

Dear Doctor,

Greetings from Micro Labs limited. We are happy to bring you “**ENTERON**” which contains latest and interesting news in the field of Gastroenterology.

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Looking forward to your valuable feedback

Best Regards,

Medical Team, Micro Labs Ltd

Safety and Efficacy of Anti-reflux Mucosectomy in refractory Gastroesophageal reflux disease

Gastroesophageal reflux disease occurs due to the malformation of the normal anti-reflux barriers to protect against abnormal amounts of retrograde reflux from the stomach to the esophagus. Gastroesophageal reflux disease for longer period of time can lead to esophagitis, esophageal ulcers, peptic esophageal strictures, Barrett's esophagus, and adenocarcinoma of the esophagus. First line treatment for Gastroesophageal reflux disease include proton pump inhibitors that inhibit meal-stimulated and nocturnal acid secretion, while 30% to 40% of patients are

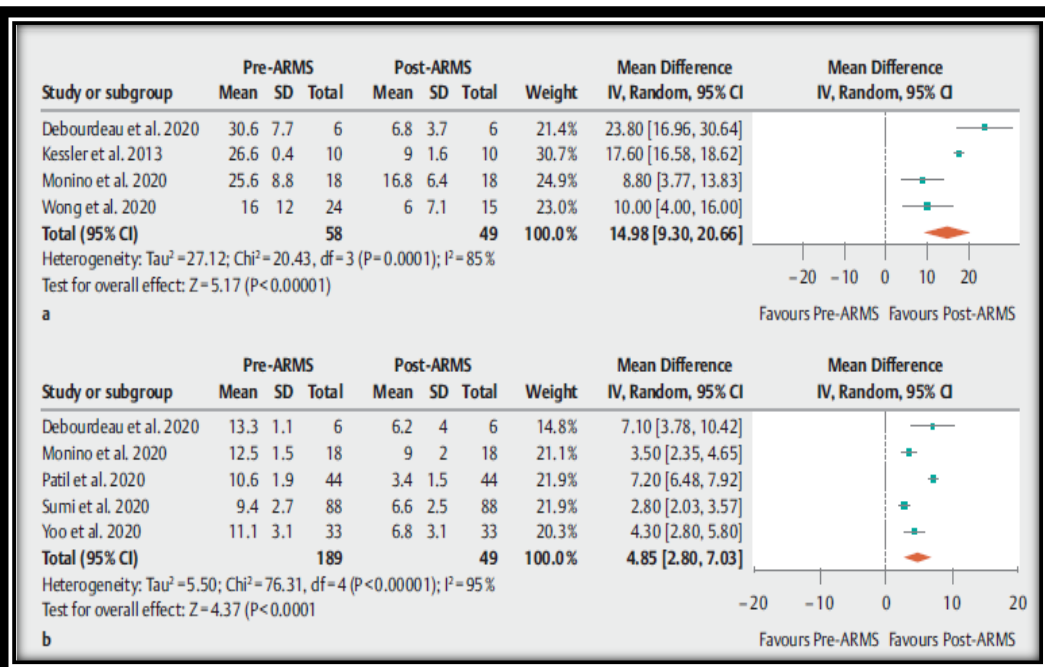
refractory to treatment with proton pump

inhibitors and may require endoscopic surgery to achieve clinical resolution of the symptoms.¹

Antireflux surgery is invasive, and has less post-operative complications such as dysphagia and gas bloating. The main aim of antireflux endoscopic treatment is to decrease the oesophageal sphincter through various techniques

including radiofrequency ablation, endoscopic fundoplication, and antireflux mucosectomy.² Garg R et al, aimed to evaluate the safety and efficacy of Anti-reflux mucosectomy (ARMS) in patients with refractory gastroesophageal reflux disease (GERD). To conduct this systematic review and meta-analysis, literature search

Fig:1 Forest plot showing a pooled rate of overall adverse events, dysphagia, and bleeding after Anti-reflux mucosectomy



was done that reported outcomes of anti-reflux mucosectomy for refractory gastroesophageal reflux disease. This review enrolled 307 patients from 10 studies. Technical success rate was 97.7% and clinical response rates was 80.1% respectively. 65.3% and 21.5% were the pooled rate of complete and partial clinical response. Commonly observed adverse events were 17.2% (**Fig:1**). Rate of Dysphagia and oesophageal stricture followed by bleeding was 11.4% and 5.0 %. In subgroup analysis, no differences were observed in terms of clinical response and adverse events between Anti-reflux mucosectomy and Anti-reflux mucosectomy with banding.

