

Screening tools for obstructive sleep apnea in extremely obese women during pregnancy



TO THE EDITORS: We have read with great interest the study from Dominguez et al¹ regarding the efficiency of established screening tools for obstructive sleep apnea (OSA) in extremely obese women and the incidence of the disease in this population. Given the rapidly increasing obesity rates worldwide, OSA is likely to become more prevalent in the pregnant population. Because of its association with several disorders during pregnancy, such as hypertensive conditions and gestational diabetes mellitus, the screening for OSA may be worthwhile. This is of particular relevance in high-risk populations, such as obese pregnant women.

After analysis of the article, some methodologic aspects must be discussed and clarified carefully, in our opinion.

One limitation of the study is the fact that more than one-fourth of the participants (26%) who were included were ruled-out because of the noncompliance with the home sleep testing. Although these data were not included in the article, the reason of noncompliance and characteristics of the women who were excluded are of major relevance, because some of these aspects may be related with the OSA status, thereby conditioning the estimated incidence of the disease.²

Women were screened from weeks 24–35 of gestation because of a higher frequency of OSA in the mid and third trimesters.¹ However, we consider that this timing may not be the best for OSA testing. First, the decrease of sleep quality throughout pregnancy that is associated with the discomfort of sleeping with a monitor device, in part, may justify the high proportion of women who were excluded from the study because of an inadequate sleep evaluation.^{1,3} Second, it is important to point out that a late detection of more severe OSA may imply that necessary therapeutic measures start only shortly before delivery. To the best of our knowledge, there are no studies about the efficacy of treatment modalities for OSA during pregnancy. Therefore, the mainstay for managing this condition, in mild and severe cases, is the use of continuous positive airway pressure, as in the general population. In this population, most groups have evaluated the long-term benefits of the use of continuous positive airway pressure, although no studies have demonstrated a positive short-term impact.⁴ By inference, at the timing considered, screening and detection may be useless if no effective therapy can be used.

Finally, despite the need for more efficient screening tools, this progress must be made alongside the development of trials to evaluate the impact of different treatments. ■

Tiago Aguiar, MD
Nuno Montenegro, PhD
Gynecology and Obstetrics Department

São João Hospitalar Center
Hospital São João
Porto, Portugal
tiagomdiasaguiar@gmail.com

Tiago Ferraz, MD
Obstetrics and Gynecology Department
Mouwasat Hospital Khobar
Khobar, Saudi Arabia

The authors report no conflict of interest.

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REPLY



We thank Drs Aguiar, Ferraz, and Montenegro for their interest in our research and their thoughtful comments. As stated in our original manuscript, a major limitation of our study was that one-quarter of the subjects either decided not to wear the home sleep test device after enrolling in the study or did not tolerate the home sleep device long enough to interpret the data (<2 hours of sleep).¹ This may be a limitation of the type of home sleep test device that was used that required a nasal canula and respiratory impedance chest belt that many women reported to be uncomfortable. We agree with the comment that the gestational window studied in this study (24–35 weeks) is also associated with greater sleep disruption because of pregnancy-related factors and may have also interfered with our ability to detect sleep-disordered breathing, which is a challenge in this population.

Although the concern that drop-outs may have influenced the prevalence of obstructive sleep apnea in our cohort is valid, we did not find any statistically significant differences in key characteristics between the drop-out subjects and those

subjects who were included in the final analysis. The drop-out subjects were of similar age (median, 26 vs 29.5 years; $P=.23$), body mass index (median, 47 vs 47.3 kg/m²; $P=.41$), and gestational age at enrollment (mean, 29.8 weeks in both groups) compared with those subjects who were included in the analysis. The rate of chronic hypertension was also not significantly different between the groups (19% vs 33%; $P=.20$). Both groups performed similarly on the Berlin questionnaire (median, 2 in both groups), Stop-Bang (median, 3 in both groups), and the score described by Facco et al² (mean, 88 vs 92; $P=.2$). Based on this analysis, there is no reason to believe that there was selection bias on key confounders or screening tool performance for the cohort included in the analysis that could have impacted our findings.

We agree that future studies that evaluate the impact of obstructive sleep apnea screening early in pregnancy on treatment options and studies that evaluate the efficacy and impact of obstructive sleep apnea treatment in pregnancy are needed. ■

Jennifer E. Dominguez, MD, MHS

Mary Cooter, MS

Ashraf S. Habib, MBBCh, MSc, MHSc, FRCA

Department of Anesthesiology

Duke University Medical Center

Durham, NC, 27710

Jennifer.dominguez@dm.duke.edu

The authors report no conflict of interest.

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