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Perinatal Outcomes After Bariatric Surgery Compared With a Matched Control Group

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We appreciate the study from Boller et al[1] in the March 2023 issue on perinatal outcomes after bariatric surgery. This topic is of interest because bariatric surgery has been shown to significantly reduce obesity-related comorbidities through sustained weight loss, but it is understudied in the context of pregnancy.[2,3] However, ambiguities in the treatment definition make it difficult to translate these results into clinical practice.

In this study, bariatric surgery is well-defined, and the authors stratify analyses to consider variation by procedure type. However, those in the no-surgery group are potentially participating in a variety of other undefined and unmeasured weight-loss regimens (eg, lifestyle modifications, therapy, medication, a combination of these regimens, or no weight-loss treatment at all). This group includes people who may be eligible for bariatric surgery and those who are not. This results in difficulties with clinical interpretation because we cannot properly attribute the estimates to bariatric surgery.[4] For example, comparing bariatric surgery with semaglutide would likely produce a different estimate than comparing surgery with psychotherapy, but neither of these alternative treatments are measured in the current study.

By ignoring other types of weight-loss treatment, the authors implicitly assume that the distribution and effect of these alternative treatments are balanced between those who did and did not undergo surgery. The distribution of alternative treatments likely differs between these groups, because bariatric surgery has distinct eligibility requirements. Although propensity score matching balances measured confounders between groups, it cannot account for heterogeneity in the treatment. Additionally, the results of this study cannot be applied to other pregnant populations, because the authors' estimates rely on a specific, but undefined, distribution of weight-loss interventions between comparator groups.[5]

The treatment could be clarified by emulating a hypothetical randomized controlled trial in which participants are assigned to distinct treatment arms, including bariatric surgery, semaglutide, a well-defined exercise program, or a combination of these.[6] In practice, the authors may consider the other regimens through matching, comparison of distributions, or sensitivity analyses.[7]

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Although it may be difficult to account for all methods of weight-loss treatment in an observational study, we believe that clarifying the treatment definition is essential for clinicians and policymakers to interpret these results.

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