Conclusions: Anti-reflux mucosectomy is safe and effective for treating refractory Gastroesophageal reflux disease as it fills the treatment gap between proton pump inhibitor and laparoscopic fundoplication

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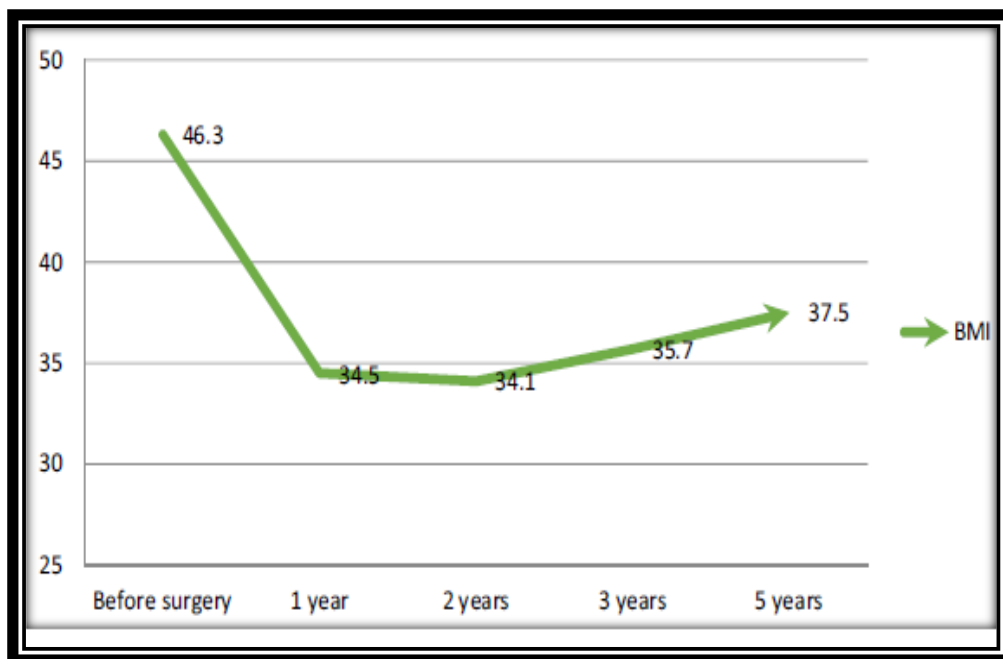
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Evaluation of 5-year outcomes of One Anastomosis Gastric Bypass following sleeve gastrectomy due to weight loss failure and weight regain.

Globally, obesity is being considered as an epidemic. However, bariatric surgery is an effective treatment option of obesity and its related complications. Due to less time consumption and simpler technique these days, sleeve gastrectomy is considered as the most frequent bariatric surgery in the world compared to gastric bypass. A major reason for undergoing bariatric surgery is failure in the weight reduction. Post-operative complications may develop after Sleeve Gastrectomy including Gastroesophageal Reflux Disease, stricture, and food intolerance leading to conversion surgery in up to 25% of the patients. One Anastomosis Gastric Bypass is a 3rd most common bariatric malabsorptive surgery performed worldwide. After Sleeve Gastrectomy, One Anastomosis Gastric Bypass has become a simple, cost-effective conversion procedure that gives promising results on weight and obesity and related complications.

Fig2: Trend of change in BMI during 5 years after conversional OAGB through repeated measure test. BMI body mass index, CI confidence interval

Kermansaravil M et al aimed to study the 5-year outcomes of One anastomosis gastric bypass following sleeve gastrectomy due to weight loss failure and weight regain. This study enrolled 23 patients with a history of Sleeve Gastrectomy conversion to One Anastomosis Gastric Bypass due to failure in weight reduction and had completed their 5-year follow-ups.

