Jejunal perforation after abdominal liposuction, bilateral breast augmentation and facial fat grafting

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A 54-year-old woman presented to the emergency department 24 h after undergoing abdominal liposuction, bilateral breast augmentation and facial fat grafting at a private plastic surgery clinic. She presented with the classic evolution of a bowel perforation secondary to abdominal liposuction. A computed tomography (CT) scan found free air in her abdominal cavity. Based on the CT scan and the persistent pain experienced by the patient, an abdominal laparotomy was urgently performed. A jejunum perforation was found and was treated with a resection of the affected segment followed by intestinal anastomosis. The patient had a successful recovery and was discharged seven days later. The present article also reviews the classical presentation of a bowel perforation following abdominal liposuction.

Key Words: Abdominal liposuction; Body contouring; Intestinal perforation; Lipoplasty; Small intestine; Suction lipectomy

Abdominal liposuction is one of the most frequently performed aesthetic surgeries, and it is considered to be a safe surgical procedure with a very low rate of complications. Bowel perforation is a well known but under-reported complication of abdominal liposuction, and is characterized by a difficult diagnosis and has the potential to be life threatening.

CASE PRESENTATION

A 54-year-old woman, who was allergic to penicillin, with a history of lumbar spine surgery and peptic ulcer disease, presented to the emergency room 24 h after undergoing plastic surgery. Her primary complaints were moderate abdominal pain, characterized by a burning sensation in the epigastrium, nausea and malaise. The surgery was described as a three-stage surgery with bilateral breast augmentation and abdominal liposuction followed by facial fat grafting. The patient received general anesthesia for the procedure and was discharged the same day after being prescribed 30 mg of ketorolac tromethamine every 8 h, as needed for relief of pain. Her usual medications also included pantoprazole in the event of dyspepsia. The same day, she consulted a general practitioner by telephone complaining of dyspepsia, and she was prescribed 10 mL of magaldrate, butylhyoscine and metamizol every 8 h. One day after being discharged, she was transferred to the emergency room by ambulance because of persistent pain.

On admission, she was dehydrated, her abdomen was tender, her peristaltic sounds were decreased in frequency and intensity, and there were no signs of peritoneal irritation. Her vital signs included a blood pressure of 110/70 mm/Hg, a pulse of 94 beats/min, a respiratory rate of 24 breaths/min and a temperature of 37.5°C. Laboratory tests showed leukocytosis of $12 \times 10^9/L$ with neutrophilia, a hemoglobin level of 120 g/L, a platelet level of $250 \times 10^9/L$, and an electrolyte imbalance with a sodium level of 150 mmol/L, a potassium level of 3.2 mmol/L and a creatinine level of 114.92 $\mu\text{mol/L}$.

She was admitted for observation with a presumptive diagnosis of dyspepsia and postoperative pain, and received 1 L of saline, 100 mg of tramadol and 40 mg of intravenous esomeprazole. Two hours later, her abdominal pain became more intense and was described as 'stabbing';

Une perforation jéjunale après une liposuction abdominale, une augmentation mammaire bilatérale et une greffe faciale d'adipocytes

Une femme de 54 ans a consulté à l'urgence 24 heures après avoir subi une liposuction abdominale, une augmentation mammaire bilatérale et une greffe faciale d'adipocytes dans une clinique privée de chirurgie plastique. Elle présentait l'évolution classique d'une perforation intestinale secondaire à une liposuction abdominale. La tomodensitométrie a indiqué la présence d'air libre dans la cavité abdominale. Compte tenu de la tomodensitométrie et de la douleur persistante que ressentait la patiente, celle-ci a subi une laparotomie abdominale d'urgence. Cette intervention a révélé une perforation jéjunale, traitée par résection du segment touché et suivie d'une anastomose intestinale. La patiente s'est rétablie et a obtenu son congé sept jours plus tard. Le présent article analyse également la présentation classique d'une perforation intestinale après une liposuction abdominale.

Figure 1) Abdominal computed tomography showing free subdiaphragmatic air

with no relief with the prescribed treatment, she underwent an abdominal computed tomography (CT) scan. Subdiaphragmatic free air was found on the CT scan (Figure 1), and an urgent exploratory laparotomy was performed. During surgery, 500 mL of free intestinal liquid, a small hematoma in the abdominal wall and a double punctiform 3 mm perforation of the jejunum (it was considered a single

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perforation with an entrance and exit hole) were found. An intestinal resection of approximately 30 cm of jejunum was performed followed by a latero-lateral anastomosis and a lavage of the abdominal cavity with 6 L of saline. The patient had a successful recuperation and was asymptomatic and tolerating food at discharge seven days later.

DISCUSSION

Abdominal liposuction is the most frequently performed aesthetic surgery in the United States, and it is considered to be a safe procedure with a low rate of minor and local complications, a high rate of patient satisfaction and, most importantly, very low mortality (1,2). Liposuction conducted by trained physicians in patients without contraindications has a mortality rate as low as 0.019% (3). Surgeons often perform two surgical procedures in a single session, which is considered to be as safe as performing liposuction alone; however, the safety of undergoing three surgical procedures, as in the present case, is less established (4,5).

Thanks to several reports, we now know the clinical presentation associated with a bowel perforation following abdominal liposuction (6-9), which is characterized by a difficult diagnosis and severe complications. The initial signs and symptoms can be obscured by the anesthesia used during the surgical procedure and the analgesia prescribed at discharge. The patient typically presents with abdominal pain to the follow-up medical evaluation, where more analgesic, and in some cases, antibiotics are prescribed, with little or no improvement of the symptoms. It is interesting to note that because postoperative pain following liposuction is characterized by being mild and easy to control, it is repeatedly ignored by doctors during follow-up evaluations (6). Often, the pain persists and the patient is sent to the emergency department where they are typically evaluated by physicians who are not familiar with the complications of cosmetic surgery, raising the possibility that the diagnosis could be delayed even further. Finally, severe complications such as peritonitis, dehydration, sepsis and even death are possible.

To avoid adverse outcomes, the physician must first carefully select prospective patients, recognizing those with factors widely described as high risk for intestinal perforation such as patients with abdominal hernias or scars, previous abdominal surgery, a weak abdominal wall and obese patients (8).

Second, when evaluating these patients postoperatively in the presence of abdominal pain, the possibility of bowel perforation should be ruled out, especially if accompanied by fever and dehydration. Diagnostic efforts should be made quickly, with a thorough physical

examination. Suspected cases should undergo normal abdominal radiography to ascertain the presence of free air; however, the absence of free air does not rule out the diagnosis. Alternatively, an abdominal CT scan is a significantly more sensitive diagnostic test. The cases described to date were usually resolved with a bowel resection followed by anastomosis. In cases with a high likelihood of intestinal perforation, especially in those who are severely ill, one should consider performing an urgent exploratory laparoscopy or laparotomy.

CONCLUSION

Adverse outcomes in surgeries are always unfortunate; however, poor or fatal outcomes are even more regrettable in aesthetic surgeries because the patients are typically healthy. Physicians must be aware that life-threatening complications can happen, and they should know how to recognize and diagnose them quickly. In the case we described here, the patient was not prescribed antibiotics, underwent abdominal CT scans and had an urgent laparotomy performed. All of these factors determined her successful clinical evolution and avoided severe complications.

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