

## SASI Operation

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### Abstract

Obesity is becoming more and more increasing in incidence all over the world including our kingdom. Many trials were adopted to treat this disease from dieting and exercises up to the surgical intervention. The different procedures have their own advantages and disadvantages. Our own experience with the Single Anastomosis Sleeve Ileal (SASI) bypass will be discussed here with review of literatures.

### Keywords

Sasi; Lsg; Roux-en-Y gastric bypass; Bariatric surgery

### Introduction

Single anastomosis sleeve gastrectomy ileal bypass (SASI) is a procedure which combines the advantages and avoids the disadvantages of the gastric restrictive and the malnutritional ones. It decreases the postoperative incidence of leakage and heartburn as well as the need for long term nutrient

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supplementation by maintaining the passage of the food and drink through the normal channel of the digestive tract.

## **Aim of The Operation**

SASI operation is a modified Omega loop gastric bypass. It has the advantages of both sleeve gastrectomy and gastric bypass by minimizing the size of the stomach and decreasing the appetite by removing the ghrelin hormone responsible for hunger, as well as reducing the long-term complications of gastric bypass.

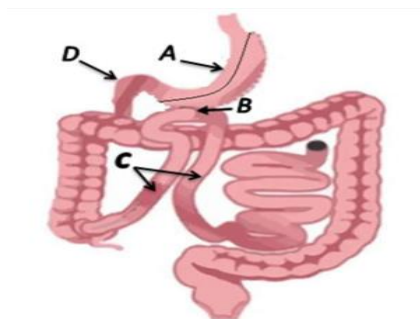
## **Material and Methods**

We hereby analyzing fourteen patients of different nationalities (5 males and 9 females) who were subjected to SASI operation between September 2022 to June 2023. Retrospective analysis and follow up were done, and the patient's satisfaction regarding the loss of weight and obesity related comorbidities are recorded.

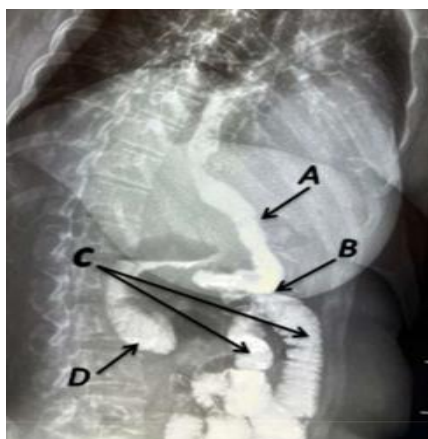
## **Surgical Technique**

Before surgery, the patient is sent to have the routine investigation done i.e. blood tests including serology and coagulation profile as well as chest x-ray & ECG, then sent to be seen and assessed preoperatively by the Anaesthetist. An informed consent is taken in the outpatient clinic.

One day before surgery, the patient is advised to put himself or herself on liquid diet until midnight, and then to take only water up to two hours before starting the operation. IV antibiotic is given and the mechanical anti-thrombotic measure using the automatic inflatable bag is applied after giving the general anaesthesia with endo-tracheal intubation. The patient is put on table supine in the French position and anti-Trendelenburg. The patient is draped and the abdominal cavity is insufflated with CO<sub>2</sub> up to a pressure of 18mm mercury. Five ports are used. We start first by creating the sleeve gastrectomy. About 75%-80% of the stomach is resected and removed. Then a length of about 250cm from the ileocaecal junction is measured and connected to the antrum of the stomach as Omega loop using an endo-GIA stapler size 45 and the hole is closed with V-lock suture material [Figure 1]. The integrity of the staple line as well as the gastroileal anastomosis is tested with Methylene blue. Size 19 JVac suction drain is left around the stomach. The abdominal cavity is desufflated and the wounds are closed with rapide 3/0. The patient is encouraged to walk up & about after full recovery and allowed sips of water at night. On the following day of the operation, Gastrographin study is done and the patient is discharged home by the end of the same day to be seen in the outpatient clinic after one week, then after 3, 6 & 10 months [Figure 2] (1-6).



**Figure 1:** A: Sleeved stomach, B: Gastroileal anastomosis, C: Omega loop, D: Duodenum.



**Figure 2:** Sleeved stomach, B: Gastroileal anastomosis, C: Omega loop, D: Duodenum.

## Advantages and disadvantages of the SASI

### The advantages

1. Reduces the high pressure in the sleeved pouch of the stomach, so reduces the risk of staple line leak than in sleeve gastrectomy alone.
2. Reduces the gastro-esophageal reflux.
3. Has great effects on treating Type 2 diabetes as well as high level of cholesterol and triglycerides and hypertension.
4. Reduces the risk of nutritional deficiencies as the food can still pass through the duodenum.
5. Still ERCP can be done through the duodenum (normal channel).
6. Reduces the feeling of hunger by releasing the intestinal break hormones from the ileum.
7. The regain of weight is much less than after sleeve gastrectomy alone especially in patients who like eating sweets.
8. Can be reversed.
9. Less risk of internal hernia.

### The disadvantages

1. Bile reflux from the Omega loop to the stomach.

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2. Anastomotic ulcer at the gastro-ileal site.

## Results and Discussion

SASI operation was practiced since 2012. Many centres around the world have established their experience regarding this investigational procedure to improve the weight loss and comorbidities. we started practicing this operation since September 2022 on 14 patients of different nationality (5 males & 9 females). The original weight on admission ranges between 78 kg - 195 kg, and the BMI between 32.8 kg/m<sup>2</sup> - 64.4 kg/m<sup>2</sup>. Their mean BMI after three months to ten months was 41 kg/m<sup>2</sup> (average 27.83 - 54.5 kg/m<sup>2</sup>). The total weight loss after three months to ten months was 13.4% (12 kg) to 41.0% (80 kg) respectively among our patients. All our patients had complete remission of their type 2 diabetes (100%), hypertension (75%), sleep apnea (100%) and hyperlipidemia (89%). None of our patients complained of heart burn (reflux) or dumping syndrome and no vomiting or regurgitation.

## Conclusion

As a result of our patient's satisfaction and no complaints during the period of the first ten months after they were subjected to the SASI operation as well as the satisfactory results regarding the weight loss and remission of the comorbidities, we think that SASI will be a promising procedure in the treatment of patients suffering from morbid & super obesity in the future especially those who love sweets or suffer from gastroesophageal reflux, but it still needs more cases and long term follow up to ensure its efficacy in different centres.

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