

Systematic comparative review of literature regarding the management of sleeve gastrectomy leaks

Introduction

Gastric leak following sleeve gastrectomy remains a major challenge to clinicians while causing significant morbidity and mortality to affected patients. Managing these deep/organ-space surgical site infections involves radiological, endoscopic and/or surgical treatments although treatment algorithms may vary between bariatric institutions depending on patient factors or clinician preference.

The objective of this review is to assess the efficacy of different treatment strategies while suggesting an algorithm to assist in managing sleeve leaks according to their severity in a CT based staging system (type 1 to 4).

Materials and methods

A comprehensive search of existing literature over the last decade was conducted using pre-defined criteria in accordance to PRISMA guidelines. The included study leaks were further categorized according to severity prior to analysing the efficacy of treatment modalities.

Results

Following review of 1030 potential articles, 22 studies were included. A total of 719 sleeve leak patients were included with mean age and BMI ranging from 33-46 years of age and 37-48kg/m²

respectively. Regardless of leak severity, all studies described the importance of initial sepsis control (i.e. antibiotics and drainage - surgical/ radiological or endoscopic) and adequate nutrition. In type 1-2 leaks, primary endoscopic therapies were effective with study leak resolution rates of 50-100%. Endoscopic therapy remains a viable option in the management of type 3-4 leaks with study success rates ranging from 33-95%. Surgery was ultimately required in chronic leaks where all other modality has failed. fistula-jejunostomy as a salvage operation is a good option with lower side effect profile to roux-en Y gastric bypass and gastrectomy.

Conclusion

Management of sleeve leaks should be driven by the underlying leak pathophysiology. Our proposed algorithm highlights the importance of an escalatory approach to sleeve leak treatment, with initiation of minimally invasive options first before progressing management when ineffective.