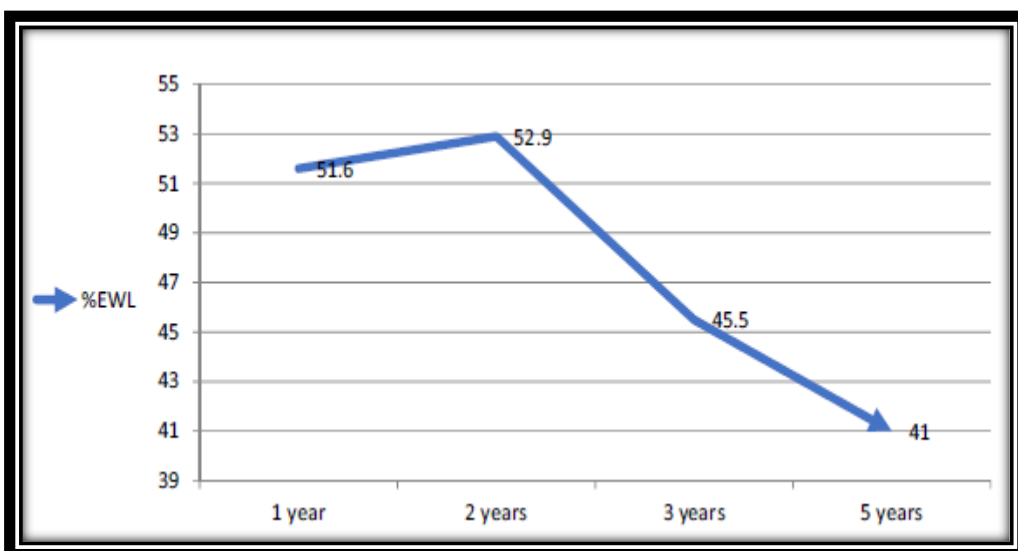


Researcher also investigated comorbidities like type-2 diabetes, hypertension, dyslipidemia, obstructive sleep apnea and gastroesophageal reflux disease at 1, 2, 3 and 5 years after conversional surgery.

A year after conversional one Anastomosis Gastric Bypass, almost all patients had shown improvement in type-2 diabetes, hypertension, dyslipidemia, obstructive sleep apnea and gastroesophageal

reflux disease. Statistically significant changes in trend of body mass index was identified. Prior to conversional surgery, at 1, 2, 3 and 5 years, mean body mass index were 46.3 ± 10.4 , 34.5 ± 8.5 , 34.1 ± 8.6 , 35.7 ± 8.7 and 37.5 ± 11.6 , respectively. Mean percent excess weight loss at 1, 2, 3

Fig3: Trend of change in %EWL during 5 years after conversional OAGB through repeated measure test. %EWL percent excess weight loss.



and 5 years was 51.6 ± 11.0 , 52.9 ± 13.1 , 45.5 ± 16.4 and 41.0 ± 18.0 , respectively while mean percent total weight loss at 1, 2, 3 and 5 years were 26.6 ± 5.9 , 27.4 ± 7.2 , 23.9 ± 9.2 and 20.9 ± 9.3 respectively. One Anastomosis Gastric Bypass is a safe and effective conversional strategy for patients with insufficient weight reduction and failed Sleeve Gastrectomy

