Author's Accepted Manuscript

Editorial: Quality of life following laparoscopic sleeve gastrectomy

John Roger Andersen

DOI: <http://dx.doi.org/10.1016/j.soard.2014.06.003>

The final article is published in: *Surgery for Obesity and Related Diseases*.

Cite this article as: John Roger Andersen. Quality of life following laparoscopic sleeve gastrectomy. *Surgery for Obesity and Related Diseases*.

DOI: <http://dx.doi.org/10.1016/j.soard.2014.06.003>.

The desire for a better quality of life (QOL) is often a major motivation for seeking bariatric surgery [1,2]. Fortunately, well-known operations, such as adjustable gastric banding, Roux-en-Y gastric bypass (RYGB) and biliopancreatic diversion with duodenal switch are associated with important long-term improvements in QOL [3-5]. These results are encouraging, although the degree of publication bias in favor of effective studies is unknown.

Laparoscopic sleeve gastrectomy (LSG) is a relatively new and increasingly popular surgical approach, due to its perceived simplicity of surgical technique and good midterm outcomes. However, due to the past lack of standardization associated with LSG, the results may differ between surgical teams [6] and consequently QOL outcomes may also differ. Some data suggest that LSG is just as effective as RYGB in improving QOL [7], but also less than desired QOL results have been reported [8]. However, data on LSG and QOL is limited. Thus, it is of major importance that there are multiple high-quality studies on change in QOL following LSG, in addition to studies that explore predictors of change in QOL.

In this issue of the journal, Charalampakis et al. from Crete present excellent QOL results 2 years after LSG, using the obesity-specific Moorehead-Ardelt II (MA II) questionnaire and a visual analogue scale for overall QOL [9]. Their findings suggest that female gender, larger weight loss, low total number of co-morbidities, and improvements/resolution of co-morbidities (diabetes and sleep apnea) are associated with better QOL (MA II total score) after surgery. Their finding on gender differences and QOL should be interpreted with special caution, as more studies are needed to explore this issue. However, their finding that poorer weight loss and co-morbidities that were not well controlled or resolved predicted poorer QOL seem to be quite logical, as these risk factors may cause bothering symptoms, reduced functioning, and negative psychological effects. In fact, an overlap exists between co-morbidities and QOL, as co-morbidities often are diagnosed partly on the patients' self-reported health status (e.g., depression, anxiety, and arthritis) [10].

Although the study of Charalampakis et al. has several strengths, it also has limitations that provide suggestions for future research. First, the first 2 years following bariatric surgery may be viewed as the "honeymoon period," a time when QOL often is vastly improved from baseline. This period seems to be followed by a gradual decline in QOL that stabilizes at approximately 5 years postoperatively [11]. Thus long-term studies on QOL following LSG are highly needed. Second, although Charalampakis et al. applied a validated obesity-specific QOL questionnaire in their study [12], a generic measure that makes possible comparisons in QOL between the patient group and the general population is also of value [3]. Preferably a QOL study in this field should use both these types of QOL measures. Another limitation is that Charalampakis et al. had a set of predictors for QOL that was far from exhaustive. For example, it would be interesting to study whether changes in health behaviors like eating and physical activity, mental co-morbidities like depression and binge eating, social support, and side effects of LSG have any effect on QOL. Of particular interest is whether gastroesophageal reflux disease, which may be a problem after LSG [13], is associated with poorer QOL.

Thus, future studies on predictors of QOL after LSG would be of benefit if studies were carefully predesigned for this purpose. To ground such studies in a theoretical QOL framework may also be of value. One example of a promising framework is the health and quality-of-life model of Wilson and Cleary [14]. Research groups may also want to include researchers that master qualitative research methods to better understand their patients. Qualitative data have given us great insight in the complexity of QOL in this patient group [[1, 15], which is complementary to those derived from self-administered questionnaires.

References

- [1] Meana M, Ricciardi L. Obesity surgery. Stories of altered lives. Reno: University of Nevada Press; 2008.
- [2] Munoz DJ, Lal M, Chen EY, et al. Why patients seek bariatric surgery: a qualitative and quantitative analysis of patient motivation. *Obes Surg* 2007;17:1487–91.
- [3] Aasprang A, Andersen JR, Vage V, Kolotkin RL, Natvig GK. Five year changes in health-related quality of life after biliopancreatic diversion with duodenal switch. *Obes Surg* 2013;23:1662–8.
- [4] Kolotkin RL, Davidson LE, Crosby RD, Hunt SC, Adams TD. Six-year changes in health-related quality of life in gastric bypass patients versus obese comparison groups. *Surg Obes Relat Dis* 2012;8:625–33.
- [5] Mathus-Vliegen EM, de Wit LT. Health-related quality of life after gastric banding. *Br J Surg* 2007;94:457–65.
- [6] Rosenthal RJ, International Sleeve Gastrectomy Expert P, Diaz AA, Arvidsson D, Baker RS, Basso N, et al. International Sleeve Gastrectomy Expert Panel Consensus Statement: best practice guidelines based on experience of 412,000 cases. *Surg Obes Relat Dis* 2012;8:8–19.
- [7] Zhang Y, Zhao H, Cao Z, et al. A randomized clinical trial of laparoscopic Roux-en-Y gastric bypass and sleeve gastrectomy for the treatment of morbid obesity in China: a 5-year outcome. *Obes Surg* 2014.
- [8] Strain GW, Saif T, Gagner M, Rossidis M, Dakin G, Pomp A. Cross sectional review of effects of laparoscopic sleeve gastrectomy at 1, 3, and 5 years. *Surg Obes Relat Dis* 2011;7:714–9.
- [9] Charalampakis V, Bertias G, Lamprou V, de Bree E, Romanos J, Melissas J. Quality-of-life before and after laparoscopic sleeve gastrectomy. A prospective cohort study. *Surg Obes Relat Dis* 2014.
- [10] Andersen JR, Aasprang A, Bergsholm P, Sletteskog N, Vage V, Natvig GK. Predictors for health-related quality of life in patients accepted for bariatric surgery. *Surg Obes Relat Dis* 2009;5:329–33.
- [11] Karlsson J, Taft C, Ryden A, Sjöström L, Sullivan M. Ten-year trends in health-related quality of life after surgical and conventional treatment for severe obesity: the SOS intervention study. *Int J Obes* 2007;31:1248–61.
- [12] Moorehead MK, Ardelt-Gattinger E, Lechner H, Oria HE. The validation of the Moorehead-Ardelt Quality of Life Questionnaire II. *Obes Surg* 2003;13:684–92.

- [13] Chiu S, Birch DW, Shi X, Sharma AM, Karmali S. Effect of sleeve gastrectomy on gastroesophageal reflux disease: a systematic review. *Surg Obes Relat Dis* 2011;7:510–5.
- [14] Wilson IB, Cleary PD. Linking clinical variables with health-related quality of life. A conceptual model of patient outcomes. *JAMA* 1995;273:59–65.
- [15] Bocchieri LE, Meana M, Fisher BL. Perceived psychosocial outcomes of gastric bypass surgery: a qualitative study. *Obes Surg* 2002;12:781–8