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CASE REPORT

Petersen's hernia recurrent after Roux-em-Y gastric bypass: case report

Hérnia de Petersen recidivada após bypass gástrico em Y de Roux: relato de caso

Marcos Augusto de Carvalho[1], Gabriel Schiavon de Lima[2], Gisele Aparecida Fófano[3], Luiza Eduarda da Silva[2], Mariane Santos Antonieto[2], Marina Carvalho de Souza Lima[4], Taynara Caroline Pereira[2]

ABSTRACT

Laparoscopic Roux-en-Y gastric bypass (LRYGB) is currently one of the most used methods in bariatric surgeries. This procedure has risks and complications inherent to surgery, however, it is distinguished by the possibility that the patient develops a Petersen hernia/internal hernia (IH). The case report aims to describe a rare case of relapsed IH that evolved after LRYGB. The case involves a 38-year-old woman, admitted to a hospital in Zona da Mata Mineira, who presented with diffuse abdominal pain and abdominal distension, similar to those presented two years ago, when she was diagnosed with IH. Due to the patient's previous clinical and pathological history and symptoms, a videolaparoscopy was indicated, in which IH was identified in mesenteric fat from a previous enteroenteroanastomosis, and a new herniorrhaphy was subsequently performed.

Keywords: Case report; Gastric bypass; Roux-en-Y; Bariatric surgery; Recurrent Petersen's hernia.

[1] Hospital da Polícia Militar de Minas Gerias, Minas Gerais, Brazil.

[2] Centro Universitário Governador Ozanam Coelho, Minas Gerais, Brazil.

[3] Universidade Federal de Juiz de Fora, Minas Gerais, Brazil.

[4] Instituto Metropolitano de Ensino Superior, Minas Gerais, Brazil.

Responsible Editor:

Dr. Claudemiro Quireze Jr.

Hospital das Clínicas da Universidade Federal de Goiás.

Goiânia/GO, Brazil.

Corresponding Author:

Taynara Caroline Pereira

Faculdade de Medicina, Centro Universitário Governador Ozanam Coelho, Ubá, Minas Gerais.

E-mail: taynarapereira103@gmail.com

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RESUMO

O *bypass* gástrico laparoscópico em Y de Roux (LRYGB) é, atualmente, um dos métodos mais utilizados nas cirurgias bariátricas. Esse procedimento possui riscos e complicações inerentes às cirurgias, porém distingue-se pela possibilidade de o paciente vir a desenvolver uma hérnia de Petersen/hérnia interna (HI). O relato de caso tem o objetivo de descrever um caso raro de HI recidivada que evoluiu após LRYGB. O caso contempla uma mulher de 38 anos, internada em um hospital da Zona da Mata Mineira, que apresentava dores abdominais difusas e distensão abdominal, semelhantes às apresentadas há dois anos, quando foi diagnosticada com HI. Em virtude da história clínica, patológica pregressa e da sintomatologia da paciente, foi indicada uma videolaparoscopia, em que foi identificada uma HI em gordura mesentérica de enteroenteroanastomose prévia, e posteriormente realizada uma nova herniorrafia.

Palavras-chave: Relato de caso; *Bypass* gástrico; Y de Roux; Cirurgia bariátrica; Hérnia de Petersen recidivada.

Introduction

Bariatric surgeries have become more and more frequent, as it is the most effective method for long-term sustained weight loss. Furthermore, laparoscopic Roux-en-Y gastric bypass (LRYGB) is the gold standard[1,2]. One of the complications of bariatric surgeries using this technique is internal hernia (IH) or Petersen's hernia. Its low incidence varies between 0,5-9,7%, therefore, it is of great value to discuss this complication, especially as it presents non-specific symptoms, such as abdominal pain, nausea, vomiting, in addition to the difficulty of radiological diagnosis as they are intermittent[3-5].

In this sense, if not addressed early, it can evolve into manifestations such as intestinal obstruction, ischemia and intestinal perforation, so early diagnosis is crucial for urgent surgical intervention[2,5]. Therefore, given the importance of recognizing and diagnosing this pathology early, the present report aims to describe a rare case of internal hernia/relapsed Petersen's hernia that evolved after bariatric surgery via laparoscopic Roux-en-Y gastric bypass.

Methods

Descriptive case report study of a patient undergoing videolaparoscopic surgery in a hospital in Zona da Mata Mineira. The information was obtained through review of medical records, reports and photographic records of the exams performed and clinical history collected in an interview with the patient. The patient was asked to sign the Free and Informed Consent Form (TCLE). Furthermore, this report was submitted for consideration by the Human Research Ethics Committee, as defined in Resolution CNS 466/12 and approved under opinion number 6.143.786, CAAE 70391023.0.0000.8108.

Results

Female patient, 38 years old, admitted to the hospital with diffuse abdominal pain, associated with nausea, bloating and constipation for four days. She reports a similar episode two years ago, when she underwent laparoscopy and a Petersen's hernia was visualized, and underwent herniorrhaphy, without any complications during the surgery. Patient reports elimination of flatus and bowel movements only with the use of laxatives and denies other complaints. She is allergic to metoclopramide and denies comorbidities. She reports having undergone Roux-en-Y bariatric surgery 4 years ago.

On physical examination, she was in good general condition, lucid and oriented in time and space, anicteric, acyanotic, afebrile, hemodynamically stable, eupneic on room air, 97% saturation on room air, blood pressure 110/60, respiratory frequency 18 breaths per minute, axillary temperature 37.5ºC, flat abdomen, flaccid and painful on deep palpation in the left hypochondrium, without signs of peritoneal irritation.