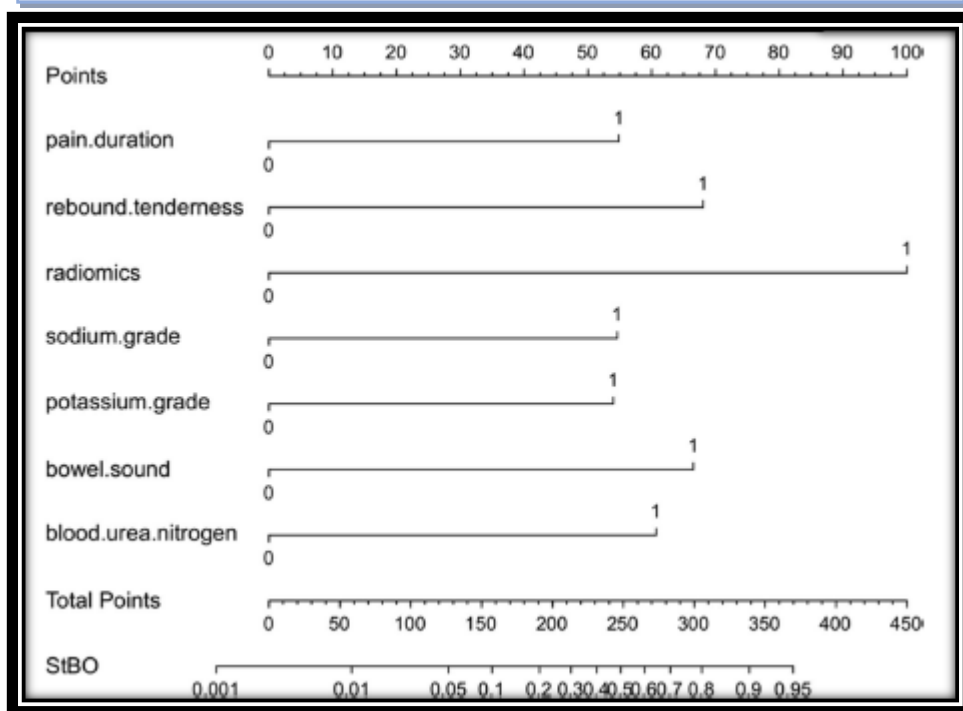
Conclusion: One Anastomosis Gastric Bypass is an effective conversional bariatric surgical procedure for treating obese patients with failed Sleeve Gastrectomy. 2 years follow up was required to get an optimal weight loss results

Reference: Kermansaravi, *et al.* Five-year outcomes of one anastomosis gastric bypass as conversional surgery following sleeve gastrectomy for weight loss failure. *Sci Rep* 12, 10304 (2022).

Distinguishing Strangulated bowel obstruction from simple bowel obstruction: A multi-dimensional model analysis

For all patients undergoing surgeries, small bowel obstruction accounts for 12%-16% patients. There are two types of small bowel obstruction: simple bowel obstruction and strangulated bowel obstruction. Usually simple bowel obstruction gets resolved without surgery, while strangulated bowel obstruction requires immediate surgical intervention as it may result in severe complications like bowel perforation, peritonitis and septic shock due to compromised blood flow.¹ According to a 35-year institutional experience, 42% of small bowel obstructions occurs due to due to strangulation. While, nonviable strangulation holds for 16% of small bowel obstructions, which have a 4-fold increase in the risk of death compared to viable strangulation.² The mortality Rate dramatically increases to 50%, in case of bowel transmural necrosis. However, studies have reported that 1/3 of patients with strangulated bowel obstruction shows the symptoms of abdominal pain, haematochezia and fever, while the remaining have non-specific symptoms such as diarrhoea, vomiting and bloating.²

Fig 4: Nomogram for the predictive multi-dimensional model of strangulated bowel obstruction



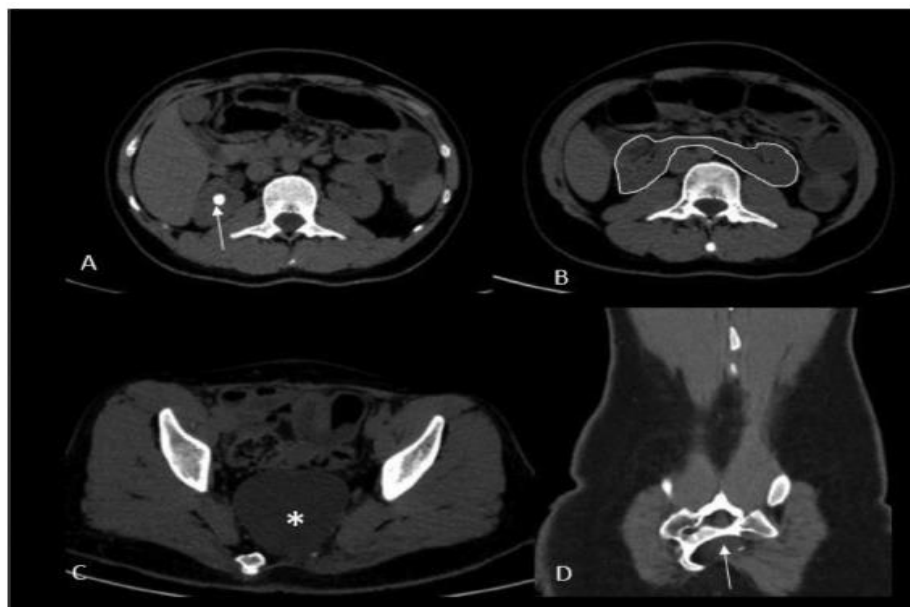
Xu WX et al, aimed to compare strangulated bowel obstruction from simple bowel obstruction based on the degree of bowel ischemia and enrolled 281 patients with small bowel obstruction. Of the enrolled patients, 16.0% had strangulated bowel obstruction and 84.0% had simple bowel obstruction. To identify independent risk factors, binary logistic regression was used, and then predictive models based on radiological and multi-dimensional models were prepared. To study the accuracy of the predicted models, receiver operating characteristic curves and the area under the curve were calculated. Multi-dimensional model was validated via stratification analysis, to predict transmural necrosis both in the training set and validation set. Observed area under the curve of the radiological model was found to be 0.706. Multivariate analysis revealed 7 risk factors including pain duration ≤ 3 days, rebound tenderness, low-to-absent bowel sounds, decrease levels of potassium and sodium, increased BUN, high radiological score (**fig 4**). Area under the curve of the multi-dimensional model was 0.857. The proportion of patients with transmural necrosis was significantly greater in the high-risk group (24%) when compared to the medium-risk group (3%). In the low-risk group, No transmural necrosis was identified. In the low-risk and medium-risk score group no patients suffered from strangulated bowel obstruction, while all patients with bowel ischemia and necrosis were seen in high-risk score group.

