

Impact of Obstructive Sleep Apnea in Patients With Concomitant Heart Failure With Preserved Ejection Fraction; A Retrospective Population-Based Analysis

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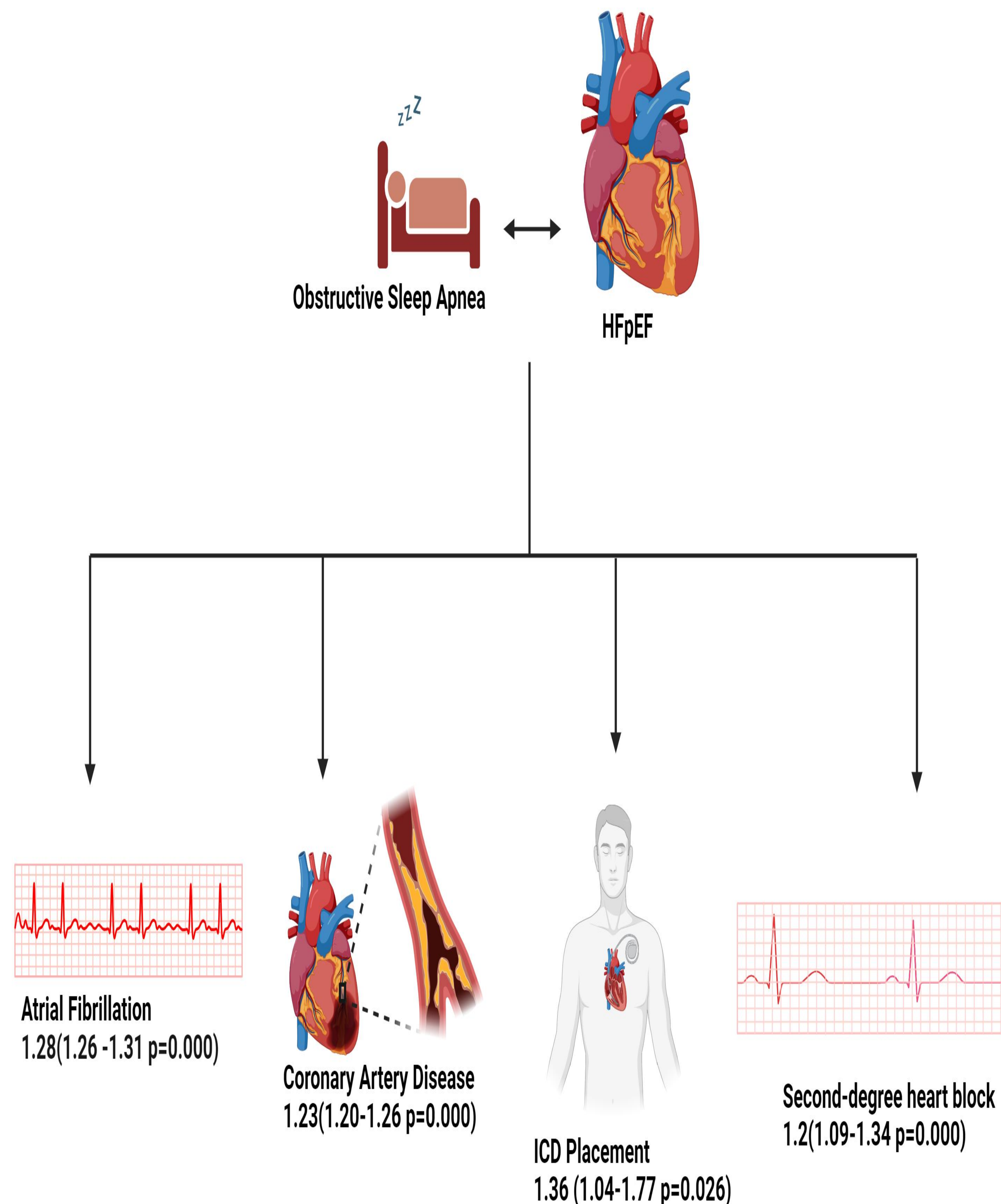
INTRODUCTION

Recent evidence from the literature has shown that obstructive sleep apnea (OSA) may contribute to worsening outcomes of patients with heart failure. However, most OSA studies were conducted in the HFrEF population. There remains scarce data on the impact of OSA in HFpEF hence, we aimed to study this population.

METHODS

- We conducted a retrospective analysis of the 2020 National Inpatient Sample (NIS) database.
- Using the ICD-10 codes, we identified the codes for HFpEF and OSA.
- We adjusted for cofounders and used multivariate logistic regression model to analyze the odds ratio (adjusted odds ratio (aOR)) of our outcomes of interest.

RESULT



RESULT

- There were 2,115,015 hospitalizations for HFpEF, and 18.1% (383,624) had a diagnosis of obstructive sleep apnea.
- The mean age was 69.5 years, with males having a prevalence of 51%.
- Of these, 74% were Caucasians, 17.26% were Blacks, and 5.24% were Hispanics.
- Following multivariate analysis, we found that HFpEF patients with OSA had significant odds of atrial fibrillation, adjusted odds ratio (aOR) 1.28(1.26 -1.31 p=0.000), coronary artery disease 1.23(1.20-1.26 p=0.000), obesity 3.49(3.41-3.57 p=0.000), diabetes mellitus 1.11(1.08-1.14 p=0.000), second-degree heart block 1.2(1.09-1.34 p=0.000), bifascicular heart block 1.08(1.02-1.14 p=0.003), defibrillator use 1.36 (1.04-1.77 p=0.026).
- However, OSA was not significantly associated with atrial flutter 1.03(0.99-1.06 p=0.13), third-degree heart block 1.07(0.99-1.15 p=0.072), ventricular tachycardia 1.01(0.95-1.07 p= 0.762).

CONCLUSION

- This analysis showed that HFpEF patients with OSA had higher likelihood of arrhythmias, and ischemic cardiac events. Lifestyle modifications including weight loss, healthy diet, and appropriate CPAP use should be encouraged in these patients.