

“AMIR’S DUBAI REPAIR- ADR” MANAGEMENT OF REFLUX (GORD) POST WEIGHT LOSS SURGERY SAFETY AND FEASIBILITY: SHORT TERM RESULTS

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ABSTRACT

Following on from our last year’s presentation from Mediclinic Parkview hospital, Dubai, of an innovative surgical technique, Amir’s Dubai Repair (ADR), to treat gastroesophageal reflux post bariatric surgery. We present our short term follow up of the patients who had undergone ADR. We aim to demonstrate that the new surgical technique, ADR, is safe and feasible with acceptable outcomes and that meet the patient and clinician’s expectations.

In addition, we assessed and demonstrate that the benefits of ADR are better than the current standards of care, mainly chronic PPI therapy or aggressive surgery like Roux-en-Y gastric bypass for previous sleeve gastrectomy or total gastrectomy and Roux en-Y OesophagoJejunostomy after an initial proximal gastric bypass operation.

Our short-term results demonstrate that Amir’s Dubai repair is safe and feasible in experienced hands with low morbidity, few complications and no mortality in our series. All the five patients reported complete resolution of reflux symptoms and positive restriction at the Gastroesophageal junction post ADR.

Background:

A. Incidence of GORD / GERD after Bariatric weight loss surgery – Magnitude of problem

The prevalence of obesity worldwide has been steadily increasing from 1975 to 2014, with men and women having a BMI > 30kg/m² in 3.2–10.8% and 6.4 to 14.9% respectively. The prevalence of obesity has been extrapolated to estimate that more than 50% of the world’s population will be classified as obese or overweight by 2030. With an increase in obesity there has been a noticeable increase in attempts to curb the trend ranging from multiple diet plans and more importantly to an increase incidence of bariatric surgery. A little over 468 000 bariatric surgeries were performed globally in the year 2013. Of 1 Proceeding abstracts Medicine (2021) 100:33 Medicine all bariatric procedures, two are significantly more popular than their counterparts; Laparoscopic Sleeve Gastrectomy (LSG) and Roux-en-Y Gastric bypass (RYGB), accounting for 78.3% of all weight loss procedures in 2013. Both of these procedures, when performed following the prescribed and acceptable methods means that

patient is no longer amenable for Nissen's Fundoplication should they experience worsening of pre-existing GORD or new onset of GORD post operatively (De Novo GORD).

The prevalence of GORD as of 2015 is estimated at 14.8% of the adult population with significantly higher prevalence in Europe and Central America. There has also been shown to be a strong correlation between obesity and GORD with an increase of BMI by 3.5-unit points being correlated to a 3-fold increase in risk of developing new reflux symptoms. Ultimately this results in a large percentage of the adult population who have undergone bariatric surgery and are now suffering from GORD and associated complications with little alternatives to treat their condition outside of life long PPI therapy or repeat bariatric surgery.

B. Current Anti-reflux management options for patients who have undergone resectional Bariatric operations (Sleeve Gastrectomy and Proximal Gastric Bypass operation) – Lack of satisfactory management option for GORD / GERD post weight loss surgery

Anti-Reflux surgery and Bariatric surgery are subspecialties in their own right. Antireflux surgery offers functional results with surgical readjustment of Oesophago-Gastric-Hiatal complex. In Bariatric surgery; mostly resectional; primary goals are restrictive and malabsorptive to lose weight and avoid metabolic syndrome complications of obesity.

Antireflux surgery is being done for nearly 70 years and there are more than 10 surgical operations and many variations being offered to the patients. Over the last 30 years 3 operations are commonly offered with Laparoscopic Nissen's Fundoplication being the most popular globally with excellent results.

Bariatric surgery is being practiced for nearly 55 years and more than 15 operations are have been used during these years and the choices change every few years, with new operations being offered to the patients after every five years or so. The jury is still out to find an operation with lower rate of complications like anastomotic leak, bleeding, failure to lose weight / regain of weight loss and post-operative reflux.