After admission, the patient underwent zero diet and clinical support with symptomatic analgesia, antiemetics, gastric protector, intravenous hydration and insulin therapy, if necessary. A CT scan examination of the total abdomen was performed, without suggestive findings. Due to the patient's clinical history, previous pathology and associated symptoms, surgical management was indicated, with videolaparoscopy

being performed. To begin the surgical process, the patient was monitored, positioned in the supine position under general anesthesia and intubated (orotracheal intubation). The surgical site was cleaned and puncture was performed with a Veress needle to create a pneumoperitoneum, creating the surgical cavity. A supraumbilical incision was made with subsequent insertion of a trocar and insertion of optics; then, the remaining trocars were passed under direct vision. During evaluation of the abdominal cavity, the liver, spleen, colon, small arms and bladder were observed to have a normal appearance; and a Petersen's hernia located in the mesenteric fat of a previous enteroenteroanastomosis (bypass gastroplasty) was identified, followed by herniorrhaphy to correct it. Without any other changes, hemostasis was reviewed and the other trocars were removed under direct vision, followed by emptying of the pneumoperitoneum and suturing of the wounds at points where the trocars passed, finishing with a sterile dressing and sending the patient to post-anesthesia recovery.

Post-surgery, the patient was calm, lucid, conscious and breathing room air; however, she was pale, claiming intense pain at the surgical site and abdominal distension. She was treated with symptoms for analgesia and excess gas, resulting in an improvement in the pain pattern. On the third postoperative day, the patient was resting in bed, lucid, responsive, breathing room air, with spontaneous diuresis, absent bowel movements, without pain complaints, and was therefore discharged from the hospital. At home, the patient only reports pain characteristic of the trauma caused by the surgery, obtaining relief after using symptomatic medications prescribed upon discharge from hospital.

Discussion

Two years after bariatric surgery, the forementioned patient underwent a first herniorrhaphy to correct a Petersen's hernia diagnosed laparoscopically. Internal hernias are possible consequences of mesenteric windows formed as a result of the positioning of the alimentary branch during Roux-en-Y surgery, among these windows is Petersen's space[6]. To prevent the occurrence of IH, this space and all defects created during surgery must be closed, however, closure does not guarantee resolution for the patient's entire life[5]. Therefore, even after correction, there may be recurrence, In the history reported, two years after the first herniorrhaphy, the patient was again diagnosed with Petersen's hernia. In these cases, recurrence can reach 3.8% of patients and presents an increased complication potential and greater morbidity and mortality, since if the space is poorly closed, the gap through which the jejunal loop migrates is smaller, increasing the chances of injury to this loop[6].

The patient in question presented diffuse abdominal pain, associated with nausea, abdominal distension and constipation, with only flatus being eliminated, a symptomatology similar to the episode that occurred two years after bariatric surgery, when Petersen's hernia was first diagnosed. In the tests carried out, nothing other than the symptoms was identified, the total abdominal CT scan performed showed no changes. According to the literature, the symptoms of internal hernia are nonspecific, such as postprandial abdominal pain, nausea and emesis, and abdominal examination is often not relevant[8]. Complementary tests are generally not specific, which makes the diagnosis even more challenging. Furthermore, normal tomographic findings, even with contrast in the early stages, do not rule out the possibility of IH, since, despite being considered the best imaging method to confirm the diagnosis, it fails in 20-30% of patients with Petersen's hernia[5]. In this case, greater precision is achieved when the intestinal loops are already in an advanced stage of ischemia, and the diagnosis is only confirmed during surgical exploration, with diagnostic laparoscopy being very useful in a suspected case of internal hernia[6].

Therefore, given the non-specific symptoms presented by the patient, in addition to the computed tomography of the total abdomen without changes, we opted for diagnostic and therapeutic videolaparoscopy, through which the presence of Petersen's hernia in the mesenteric fat of a previous enteroenteroanastomosis was identified, confirming the clinical suspicion based on the history of Roux-en-Y bariatric surgery with a previous episode of hernia.

Conclusion

The non-specific symptoms associated with the absence of changes in exams can make the early diagnosis of IH difficult. Therefore, when faced with a condition like this, it is necessary to correlate the clinic with the patient's past history. Furthermore, in suspected cases of internal hernia, laparoscopy becomes a useful method for diagnosis and treatment. Therefore, it is necessary that more reports of cases like this are carried out to generate knowledge of a low-incidence and difficult-to-diagnose pathology, to facilitate more precise and rapid management, ensuring better quality treatment for the patient and avoiding possible complications arising from it or an internal hernia recurrence.

Authors' Contributions

Conceptualization, Research & Writing – original draft: GS, Lima; LE, Silva; MS, Antonieto; TC, Pereira. Data Curatorship: MA, Carvalho, GS, Lima, MS, Antonieto, MCS, Lima. *Project Administration, Supervision, Validation:* MA, Carvalho, GA, Fófano, MCS, Lima. Visualization: MA, Carvalho, GA, Fófano, GS, Lima, LE, Silva, MS, Antonieto, MCS, Lima, TC, Pereira. *Formal Analysis:* GA, Fofano. Methodology: GA, Fófano, MS, Antonieto, TC, Pereira. *Writing – proofreading and editing:* GA, Fófano, GS, Lima, LE, Silva, MS, Antonieto, TC, Pereira.

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