION?

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Introduction: Bradycardia is a common finding in patients with obstructive sleep apnea and might be pronounced in heart failure patients. The aim of this study was to determine the relationship between nocturnal hypoxemia, apnea-hypopnea index and electrophysiological parameters of sinus node and atrioventricular conduction properties. **Methods:** Electrophysiological studies were performed in 12 patients with heart failure. Polygraphic studies were done in all of the patients irrespective of sleep apnea symptoms. Patients with an AHI >10/h were classified as sleep apnea patients. Exclusion criteria were existing CPAP therapy or atrial fibrillation. **Results:** Mild Sleep apnea was diagnosed in 50% of the patients (AHI 17.8 ± 4.4/h vs. 5.1 ± 3.6/h). There was no difference with respect to resting heart rate, PQ-interval, or QRS-duration between the two groups. Sinus node recovery time was normal in all of the patients (993 ± 291 vs. 1099 ± 62 ms, p = 0.45). There was no abnormal atrioventricular conduction. Nevertheless, sleep apnea patients showed decreased AH-intervals (134 ± 42ms vs. 102 ± 25ms, p = 0.1) and HV- intervals (59 ± 9ms vs. 43 ± 7ms, p = 0.01).