

Sleep Disorders

SESSION TITLE: OSA and the Overlap Syndromes

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ASSOCIATION BETWEEN SLEEP DURATION AND RISK OF HEART FAILURE: ANALYSIS OF NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (NHANES)

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PURPOSE: Though inadequate sleep is known to associate with cardiovascular outcome, association between sleep duration and risk of heart failure (HF) remains inconclusive. Our objective is to investigate whether sleep duration is associated with risk of HF.

METHODS: A retrospective cross-sectional analysis of the 2017-2020 National Health and Nutrition Examination Survey (NHANES) included adult participants aged over 18 years with self-reported history of HF and sleep duration. Sleep duration were stratified into short (<6 hrs), normal (6-9 hrs) and long sleep durations (>9 hrs). Association of sleep duration and HF was evaluated by multivariate logistic regression.

RESULTS: A total of 9,520 participants were identified with mean age of 49.5 ± 18.6 years old. Mean sleep duration was 7.62 ± 1.68 hrs. Overall, 357 patients (3.7%) had HF. Participants reported a normal sleep duration (n=7352, 77.2%), short sleep duration (n=994, 10.4%) and long sleep duration (n=1174, 12.3%). Compared with normal sleep group, participants with the short sleep duration had significantly greater the odds of HF (adjusted OR 1.70; P 0.02; 95%CI 1.07 - 2.70). Long sleep duration group also had higher odds of HF compared to normal sleep group (adjusted OR 1.53; P 0.06; 95%CI 0.99 - 2.38; Table 1).

CONCLUSIONS: In this large national data, sleep duration interestingly shows u-shaped association with decreased risk of HF in normal sleep duration. Promotion of proper sleep duration may be important for preventing HF in modern society.

CLINICAL IMPLICATIONS: This study suggests that both short and long sleep durations are associated with an increased risk of heart failure (HF), with the normal sleep duration (6-9 hours) appearing to have the lowest risk. Clinically, promoting optimal sleep duration may be important for preventing heart failure in the population. Healthcare providers should consider addressing sleep duration as part of cardiovascular risk management, encouraging patients to maintain healthy sleep habits.

DISCLOSURES:

No relevant relationships by Dariush Jahandideh

No relevant relationships by Pakin Lalitnithi

No relevant relationships by Chanattha Thimphitthaya

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