RESPONSE TO COMMENT ON SJÖHOLM ET AL.

Weight Change–Adjusted Effects of Gastric Bypass Surgery on Glucose Metabolism: 2- and 10-Year Results From the Swedish Obese Subjects (SOS) Study. Diabetes Care 2016;39:625–631

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We are pleased that Spaniolas and Pories (1) take an interest in our work and that they agree that "weight loss is a key factor in the success of metabolic surgery." However, they have concerns about the methods used to assess weight loss–adjusted effects of gastric bypass surgery on glucose metabolism. We agree and therefore discussed the issues raised by Spaniolas and Pories in detail in the CONCLUSIONS section (2), including the use of fasting glucose values and lack of clamp data (limiting us to use HOMA of insulin resistance [HOMA-IR] as an estimate of insulin resistance), loss to follow-up at 10 years, and the fact that vertical banded gastroplasty is a technique that is rarely used today.

There is also a concern about the group sizes and potential power problems when dividing the data by surgery type and degree of weight loss. For the main analysis this is probably not an issue, as 204 gastric banding and 171 gastric bypass patients completed the 10-year follow-up and were therefore included. In contrast, as correctly pointed out by Spaniolas and Pories, power may be an issue in the subgroup analyses where group sizes are smaller (data in Supplementary Data online in ref. 2). However, despite these difficulties, we believe it is important to share this information, as other studies with a comparable number of included subjects and 10-year follow-up are lacking.

Furthermore, the authors are of the opinion that our results are in contrast to the report recently published by Mingrone et al. (3), in which diabetes remission/relapse was assessed 5 years after gastric bypass, biliopancreatic diversion, or medical therapy (in groups of 20 patients). It is true that Mingrone et al. report that "weight changes were not associated with either remission or relapse of diabetes" and "despite differences in glycaemic control, weight loss and changes in BMI did not differ significantly between patients in either surgery group." However, these observations are based on just 19 patients in remission and 19 not in remission after 5 years, and the range of weight loss was smaller than in our study. Thus, the power issue discussed above is relevant also when interpreting this statistically nonsignificant observation by Mingrone et al.

Finally, we agree with Spaniolas and Pories that further mechanistic studies are needed in the area of metabolic surgery, and we would be happy if our results inspired the setup of well-powered, long-term studies including analysis of clamp-based glucose disposal.

Duality of Interest. No potential conflicts of interest relevant to this article were reported.

References

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