

Postoperative Bleeding Risk after Sleeve Gastrectomy. A Two Techniques of Stapled Line Reinforcement Comparative Study in 4996 Patients

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Abstract

Aim of the study: To compare the effectiveness of two different techniques used to control the postoperative bleeding after laparoscopic sleeve gastrectomy (LSG): over-sewing the stapled line and applying hemostatic clips on the visible bleeders along the stapled line.

Material and Methods: Prospectively collected data of the patients submitted to LSG in Ponderas Academic Hospital, since January 2012 to November 2019 were retrospectively reviewed. Before and including the year of 2014, the control of the stapled line bleeding sources was provided by hemostatic clips while, starting with 2015, hemostasis was controlled by over-sewing the stapled line. For both groups, the blood pressure (BP) was intraoperatively raised up with 30% as compared to the preoperative level, in order to finally verify the surgical hemostasis.

Results: Between 2012 and 2019, 4996 gastric sleeve procedures were performed in our center, 1093 operations (Group A) being performed during the first interval (2012-2014) while the remaining 3903 procedures (Group B) have been performed during the second interval (2015 to 2019). Nine patients of the Group A (0.8%) developed early postoperative hemoperitoneum, in five of these cases the source being localized on the stapled line; among patients in the Group B early postoperative re-operation for hemoperitoneum was needed in 15 cases (0.38%), but in none of these cases the source was located at the stapled line; the difference was statistically significant ($p=0.002$).

Conclusions: The intraoperative risen of the blood pressure (BP) with 30% helps identifying and controlling the bleeding sources thus reducing the incidence of postoperative bleeding in LSG. Over-sewing the stapled line provided better hemostasis in LSG as compared with the application of metallic clips. No stapled line bleeding was encountered after systematically over-sewing it.

Key words: bariatric surgery, gastric sleeve, over-sewing the stapled line, hemostatic clips, post-operative bleeding