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PII: S1550-7289(16)30809-7S1550-7289(16)30684-0
DOI: http://dx.doi.org/10.1016/j.soard.2016.11.006
Reference: SOARD2824

To appear in: *Surgery for Obesity and Related Diseases*

Cite this article as: Gordon G. Wisbach, Comment on: Temporal changes in plasma markers of oxidative stress following laparoscopic sleeve gastrectomy in subjects with impaired glucose regulation, *Surgery for Obesity and Related Diseases,* http://dx.doi.org/10.1016/j.soard.2016.11.006

Comment on: Temporal Changes in Plasma Markers of Oxidative Stress Following Laparoscopic Sleeve Gastrectomy in Subjects with Impaired Glucose Regulation

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Obesity is a state of chronic low-grade inflammation with increased levels of inflammatory markers. Inflammation and oxidative stress are pathophysiological mechanisms linking obesity to the development of insulin resistance. A number of proteins secreted from adipose tissue, known as adipokines, are involved in the inflammatory process. Dysregulation of these adipokines leads to a pro-inflammatory state and peripheral insulin resistance. Bariatric surgery decreases the low grade inflammation associated with obesity as well as oxidative stress, and beneficially changes the levels of several adipokines. In 2010, Cabrera *et al* studied a few markers of oxidative stress and inflammation in 20 obese patients following laparoscopic Roux-en-Y gastric bypass (RYGB). In the preoperative period, the obese group individuals showed higher oxidation and inflammation levels and lower indices of antioxidant defense than the control group. One year after RYGB, an improvement in antioxidant protection, associated with a reduction in inflammatory and oxidative markers, was observed, indicating that these individuals presented a lower degree of oxidative stress.[1] One year later, Miller *et al* examined the changes in the biomarkers of inflammation, including leptin, adiponectin, C-reactive protein, interleukin-6, and tumor necrosis factor-α after RYGB in morbidly obese and found a reduction in pro-inflammatory biomarkers and an increase in the anti-inflammatory mediators