In recent years the awareness has improved regarding the issue of Gastro Oesophageal Reflux disease (GORD / GERD) after Bariatric surgery (Sleeve Gastrectomy and Proximal Gastric Bypass operation). Bariatric fraternity tends to have a consensus of converting a sleeve to a Proximal Gastric Bypass and a Proximal gastric bypass to a Total gastrectomy and Roux en Y OesophagoJejunostomy. Both are salvage operations of poor acceptance from patients, poor quality outcomes and unpredictable results. In our opinion a simplistic answer to a complex situation.

We presented our new technique in 2019, which is being offered to the patients with reflux after Bariatric surgery (Sleeve Gastrectomy and Proximal Gastric Bypass operation). The technique is based on the sound principles and practices of established Antireflux surgery operations. We have treated patients over a period of three years with our technique named, Amir's Dubai Repair (ADR). It's compliant with all the four fundamental principles of Anti-reflux surgery.

We have performed ADR for 8 patients over the last 3 years. Six patients had previous sleeve gastrectomy and two had Proximal gastric bypass operation.

Following on from our previous presentation of ADR as a safe and feasible preferred technique to treat gastroesophageal reflux post bariatric surgery (Sleeve Gastrectomy and Proximal Gastric Bypass operation), we have followed up the outcomes of patients who have undergone ADR in Mediclinic Parkview hospital, Dubai.

Our secondary aim is to demonstrate that the new surgical technique was a success outright by ensuring that surgical outcomes and patient expectations were met.

In addition, the authors believe that the benefits of ADR are superior to the current Bariatric surgery salvage /corrective standards of care, mainly chronic PPI therapy or conversion to Roux-en-Y gastric bypass surgery (for Previous sleeve gastrectomy) or total gastrectomy and Roux-en-Y Oesophago-Jejunos tomy (for a previous proximal gastric bypass operation).

Method:

Patients followed after ADR procedure were reviewed in clinic 1 week and 6 weeks post operatively. The patients had a telephone interview using a standardized questionnaire at 1, 12 and 24months after surgery. In addition, data collected from the hospital records regarding patient's weight and height, preoperative endoscopic findings, operative time, post- operative complications, length of hospital stay and unplanned return to hospital.

Results:

Outcomes from the assessment in all the patients are shown in table below:

- Primary aims of ADR:
 - Control of reflux symptoms
 - Quality of life post procedure

- Secondary aims of ADR:
 - Continued weight loss post procedure with improved satiety
 - Correction of other complications from the primary bariatric surgical procedure (Gastric tube spiral and Gastric tube stenosis)

All the patients reported complete resolution of reflux symptoms and positive restriction at the Gastroesophageal junction post ADR.

All reported improvement in their need to take medication, with no reliance on chronic PPI therapy or minimal use of PPIs on as an if required basis.

All the patients in study have expressed significant improvement in:

- Quality-of-life post ADR, including factors such as being able to eat better and appropriately, ability to lie flat at night, sleep through the night without symptoms, no need to sleep propped up or sitting after ADR
- Absence of heartburn and volume reflux
- Absence of coughing, sore throat and associated symptoms
- Improved satiety after ADR has helped them to continue their weight loss journey with fresh hope and vigour.

Discussion:

Although the sample size is small, however the preliminary results for ADR are very promising in short term.

We need to follow up the patients closely in medium and long term. Amir's Dubai Repair (ADR) primary goal is to control and cure reflux after Bariatric surgery (Sleeve Gastrectomy and Proximal 2 Proceeding abstracts Medicine (2021) 100:33 www.md-journal.com Gastric Bypass operations).

While performing ADR, we also correct the other complications from the initial bariatric operation ((Gastric tube spiral, Gastric tube stenosis, lax Gastrojejunostomy post gastric bypass).

We will present of medium-term results after ADR in due course.

With increased awareness, we hope to be able to help a large proportion of patients suffering from GORD post bariatric surgery with this technique.

Reproducibility of the technique will have to be ensured in order to achieve consistently good results.

Conclusion:

- Amir's Dubai Repair is based on and compliant with the standard and published principles of anti-reflux surgery.
- We believe that Amir's Dubai repair (ADR) is a safe and feasible option for the treatment of complex issues in patients with reflux (GORD/GERD) after Bariatric surgery/Metabolic Syndrome surgery for weight loss (Sleeve Gastrectomy and Proximal Gastric Bypass operation).