Response to Letter Regarding Article, “Cardiac Structure and Function Across the Glycemic Spectrum in Elderly Men and Women Free of Prevalent Heart Disease: The Atherosclerosis Risk In the Community Study”

We thank Dr Monneret et al for their kind words commending our article describing cardiac structure and function across the glycemic spectrum in elderly men and women free of prevalent heart disease from the Atherosclerosis Risk in the Community (ARIC) study. Dr Monneret et al raise an important question about the potential impact of obstructive sleep apnea (OSA) on the incidence of dysglycemia, as well as subclinical impairments of cardiac structure and function.

OSA is reportedly prevalent in ≤17% of men and 9% of women; however, it frequently remains undiagnosed. It is well known that OSA frequency and severity is highly associated with common cardiovascular risk factors, such as age, male sex, and more importantly, obesity. Furthermore, it has been shown to increase the risk of cardiovascular morbidity and mortality in several observational studies. It is also well known that there is a higher prevalence of diabetes mellitus among patients with OSA than in the general population, although it is not clear whether it is because of common risk factors between diabetes mellitus and OSA or that there is a causal role between OSA and diabetes mellitus. Indeed, recently, it has been reported that OSA severity is associated with incidental diabetes mellitus in a historical cohort study.

Although this was not specifically the objective of our analysis, we combined results from older analyses of the Sleep Heart Health Study (SHHS) and identified 830 subjects with polysomnography data at ARIC visit 4, who were included in our echocardiographic analysis. Although moderate to severe OSA was prevalent in 11.7%, 10.3%, and 20.8% of subjects with normal glycemic status, pre–diabetes mellitus, and diabetes mellitus, respectively, it was not associated with incident diabetes mellitus or pre–diabetes mellitus at visit 5. Because of the reduced statistical power in this small limited sample, we were unable to effectively assess for an independent association between measures of cardiac structure and function and dysglycemia adjusting for OSA severity (of note, the point estimates for the association between cardiac structure and function and dysglycemia did not significantly change compared with the analysis in the larger cohort). Although the question by Monneret et al remains of scientific value, it may not be answered directly with our data set.

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Disclosures

None.

References

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