

A case of untreated ventral hernia after laparoscopic single anastomosis sleeve ileal (SASI) bypass surgery

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Abstract

A number of candidates of bariatric surgery may have a concomitant ventral hernia. Simultaneous repair of ventral hernia with bariatric surgery remains a subject of controversy in surgical practice. We present a morbid obese patient who underwent single anastomosis sleeve ileal (SASI) bypass while having a ventral hernia. The procedure for the repair of hernia was postponed until after the bariatric surgery was done. The untreated ventral hernia caused bowel incarceration and anastomosis leakage during the postoperative days. Thus, it seems that patients with small size ventral hernia with no intestinal or omental adhesions may benefit from hernia repair at the same time with bariatric surgery. However, in patients with large or complex ventral hernia and severe bowel and omental adhesions, it is advisable not to release adhesions and that the hernia repair be carried out after the patient's weight loss is achieved, to prevent iatrogenic bowel injury and minimize the risk of hernia recurrence and incarceration.

Keywords: SASI bypass, Ventral hernia, Weight loss

Introduction

Obesity is an independent risk factor for the development of ventral hernias. Therefore, about 8% of patients undergoing laparoscopic Roux-en-y gastric bypass (LRYGB) as a surgical treatment for morbid obesity may have a ventral hernia (1). Concomitant treatment of ventral hernia with bariatric surgery remains a subject of controversy in surgical practice (2).

Over the recent years, treatment of ventral hernias has been suggested to be postponed after improvement of nutritional status and other complications (3). However, in patients undergoing LRYGB with a hernia, the complications may occur and repair of ventral hernias in this patients should not be deferred (4). These complications may occur in other bariatric surgeries such as single anastomosis sleeve ileal (SASI) bypass, which is a novel bariatric surgery operation. SASI bypass surgery is based on mini gastric bypass operation and Santoro's operation in which a sleeve gastrectomy is followed by a side-to-side gastro-ileal anastomosis (5). In the current case report, complications of untreated ventral hernia after laparoscopic SASI bypass are presented.

Case report

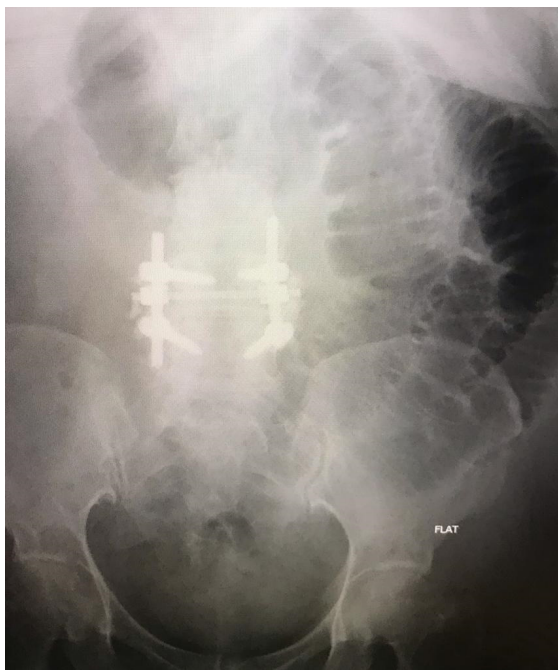
A 53-year-old morbidly obese female (BMI= 43) with no co-morbidities and several failed attempts to lose weight due to inability to exercise and low back pain, was

scheduled for laparoscopic SASI bypass. There was a past surgical history of abdominoplasty and ventral hernia repair 10 years prior to the time of scheduled surgery.

