Case Report

Complication related to colostomy orifice: intestinal evisceration

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ABSTRACT: Intestinal evisceration at the site of a stoma is a rare event, with high morbimortality. Its clinical manifestation often occurs between the sixth and seventh days after surgery. The risk factors most frequently related to evisceration are: increased intra-abdominal pressure, digestive tract cancer surgery, emergency surgery and stomas in the surgical incision. The authors report the case of a male patient, aged 62, suffering from adenocarcinoma of the rectum with obstructive acute abdomen, who underwent loop transversotomy for decompression. On the fourth day after surgery, he had a bronchospasm crisis, with evisceration of ileum and colon through the colostomic hole. The association of some triggering factors, such as emergency surgery, colorectal malignant neoplasm, increased intra-abdominal pressure and technical failure of colostomy were decisive in the development of this rare peri-colostomy complication.

Keywords: dehiscence; evisceration; colostomy; wound closure techniques; complications.

INTRODUCTION

Complications at the colostomy site show variable incidence, with the most frequent of them occurring in the immediate postoperative period, such as: necrosis, colocutaneous fixation dehiscence, retraction, hemorrhage, cellulitis and abscess[1-4], with no difference if appearing 30 days after the surgery, when complications usually occur in approximately 39% of the cases[5].

Local factors that influence the incidence of complications include: stoma topography, involvement of rectus abdominis muscle, preoperative demarcation, stoma diameter, transposition on intra- or extraperitoneal plane with fascia fixation, aponeurotic closure, emergency surgery and stoma type[6], as well as higher predominance associated with females and obesity[7].

Due to the low frequency of this type of complication, but associated with high morbidity, the authors decided to report this case, discussing the factors predisposing to intestinal evisceration and the adopted therapeutic option.

CASE REPORT

A 62-year-old male patient was admitted to the emergency sector of the Hospital Regional do Vale do Paraíba with obstructive acute abdomen and was submitted to loop transversotomy for decompression. He had middle rectum adenocarcinoma and was taking an oncologic neoadjuvant treatment. His comorbidity was chronic obstructive pulmonary disease associated with systemic arterial hypertension, both under proper clinical control. On the fourth post-operative day, with functional colostomy and without relevant clinical alterations, the patient had a bronchospasm crisis with intermittent cough and intense pain at the colostomy site. Despite the clinical measures adopted, his respiratory condition was worsened, requiring a mechanical ventilation support, and he was transferred to the Intensive Care Unit (ICU). During this respiratory decompensation, he presented evisceration of ileum and colon

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through the colostomic hole (Figure 1), although he remained with the colocutaneous fixation tube in the intestinal segment (Figure 2). He was then submitted to an urgency surgery, with surgical approach through the colostomy site, and the peritoneum-aponeurotic hole diameter was corrected, reducing it by using simple suturing, with separate stitches of unabsorbable wire (zero *nylon*©). In surgical exploration, microperfurations were observed in a restricted area of eviscerated colon, which determined the partial resection of transverse colon followed by terminal colostomy and mucosa fistula. The patient presented satisfactory clinical progress and was discharged from the hospital, with scheduled elective rectosigmoidectomy.

