Obstetrics: *Editorial*

The Advice We Give to Pregnant Women

Sleep On It

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Pregnant women are frequently advised to sleep on their left side owing to a concern about increased risk of stillbirth. This recommendation is based primarily on low-quality evidence from retrospective and case–control studies. In this month's issue of *Obstetrics & Gynecology* (see page 667), Silver et al[1] report on a study of maternal sleep position and pregnancy outcomes using a prospective study design. Maternal sleep position was assessed in early and middle pregnancy and linked with possible adverse outcomes, including stillbirth, small for gestational age, and gestational hypertension. In contrast with the existing literature, Silver et al found no association between non–left lateral sleep and any measured adverse outcome. The only significant finding was a protective effect of non–left lateral sleep on stillbirth (notably the opposite of existing findings; the authors state that they believe this finding was spurious owing to small numbers).

These new findings stand in contrast to the case–control studies that are common in this literature and referenced in this study, which suggest a significant association between sleep position and stillbirth. For example, McCowen et al[2] conclude that the adjusted odds ratio of stillbirth with non-lateral sleep is 3.67, with nearly 10% of stillbirths being attributable to this risk factor. The key difference between these existing studies and the findings of Silver et al is the methodology. The existing case–control studies elicit information on sleep after the adverse event, whereas Silver et al collected sleep position prospectively.

The prospective method should be recognized as preferable. Eliciting information on behavior after a devastating adverse event such as stillbirth is challenging, and women in this situation may be more likely to report behaviors they think are linked to the adverse outcome in a search of an explanation. This is referred to as *recall bias.* Beyond this, the selection of a control population, by necessity done in a different manner from selection of the case population, may introduce further bias.

This study should cause us to reconsider how we counsel pregnant women regarding sleep position. We suggest that pregnant women should be told that, although some evidence in the past may have suggested a link between not sleeping on the left side and adverse outcomes, the best evidence does not suggest such an association, and, as a result, they should feel comfortable sleeping in any position that works for them.

The contrast between these new results and the existing advice should also give pause in how we generally approach recommendations and guidelines for pregnant women in the face of limited evidence. The limitations of case–control studies are well known. Although it is true that there were several case–control studies showing the same associations, because they are all subject to the same biases, having more of them does not obviously improve inference.

Yet, despite the clear limitations in the existing data, advice on sleep position has not been nuanced. As the authors of this new study note, there are public health campaigns urging women to sleep on their left side. The advice to sleep on the left side is generally given in absolutes, without caveats, and without mention of the limitations of the supporting data. Women are told this is the safest or best way to sleep, and they should certainly avoid sleeping on their back. As it turns out, this advice is likely wrong.

One may ask, of course, what is the big deal? Even if the recommendation for left-sided sleep may be unwarranted, what is the harm from a medical standpoint?

We believe this logic is problematic for two reasons. First, advice like this puts unnecessary restrictions on women in a time when it is already difficult to sleep well. Many pregnant women struggle to get comfortable, especially toward the middle and end of pregnancy. Sleep is important for everyone and especially for women who are about to enter a period of significant sleep deprivation. Making sleep more difficult for pregnant women could at worst be harmful for some women, and at least be quite unpleasant for many women.

Second, in the rare cases when there is a bad outcome, advice like this contributes to devastating and unwarranted feelings of responsibility and guilt, and this harm to women already suffering from sadness and despair must not be minimized. A small share of pregnant women will experience a stillbirth, no matter how they sleep. When this happens, it is natural to look for explanations, even though there often are none. Advice like this gives women an avenue to blame themselves, and we need to do our best to relieve them of this guilt. One way would be not perpetuating advice about unproven causes of stillbirth such as sleep position.

Sleep position is only one example. We have both written on the topic of evidence-based recommendations for pregnant women[3–5] and believe that advice for pregnant women should be based on quality evidence. Not doing so can have unintended consequences.

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