Use of Endoscopic Vacuum Therapy to Repair Colonic Anastomotic Leaks: A Meta Analysis

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Introduction: Endoscopic vacuum therapy (EVT) has recently emerged as a treatment modality for patients who experience anastomotic leak after surgery with an incidence of 6-30%. Treatment of anastomotic leaks using EVT in the upper gastrointestinal tract has been well documented. However, EVT for colorectal leaks remains a less studied entity. EVT is based on applying sponges to the area of the leak and negative pressure is applied to draw off fluid from the leak and help promote granulation tissue formation and healing. Our study aims to use prospective studies to assess the success and rates of adverse events using EVT for colo-rectal anastomotic leaks.

Methods: Pubmed, Embase and Cochrane were searched from inception to April 2022 for prospective studies reporting success and adverse event rates for EVT used for colo-rectal anastomotic leaks. Using I2 we assessed heterogeneity and calculated 95% confidence intervals using fixed or random effect models.

Results: Seven studies involving 368 patients were included in our analysis. Indication for surgery was malignancy in all cases. The total clinical success rate was 90.5% (CI: 87.6-93.5. I2 = 0%). The adverse event rate among all studies was 7% (95% CI: 4.4-9.5%, I2 = 0%). 6 patients required further surgical intervention and 2 required CT guided drain placement. No mortality was reported.

Conclusion: EVT is an emerging treatment option for anastomotic leak. Our study demonstrates the safety and efficacy of EVT as an option for patients who experience colorectal anastomotic leak, however large prospective studies are warranted for further evaluation.

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