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Obesity Surgery
The Journal of Metabolic Surgery and Allied Care

ISSN 0960-8923

OBES SURG
DOI 10.1007/s11695-018-3504-5

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https://doi.org/10.1007/s11695-018-3504-5

LETTER TO THE EDITOR

Acute Intestinal Obstruction Due to Internal Hernia After Abdominal Dermolipectomy

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Dear Editor,

We know that Roux-en-Y gastric bypass is currently considered the gold standard treatment for morbid obesity [1]. Internal hernias are one of its potential complications, with an incidence ranging from 0.8 to 5% [1–3]. Intestinal obstruction due to internal hernia in patients undergoing gastric bypass is already well documented in the literature, but the occurrence of obstruction after abdominal dermolipectomy in post-bariatric patients is still rarely reported. In such cases, exploratory surgery and proper treatment cannot be delayed due to the high risk of damage to the herniated intestinal loop [4]. In this letter, we aimed to describe a symptomatic case of intestinal obstruction due to internal hernia in a post-bariatric patient who underwent abdominal dermolipectomy.

A 46-year-old woman underwent open Roux-en-Y gastric bypass 6 years prior. Her total weight loss was 75 kg (BMI prior to gastric bypass, 53.27 kg/m^2), and her current BMI was 29.05 kg/m^2. The patient had no gastrointestinal symptoms. Following weight loss, the patient underwent anchor-line abdominal dermolipectomy (Fig. 1). On the first and second postoperative days, the patient complained of bilateral back pain and nausea, which worsened on the third postoperative day. On the fourth day after the procedure, she went to the emergency room at the same hospital reporting symptoms of abdominal pain, nausea and vomiting.

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An abdominal X-ray revealed distension of the small bowel loops and fluid-air levels (Fig. 2). Computed tomography of the abdomen showed significant distension and edema of the small bowel loops, as well as diffuse fluid-air levels, especially in the left hypochondrium. The dilated and abundant intestinal loops were located anterior to the spleen and posterior to the stomach. In addition, the latter test also suggested an abundance of a possible Roux segment within a smaller sac (Fig. 3).

Twelve hours after arriving at the hospital, the patient developed persistent pain, abdominal distension in the four abdomen quadrants, and decreased bowel sounds. The diagnosis of acute intestinal obstruction secondary to internal hernia was considered. After antimicrobial prophylaxis, the patient underwent exploratory laparotomy with hernia reduction followed by a hernial orifice repair.

Small bowel loop herniation through an opening in the transverse mesocolon was found during exploratory laparotomy. There was no evidence of ischemia or any vascular damage to the loops, which were carefully reduced after cephalic reflection of the colon. The Roux segment was reattached to the transverse mesocolon using a continuous seromuscular suture. Petersen's space was closed, as was the defect in the mesentery of the entero-entero anastomosis. The patient had a postoperative recovery without complications and was discharged on the third postoperative day.

We know that internal hernias are a known cause of intestinal obstruction following Roux-en-Y gastric bypass, with an estimated incidence of 0.8 to 5%, especially when the laparoscopic route is chosen [5–8]. It is believed that the decrease in intra-abdominal fat after weight loss causes an elongation of mesenteric defects. However, there are few reports of the occurrence of internal hernias after abdominal dermolipectomy in post-bariatric patients. The increased risk in these patients is known, but the occurrence of internal hernias after abdominoplasty is rare [4].

Published online: 19 September 2018

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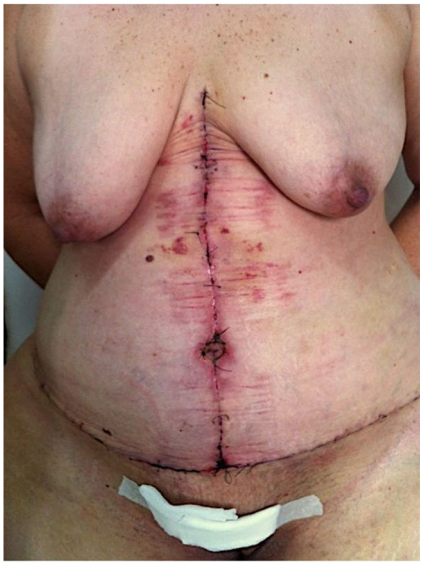

Fig. 1 Postoperative of anchor-line abdominal dermolipectomy after bariatric surgery

Weight loss in these patients, some months after gastric bypass, results in a reduction in intraperitoneal fat, making the mesenteric defects larger. Some intraoperative factors can reduce the incidence of internal hernia, such as the closing of all potential mesenteric defects, the use of non-absorbable sutures, and the use of an antecolic, rather than retrocolic, Roux segment [5, 7, 9]. The latter recommendation is associated with a significant decrease in the incidence of internal hernias [10].

