European Respiratory Society
Annual Congress 2013

Abstract Number: 2133

Publication Number: P2040

Abstract Group: 4.2. Sleep and Control of Breathing

Keyword 1: Sleep disorders **Keyword 2:** Sleep studies **Keyword 3:** No keyword

Title: Implications of revised rules on scoring apneic and hypopneic respiratory events in heart failure patients with nocturnal Cheyne-Stokes respiration

Jessica 16901 Heinrich jessica.heinrich@web.de [1], Jens 16902 Spießhöfer jens.spiesshoefer@googlemail.com [1], Thomas 16903 Bitter bitter.thomas@gmail.com MD [1], Henrik 16904 Fox hfox@hdz-nrw.de MD [1], Dieter 16905 Horstkotte akleemeyer@hdz-nrw.de MD [1] and Olaf 16906 Oldenburg ooldenburg@hdz-nrw.de MD [1]. [1] Department of Cardiology, Heart and Diabetes Center North Rhine-Westphalia, Ruhr University Bochum, Bad Oeynhausen, Germany .

Body: Scoring definitions and therefore data on prognostic impact of sleep-disordered breathing (SDB) on survival in heart failure (HF) patients are based on 1999 and 2007 definitions of the American Academy of Sleep Medicine (AASM). Thus, a recent (09/2012) update of these scoring rules include a more broadly definition especially on hypopneic events. This study investigates the impact of the new scoring rules on apnea and hypopnea events in a cohort of well characterized HF patients (NYHA ≥ II, LV-EF ≤ 45%) with nocturnal Cheyne-Stokes respiration. Cardiorespiratory polygraphy recordings of 35 HF (NYHA 2.7 ± 0.7; LV-EF = 30.2 ± 7.5%; 30 male; 72 ± 12 years) were scored according to 2007 (recommended) and 2012 recommendations. Apnea hypopnea index according to 2007 recommended scoring rules was 39.7 ± 13.6/h compared to 44.3 ± 12.7/h by using the revised 2012 rules ($p<0.001$). This difference is based on a highly significant difference in hypopnea index (13.3 ± 12.1/h vs. 18.0 ± 13.5, $p<0.001$), whereas there was no difference in apnea index (26.4 ± 12.8/h vs. 26.3 ± 12.9/h, $p=0.353$). Applications of new AASM scoring rules lead to a higher AHI, which is based on a less strict definition of hypopneas. To date and especially in HF patients, prognostic data on SDB in general and Cheyne-Stokes respiration in particular are based on 2007's strict definitions. With application of the new AASM recommendations, mortality data needs to be reanalyzed and graduation of SDB severity has to be adapted. In addition, data on prognostic impact on hypopneas itself is warranted as are studies differentiating central and obstructive hyponeic events.