Conclusion: This novel predictive model consists of risk factors for pain duration, rebound tenderness, bowel sounds, potassium, sodium, BUN levels and radiological characteristics and can be used as an effective tool for predicting strangulated bowel obstruction. Clinical management should be performed according to the multivariate score and conservative treatment is recommended for patients with low risk

A Case Report of Currarino Triad in an adult male, diagnosed as an incidental radiologic finding.

Currarino syndrome is an autosomal dominant hereditary disease characterized by abnormality in anorectum, triad of sacral anomaly, and a presacral mass.¹ Sacral anomaly includes agenesis of the sacrum, coccyx, and hemisacrum while anorectal abnormality includes rectoperineal fistula, rectourethral fistula, rectovestibular fistula, and anorectal stenosis. Presacral mass is seen as anterior meningocele, teratoma, duplication cyst of rectum, or dermoid cyst.² This syndrome is rarely observed in adult patients while in some cases, it remains asymptomatic. Usually patients with currarino syndrome may have symptoms like constipation, rectal fullness, and abdominal pain due to extensive enlargement of the sacral mass which could be misdiagnosed as gastrointestinal problems.¹

Fig:5 Axial non-enhanced CT scan shows right sided radiopaque renal stone (arrow, A). Horseshoe kidney (B) anterior sacral meningocele (*, C), and sacral dysgenesis (arrow, D).



Jahromi MG. et al presented a case of a 21-year-old male patient with acute flank pain and a history of Hirschsprung's disease. Patient had undergone surgery in his infancy. Patient also complaint of having prolonged constipation. On physical examination, blood pressure was 125/80 mm/Hg, heart rate was 93 b/m, respiratory rate was 20 b/m, and temperature was 37.8 °C.

Physical examination revealed severe costovertebral angle tenderness. Urine analysis showed microscopic haematuria while laboratory tests were unremarkable. CT scan showed renal stones as well as a horseshoe kidney. A large simple cystic structure in the presacral area was observed suggestive of an anterior meningocele

and sacral dysgenesis associated with scimitar sacral appearance (Fig:5). Radiologic findings, along with the past history of anorectal abnormality suggested a diagnosis of Currarino syndrome.

Conclusion: Currarino syndrome is a hereditary disease characterised by the triad of anorectal abnormality, sacral malformations, and a presacral mass but the common clinical presentation is constipation. Because, of which, it is important to have a high level of suspicion when encountering patients with gastrointestinal, neurologic, or urologic signs and symptoms. A thorough history taking and physical examination alongside proper imaging evaluation should be considered to prevent the misdiagnosis. This case report demonstrated the importance of thorough history taking and imaging evaluation, as the primary tools for diagnosing Currarino syndrome

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