



THE IMPACT OF HELICOBACTER PYLORI ON LAPAROSCOPIC SLEEVE GASTRECTOMY POSTOPERATIVE COMPLICATIONS: A SYSTEMATIC REVIEW AND META-ANALYSIS¹

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Background: There is no consensus regarding the screening and eradication of *Helicobacter pylori* before laparoscopic sleeve gastrectomy (LSG). It has been hypothesized that *H. pylori* could increase the risk of postoperative complications following LSG due to its inflammatory and atrophic effect on gastric mucosa. Due to the scarcity of data, the European Association for Endoscopic Surgery states in their clinical practice guidelines on bariatric surgery that no recommendation can be made regarding *H. pylori* preoperative eradication. **Objectives:** We aimed to perform a systematic review and meta-analysis to evaluate the impact of *H. pylori* on postoperative outcomes of LSG. **Methods:** We performed a literature search of Cochrane, Scopus and PubMed databases to identify studies comparing surgical outcomes on patients who underwent LSG according to *H. pylori* positivity. Postoperative outcomes (staple line leak, length of hospital stay or bleeding) were assessed by pooled analysis and meta-analysis. Statistical analysis was performed using RevMan 5.4, heterogeneity was assessed with I^2 statistics and risk of bias was assessed using the Newcastle-Ottawa scale. Due to the nature of the research no ethical approval was necessary. **Results:** 1,026 studies were screened and 42 were thoroughly reviewed. Thirteen observational studies comprising 6,199 patients were included in the analysis. We found that *H. pylori* positivity was significantly associated with an increase in overall postoperative complications (OR 1.56; 95% CI 1.13,2.16; $P=0.007$) and in the occurrence of staple line leak (OR 1.89; 95% CI 1.05,3.41; $P=0.03$; $I^2=0\%$). Moreover, no differences were noted in length of hospital stay (OR -0.47; 95% CI -0.97,0.03; $P=0.07$; $I^2=70\%$) or bleeding (OR 1.44; 95% CI 0.79,2.64; $P=0.24$; $I^2=0\%$). Overall, studies were classified as having a low or moderate risk of bias. There was no evidence of publication bias by funnel plot analysis. **Conclusions:** *H. pylori* positivity on gastric tissue is associated with an increase in overall postoperative complications and staple line leak after LSG. Even though this data should be interpreted cautiously since it is derived mostly from retrospective studies and therefore cannot infer causality, it is suggestive that preoperative *H. pylori* screening and eradication could result in better outcomes for patients who will undergo LSG. Larger high-quality studies are needed to assess the role of *H. pylori* and its preoperative eradication in LSG outcomes. **Keywords:** Helicobacter pylori; laparoscopic sleeve gastrectomy; Obesity.