Reviewer’s report

Title: Irritable bowel syndrome-like symptoms and health related quality of life two years after Roux-en-Y gastric bypass - a prospective cohort study

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Reviewer: Yoav Mazor

Reviewer's report:

I read with interest the article 'Irritable bowel syndrome and health related quality of life two years after Roux-en-Y gastric bypass - a prospective cohort study' by Blom-Hogestol et al. The authors should be applauded for their effort to assess complications of RYGB and their relation to quality of life measures. The presented cohort (n=233) with two years follow up is of sufficient size, with acceptable follow up rates (76%). Missing data is sometimes substantial (19% of patients from one of the two included centers did not have baseline HRQoL), but all missing data is accounted for, and statistical methods are performed and reported as appropriate. Main findings suggested by this article are (1) 22% of patients develop IBS following RYGB (2 years), (2) Some predictors of developing IBS exists, especially pre-surgery IBS, (3) IBS is associated with reduced QOL.

My main comment regards the use of the IBS Rome definition in this cohort. Rome III defines IBS as a symptom based diagnosis which includes abdominal pain/discomfort, with 2 of 3 features: (1) improvement with defecation (2) onset associated with change in stool form or (3) change in stool frequency, all lasting for at least 6 months. Rome IV furthers this definition to include only pain and not discomfort. This symptom-cluster has been validated in numerous studies of non-surgical patients, and minimal, if any, additional work up is required in these patients. Pathophysiology includes gut hyper-sensitivity.

Nevertheless, applying this Rome definition to patients following surgery, specifically intestinal surgery, requires additional care. As the authors themselves show, change in bowel habits is common following RYGB (diarrhea and constipation scores increased significantly from baseline). Abdominal pain (but not necessarily IBS) is also common following non-intestinal surgery (Sperber et al 2008 Gastroenterology). Furthermore, multiple non-functional etiologies for abdominal pain can be present following bariatric surgery (Greenstei et al, Am J Surg. 2011); in a previous publication from the same study group, an underlying organic explanation for abdominal pain was found in 34 (76% ) of patients with abdominal pain 5 years following bariatric surgery (Blom-Hogestol et al, Surg Obes Relat Dis. 2018). Only 5 (17%) of these patients were given a diagnosis of IBS.

As such, missing are the following data:

1- What was the prevalence of abdominal pain before surgery and at two years? The authors cite a study looking at this question (ref 12, Chahal-Kummen M et al accepted for publication, not available online yet). What are the differences between these two studies?
2- What was the prevalence of each of the Rome criteria (change in stool form, frequency and relation of pain to defecation) before and after surgery? How many patients were actually defined as IBS due to abdominal pain and change in defecation habits resulting from surgery? What was the prevalence of other pain-related Rome diagnosis such as central-mediated (chronic functional) abdominal pain, dyspepsia or non-specific abdominal pain?

3- What, if any, work up was performed for these problems (abdominal pain and change in stool habits)? Although no formal guidelines exists, in light of the above publications reasonable testing would include exclusion of surgical complications, celiac, lactose intolerance and biliary colic. How many patients were tested for these alternative diagnosis?

4- What medications were patients taking at follow up? Anti-pain medications can severely effect bowel habits, and treating with neuromodulators (TCA, SNRI) can ameliorate IBS-like symptoms. Can the authors present any data on these?

Minor comments include:

1- What was the prevalence of the different subtypes of IBS?

2- No discussion of the associating of high vitamin B1 with developing of IBS/pain/change in bowel?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
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No

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