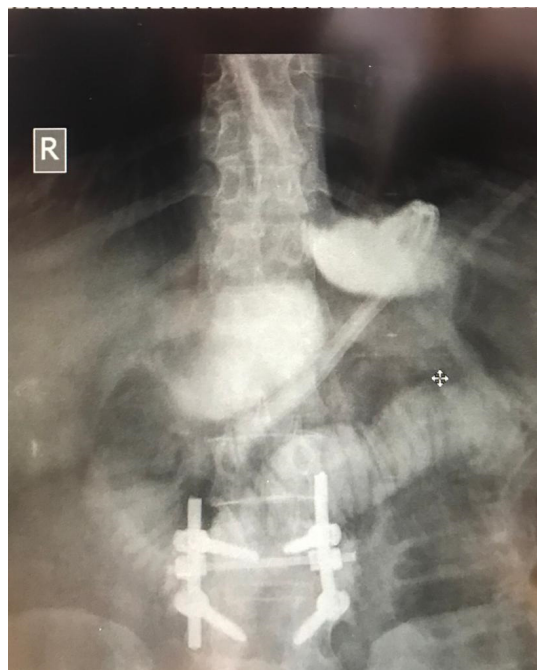
On clinical examination, recurrence of a ventral hernia was noticeable. Intraoperatively, the ventral hernia was seen with 5 cm defect in the RT upper quadrant of the abdomen, having omentum as content along with bowel adhesion to the abdominal wall. To proceed with SASI bypass, after the insertion of the other ports, bowel and omental adhesions were released completely. Procedure of SASI bypass was done by making loop gastro-ileostomy anastomosis to the antrum of sleeved stomach at about 300cm proximal to ileocecal valve. Intraoperative methylene blue leak test was negative; the Ventral hernia site was kept open but the port sites were closed with fascia closure as routine and jp (Jackson prat) drain inserted bellow left diaphragm and near the site of anastomosis. Then the patient was transferred to ICU for post-operative care. On the first post-op day, the patient was hemodynamically stable and therefore, she was transferred to the ward. On the third day following the procedure, clear liquid diet was started for her with a good recovery condition and tolerance level. On the fourth post-operative day, the patient developed several episodes of persistent postprandial vomiting which gradually changed to bilious vomiting. Medical therapy and hydration were commenced but no improvement occurred. Abdominal x-ray and contrast study (Pics 1,2) showed air-fluid levels and dye passage from the anastomosis sites without any leakage. On the fifth day, after one day of conservative management, the patient developed tachycardia, tenderness in right upper quadrant of abdomen associated with bilious drainage from jp. Immediately, re-laparoscopy was planned which revealed that a loop of small bowel in the efferent limb was herniated into the abdominal wall ventral defect at about 20 cm distal to the

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Pic. 1. Small bowel obstruction due to incarcerated efferent limb.



Pic. 2. Contrast study showed no leakage of anastomosis.

gastroileostomy anastomosis, with severe proximal small bowel dilation and obstruction which caused Minimal bile leakage from the anterior suture line of the anastomosis site due to excess pressure without any major collection in the abdominal cavity. The obstructed small bowel was normal without any sign of bowel gangrene so it was reduced with a smooth grasper and proximal decompression was done. The abdominal cavity was irrigated with N/S, the site of ventral hernia was repaired with several simple sutures with fascia closure, the anastomosis site was reinforced with pds 3-0 and a drainage catheter was inserted. Postoperatively, the patient was transferred to the intensive care unit and intravenous antibiotics were administered. On the second post-operative day, the patient was transferred to the ward and tolerated clear liquid diet on the fourth day. On the sixth post-operative day, the patient developed respiratory distress and tachypnea when chest CT scan was in favor of pulmonary emboli. After receiving therapeutic heparin, the patient was finally discharged with normal condition on oral anticoagulant medication.

Discussion

To the best of our knowledge, this is the first case-report presenting an incarcerated ventral hernia after SASI bypass procedure. Laparoscopic SASI bypass has been shown to be an effective and safe procedure for the treatment of morbid obesity and its associated metabolic consequences. Moreover, it may have minimal postoperative nutritional complications in comparison to other malabsorptive bariatric surgeries (5). The incidence of ventral hernia is common in bariatric population, which creates a challenge to bariatric surgeons. Some previous

studies have reported that hernia repair should be performed after bypass surgery as a staged repair. Newcomp et al., reported a cross-sectional study of 27 morbidly obese patients with ventral hernia who underwent gastric bypass surgery. Seven of the patients had hernia repair at the same time of their gastric bypass (4 sutured, 3 biological mesh), all of which developed hernia recurrence over an 18 month follow up (7). On the other hand, Eid et al., reported that 38% of patients with deferred hernia repair developed incarceration and intestinal obstruction. Following that observation, the author concluded that all incisional ventral hernias identified intraoperatively at the time of gastric bypass surgery should be simultaneously repaired (4). It has been shown in a previous case series that using synthetic mesh-reinforcement at the time of bariatric procedure is safe (8). However, mesh infection, prolonged operation time and hernial recurrence are among likely complications of simultaneous bariatric surgery and hernial repair (9). Moreover, potential consequences like incarceration due to incomplete hernial repair are a major concern for bariatric surgeons.

Conclusion

Patients suffering from small size hernia with no intestinal or omental adhesions seem to benefit from hernia repair by suture or small dual mesh fixation simultaneous with bariatric surgery. In contrast, in patients with large or complex ventral hernia and severe bowel and omental adhesions, it is better not to release adhesions and for the hernia repair itself, it is advisable to be carried out after the patient's weight loss is achieved, to prevent iatrogenic bowel injury and minimize the risk of hernia

recurrence and incarceration. Furthermore, we can choose a simpler technique for performing bariatric surgery in these cases.

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