Case Report

Temporary ileostomy for the preservation of colon fistula in patients with postoperative complications: case report

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ABSTRACT: Among the postoperative complications in the digestive system, the fistulae are the most common ones. The changes resulting from these fistulae are very important, once they can determine the patient's situation and the development of multiple organic failures. This paper reports the case of a patient who had relevant complications after having undergone temporary ileostomy to maintain the colon fistulized. About 90 to 95% of the digestive tract fistulae have spontaneous resolution. In some cases, the general state of the patient compromises the spontaneous closure. In this study, after one month of nutritional support and medicine treatment, the spontaneous closure of the colon fistula did not occur, thus, a surgical intervention was necessary to solve the case.

Keywords: gastric fistula; ileostomy; gastroplasty.

INTRODUCTION

Ileostomy is defined as the opening of the ileal segment in the patient's abdomen, under general anesthesia, aiming to deflect the stool to the external side. Ileostomies can be classified as temporary or loop, and also as definite or terminal. They are usually placed on the right lower abdominal quadrant[1].

Different situations may require ileostomy, such as deformities or bowel blockage, bleeding, infection or ulcers due to small bowel inflammation; cancer, pre-cancerous polyps[2]; extensive lesions, perianal fistulae, peritonitis; toxic megacolon, perforation or digestive fistula[3].

The postoperative fistula represents more than 90% of all intestinal fistulae, and is usually one of the main complications related to surgery of the digestive system[4]. Mortality rates resulting from the complications related to intestinal fistulae are still high, ranging from 6.5 to 48%, against the mean of 2% obtained from elective surgical procedures[5].

The fistulae that drain 500 mL or more of digestive secretions every 24 hours are considered as high-debt. Spoliation is determined by these great losses,

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and causes important hydroelectrolytic and nutritional impacts. These losses are easily compensated with low-debt fistulae[5].

The treatment of digestive fistula, especially high-debt fistulae, is a complex procedure which demands multi-professional work, besides specific and dynamic conducts. Clinical and surgical measurements add up in different stages of the treatment towards the final objective, that is, to obtain the closure of the fistula and achieve the patient's full recovery[5]. Intra-abdominal infection is still the factor that is more likely to compromise the prognosis. In this situation, early surgical intervention is essential to decrease mortality rates. Studies show a 90% mortality rate in patients who presented with sepsis and malnutrition[4].

Parenteral nutrition can speed up the nonoperative closure of high-debt fistulae, and, in case the fistula has not healed after four to six weeks of parenteral nutrition, it is unlikely to heal without surgery[6].

In this context, the objective of this study is to discuss the case of a patient who presented with relevant complications after a temporary ileostomy to preserve the fistulized colon, and the intervention measurements that were used to resolve the case.

CASE REPORT

A 33 year-old male patient with chronic gastric fistula post-gastroplasty, sleeve type, was submitted to drainage of the abdominal abscess, which resulted in colon fistula, diagnosed with the radiologic examination. In order to preserve the fistulized colon, a temporary ileostomy was performed. After seven days of hospital stay, the patient was discharged and received nutritional guidance. Five days later, the patient suddenly presented with severe dehydration, persistent diarrhea, jaundice and fever, being admitted to an emergency unit.

The results of the laboratory examinations performed during hospital stay were: hematocrit 37% (normal: 36-52%); total leukocytes 20,190/mm^3 with no deflection to the left (normal: 4,000-10,000/mm^3); sodium 116 mmol/L (normal: 140-14 mmol/L); potassium 5.50 mmol/L (normal: 3.50-4.50 mmol/L); creatinine 3.86 mg/dL (normal: 0.6-1.3 mg/dL); total bilirubin 3.90 mg/dL (normal: 0.0-1.0 mg/dL); direct bilirubin 2.76 mg/dL (normal: 0.0-0.3 mg/dL); indirect bilirubin 1.14 mg/dL (normal: 0.0-0.7 mg/dL); aspartate aminotransferases (AST) 36.0 U/L (normal: 15-37 U/L); alanine aminotransferases (ALT) 168.0U/L (normal: 30-65 U/L); gamma glutaryl transferases (GGT) 341 U/L (normal: 15-85 U/L); glucose 98 mg/dL (normal: 70-110 mg/dL); negative hemoculture.