The most common symptoms presented by post-bariatric patients with acute intestinal obstruction are abdominal pain and vomiting, which are present in 70% of cases [7]. Abdominal pain may be vague and intermittent. Upon physical examination, abdominal distension is not significant, especially when symptoms have recently begun. Laboratory tests are normal or show mild leukocytosis. X-ray images may be normal in 20 to 30% of cases of intestinal obstruction due to internal hernia [5, 7].

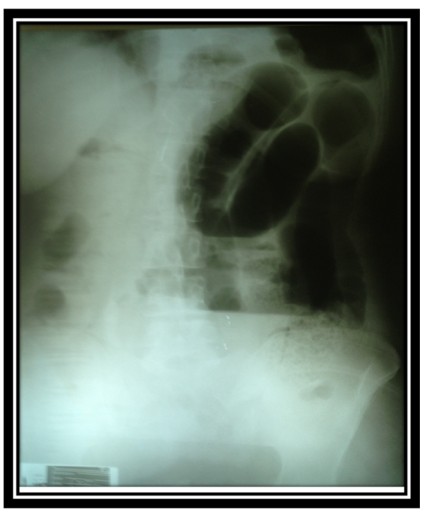

Fig. 2 Abdominal X-ray with distension of the small bowel loops and fluid-air levels

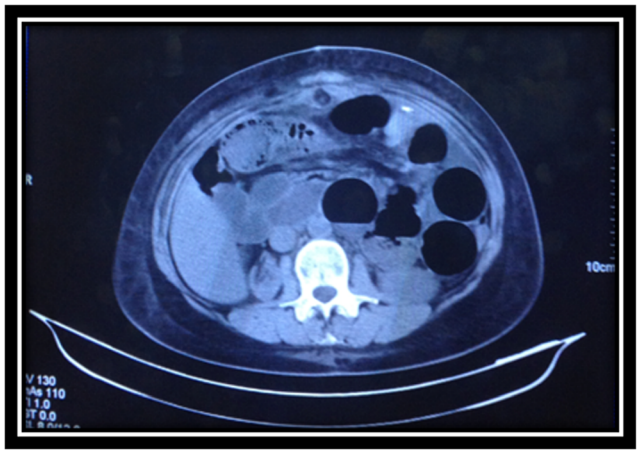

Fig. 3 Computed tomography of the abdomen showed dilated loops of small bowel in the left hypochondrium and fluid-air levels

All these findings suggest that the bariatric and plastic surgeon should take special attention in the evaluation of a post-bariatric patient who has undergone abdominal dermolipectomy and who develops abdominal pain. Furthermore, the evaluation should include a detailed medical history, physical examination, and laboratory and imaging tests.

Patients undergoing gastric bypass are advised to not become pregnant and to not undergo abdominoplasty for 1 year after their operations. The reasons are that the weight loss needs to be stabilized, nutritional deficiencies need to be corrected, and, in particular, any internal hernias must be found. It is possible that abdominal dermolipectomy increases intra-abdominal pressure and upwardly displaces the bowel loops, increasing the likelihood of an internal hernia with entrapment of a bowel loop within a mesenteric defect [4].

Furthermore, the surgeon should be aware that an internal hernia may present with nonspecific symptoms that may be similar to those normally found in the abdominal dermolipectomy postoperative period. The symptoms may be episodic, and patients may not report the problem to the doctor, thinking that this is to be expected after such a surgical procedure. It is important not to delay surgical exploration, as intestinal ischemia may occur, which increases patient morbidity.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Statement of Informed Consent Informed consent was obtained from all individual participants included in the study.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the

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institutional and/or national research committee and with 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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