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**Title:** Prevalence of sleep-disordered breathing related symptoms and results from an objective vigilance test in patients with chronic heart failure

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**Body:** Background: The Epworth Sleepiness Scale (ESS) has been shown to be unreliable in predicting sleep-disordered breathing (SDB) in patients with chronic heart failure (CHF). Objectives: to assess the prevalence of diverse SDB-related symptoms and objective vigilance in CHF patients according to SDB severity. Methods: 222 consecutive CHF patients (age 62±10 y, LVEF 34%) underwent polysomnography (1/2002-10/2011). Patients were stratified in those with no (apnoea-hypopnoea index, AHI<15/h), moderate (15≤AHI<30/h) and severe SDB (AHI≥30/h), respectively. The ESS questionnaire and a standardized institutional questionnaire assessing diverse SDB-related symptoms were applied. In addition, patients underwent objective vigilance testing (Quatember Maly, 100 stimuli within 20 min). Results: While in the groups with no, moderate and severe SDB the ESS scores were similar and in the normal range (6.9±4, 7.4±4 and 8.0±5, p=0.452, respectively), several symptoms were more often reported in CHF patients with more severe SDB: e.g. daytime fatigue (no, moderate and severe SDB: 53, 69 and 80%, p=0.005), unintentional sleep (9, 5 and 32%, p=0.004), nocturia (66, 89 and 85%, p=0.011), nocturnal dyspnea (11, 13 and 25%, 0.071) as well as xerostomia (52, 49 and 70%, p=0.018). In addition, CHF patients with increasing degree of SDB had significantly less right responses in the vigilance test (99±1, 95±7 and 87±20, p=0.027). Conclusions: Considering the full spectrum of SDB-related symptoms and objective vigilance testing, most CHF patients with moderate or severe SDB have at least one related symptom or functional impairment as a potential treatment target.