After one month of parenteral nutrition and sepsis control with broad spectrum antibiotics and octreotide to decrease gastric secretion, the fistula did not close spontaneously. The case was surgically resolved after the ileostomy removal. After this intervention, the patient fully recovered in approximately 60 days.

DISCUSSION

The presence of the septic focus is always seen as an aggravating factor that needs to be rapidly identified, since it has a direct relation with the severity of the disease. In this case, the patient presented with sepsis due to the abdominal collection drained by the chronic gastric fistula. Despite the patient's general state, the choice for laparotomy was based on data from the literature which describe that, in such situations, the risk of surgery is lower than not undergoing surgery, since it avoids the development of multiple organic failures[5].

Many complications may occur during the drainage of the abdominal abscess, such as the perforation of organs and the risk of infection. In the studied case, the abscess adhered to the colon, and the drainage caused its perforation. The colon fistula can close spontaneously or by surgical intervention. Thus, ileostomy was performed to deflect the bowel transit in order to prevent the aggravation of the abdominal contamination, aiming at the spontaneous closure of the fistula's path.

Generally, 90 to 95% of the digestive fistulae are spontaneously resolved, and the closure takes place four to five weeks after the infection is eradicated[4]. According to Torres et al., when the sepsis is controlled within one month, the rate of spontaneous closure is 48%, while the rate of spontaneous closure is 6%[4] for those patients whose sepsis has never been controlled. In this case, besides sepsis, the patient's general state also compromised the spontaneous closure of the fistula; after the picture improved, surgical intervention was necessary to resolve the case.

The use of different drugs to control the infection and to restore the organic functions of the patient resulted in hepatotoxicity, which was observed by changes in the liver function. Alterations in bilirubins, especially of the direct fraction, are compatible with the obstruction of the bile ducts, as well as changes in the GGT enzyme.

Jaundice is also a consequence of sepsis[5]. ALT also presents altered values, which demonstrates hepatocyte injuries. Hundreds of drugs have been pointed out as possible causes of liver lesion, be it a result of direct or indirect toxicity, probably hepatocytic, cholestatic or mixed[7,8]. However, after the resolution of the case, such liver alterations were controlled, which demonstrates the absence of a pathology that would be directly related to the liver.

The patient presented with hyponatremia, which could be explained by the massive liquid loss due to the diarrhea caused by ileostomy. In these situations, total body sodium low, and this characterizes hypotonic hypovolemia[7]. On the other hand, potassium levels were high, probably due to the changes in renal function, demonstrated by the serum creatinine exam test.

Laboratory changes such as leukocytosis and the increased creatinine, followed by jaundice and fecer, are compatible with sepsis[5]. The negative hemoculture was considered a result of the continuous use of antimicrobials.

The treatment of a complicated fistula is long and requires the work of a multidisciplinary team. Future studies should dedicate some attention to drugs and therapies that could improve the healing of such fistulae, thus, enabling an earlier hospital discharge and preventing the occurrence of hospital infections.

RESUMO: Dentre as complicações pós-operatórias do aparelho digestório, as fístulas apresentam alta incidência. As alterações decorrentes dessas fístulas são muito importantes, pois podem determinar o agravamento do estado geral do paciente e o desenvolvimento de insuficiências orgânicas múltiplas. O presente trabalho relata o caso de um paciente com complicações relevantes após a realização de uma ileostomia temporária para preservação do cólon fistulizado. A maioria (90-95%) das fístulas do trato digestório tem resolução espontânea; entretanto, em alguns casos, o estado geral do paciente compromete o fechamento espontâneo. No caso em estudo, após um mês de suporte nutricional e tratamento medicamentoso, o fechamento espontâneo da fístula de cólon não ocorreu, sendo necessária a intervenção cirúrgica para resolução do caso.

Palavras-chave: fístula gástrica; ileostomia; gastroplastia.

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