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Title: CPAP versus adaptive servoventilator (ASV) in patient with congestive heart failure and sleep disorder breathing

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Body: Introduction The aim of this study was to evaluate the effects of nocturnal ventilation by two different ventilatory support: CPAP or Adaptive Servo Ventilator (ASV) in patients with heart failure and sleep disorder breathing, in particular on echocardiographic parameters. Methods Ambulatory patients with congestive heart failure were screened for presence of Sleep Disorder Breathing (SDB). After a full night polysomnography the patients were divided in OSA, CSA-CSR or noSDB. All patients with SDB were titrated at the begin by CPAP but if CSA-CSR occurred or was not resolved they were switch to ASV.

All patients were evaluated at baseline and after six month of treatment by echocardiographic study and clinical evaluation. Results 52 patient were enrolled, age was $63,2 \pm 10,06$, FE $31,2 \pm 8$. Of them 13 patient (25%) were no SDB, 21 were OSAS (40%) 18 were CSA-CSR (35%). There was not differences among groups according to age, FE, TAPSE and NT-proBNP. All patients with SDB were admitted to nocturnal ventilation: 14 received CPAP, 16 received ASV while 9 refused treatment. After 6 months, any change was obtained in FE and NT-pro-BNP and in TAPSE, as well as on the other echocardiographics parameters in all groups. Conclusion In patients with CHF sleep disorder breathing are very common, however CPAP o ASV nocturnal ventilation have no impact on improvement of echocardiographics parameters.