



Comparative study of two different linear staplers in 800 consecutive cases of laparoscopic gastric bypass.

Authors: Cohen, Ricardo Vitor; Schiavon, Carlos Aurélio; Galvão Neto, Manoel; Ramos, Almino Cardoso.

Institutions: 9 of July and Sao Camilo Hospitals – Sao Paulo - Brazil

Background: Advanced lap bariatric procedures like gastric bypass are increasing in number and are being accepted as a safe and effective approach to treat morbid obese patients. Many are the issues discussed about lap gastric bypass and one of that is the safety of the lap staplers. Since we have two major stapler manufactory companies, we decide to run a study to in practical field in order to compare if there's a difference between the use of those two staplers in terms of bleeding in suture line, digestive bleeding and leakages.

Methods: The experience of two of Brazilian top lap bariatric surgeons with referral in Latin America where reviewed in their last 400 cases of lap gastric bypass, that's mean, avoiding the learning curve of the first 200-250 cases. One of surgeon uses only the Endopath ATW® linear stapler of Ethicon Endo Surgery® (EES) company and the other uses only the Endogia® linear stapler of United States Surgical Company® (USSC) and their data bases were reviewed and data about possible troubles of stapler use was extracted .The surgeons perform the gastric bypass using 3 blue cartridges to make the pouch, 1 white cartridge to transect the bowel, 1 white in the enteroanastomosis and in gastro-entero anastomosis the EES reefer surgeon uses white and the USSC reefer surgeon uses blue cartridges. By the time of collecting data both surgeons didn't know the purpose of the study

Results: In the USSC reefer surgeon 400 patients group, there were 301 women (75,2%) with a mean BMI of 44 (2y follow-up , 77% EWL and a mean of 60 min operation time). Around 1600 shots of blue and 800 shots of white cartridges were fired. There were 11 (2,7%) episodes of bleeding in suture line (treated with monopolar cauterization), 1 (0,25%) digestive bleeding (clinical treatment), 6 (1,5%) Gastrojejunostomy leakages (1 re-operation and 5 clinical treatments) and one death (0, 25%) doe to sepsis in re-op patient. / In the EES reefer surgeon 400 group, there were 285 women (69, 5%) with a mean BMI of 44,7 (2y follow-up, 74% EWL and a mean of 72min operation time). Around 1200 shots of blue and 1200 shots of white cartridges were fired. There were 15 (3,7%) episodes of bleeding in suture line (treated with monopolar cautery in 13 and suture reinforcement in 2), 1 digestive bleeding (clinical treatment), 4 (1%) Gastrojejunostomy leakages (1 re-operation and 3 clinical treatments) and also one death (0, 25%) doe to sepsis in re-op patient. The statistics shows no difference between the groups, excepts to number of shots with blue and white cartridge and operation time ( $P>0,05$ ). The USSC reefer surgeon use ante-colic technique and the EES reefer surgeon use trans meso- pre gastric technique.

Conclusion: This comparative study shows the safety and efficiency of both staplers from different companies in hands of experienced lap bariatric surgeons who pass trough through the learning curve of lap gastric bypass with low rates of complications that can be related to the use of staplers