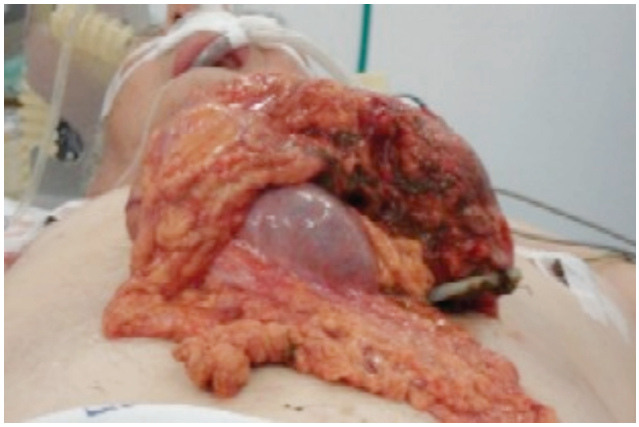

Figure 1. *Voluminous intestinal evisceration through the colostomic site.*

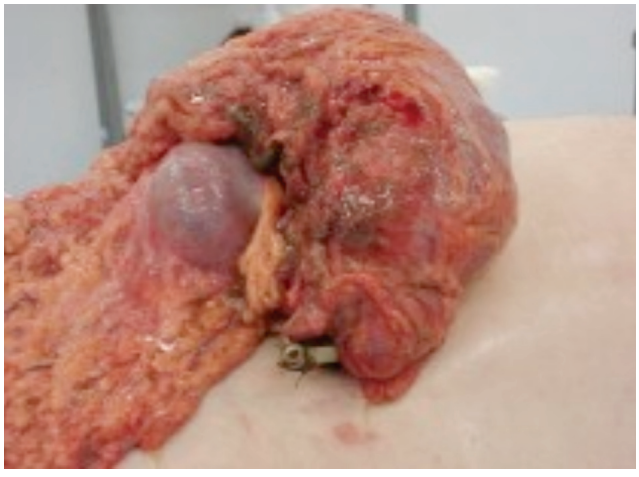

Figure 2. *Colocutaneous fixation tube fixed to the intestinal segment.*

DISCUSSION

Intestinal evisceration at the site of a stoma is a rare event, with few reports in the literature of this complication[8,9], which presents high morbimortality and incidence between 2 and 3.5%[10]. General morbidity associated with colostomy may vary between 20 and 30% and mortality, around 1%[8].

Acute dehiscence of surgical incision, also called evisceration, has incidence in adults ranging from 0.4 to 3.0%[11] and it may present early clinical manifestation due to a number of factors, leading to ineffective healing[12]. Total evisceration occurs through complete rupture of aponeurosis and, in partial evisceration, the involvement is restricted to skin and subcutaneous tissue[13]. Its clinical manifestation often occurs between the sixth and seventh days after surgery[14,15]. The approximate interval of 30 days is considered the most critical, as in this period, the surgical wound tension is maintained mostly by the surgical synthesis material, which constitutes the main factor for proper healing maintenance[16].

The risk factors most frequently related to evisceration are: anemia, increased intra-abdominal pressure (due to ascites, cough, adynamic ileum, acute urine retention and vomiting), improper healing, digestive tract cancer surgery, emergency surgery, low vitamin or zinc level, malnutrition, diabetes mellitus, advanced age – over 65 years old, multiple organ failure, fever, digestive fistulas, systemic arterial hypertension, hypoproteinemia, jaundice, shock, surgical wound infection, peritonitis, drainage holes or stomas in the surgical incision, surgical reintervention, surgery duration over three hours, inadequate suture material, uremia, corticotherapy, chemotherapy and/or radiotherapy, mechanical ventilation and technical failure, among others[10,14-18]. To prevent evisceration, the surgeon should correct the triggering factors and, in the surgery, use proper incisions, handle tissues carefully and perform the surgical incision closure following the tissue planes[12,15,19,20].

When performing colostomy, some basic concepts should be taken into account, such as: location, which should be far from the surgical incision; prior demarcation; hole size, whose extension should be close to two to three fingers (around 5 cm); proper bowel mobilization, free of tension and with good blood cir-

culation[1]. In cases of low-level bowel obstruction, the colostomy approach through the abdominal cavity is usually performed in the right upper quadrant, far from bony prominences, with the extension of transverse cutaneous incision extension of around 8 cm[8]. After defining the aponeurotic cutaneous hole diameter, the muscle plane is accessed through a transrectal approach. After opening the peritoneal cavity, the colon segment to be extruded is determined and, after colostomy is performed, the colon is fixed to the skin at the mucocutaneous junction, which should be made with inabsorbable suture, such as prolene 3–0 or 4–0, our absorbable suture, such as catgut 2–0[20-22].

This case report involved some triggering factors, such as: urgency surgery, malignant colorectal neoplastic disease and increased intra-abdominal pressure, due to the chronic obstructive pulmonary disease, factors associated with the technical failure to perform colostomy, as the hole diameter of stoma was larger than required for colon extrusion, due to the large transverse colon distension observed in the episode of acute intestinal obstruction. In the surgical approach for intestinal evisceration, the surgical practice can be defined by exploratory laparotomy combined with the creation of a new stoma or an intervention restricted to the colostomic site[23]. The method adopted in this study, with resection of the eviscerated loop and new colostomy performed through the prior colostomic hole, was based the patient's clinical condition of severe respiratory failure for being less aggressive, as, in the opinion of the surgical team, large exploratory laparotomy could increase the patient's morbimortality.

RESUMO: A evisceração intestinal desenvolvida no sítio de um estoma é um evento raro, tendo elevada morbimortalidade. Sua manifestação clínica ocorre frequentemente entre o sexto e o sétimo dias de pós-operatório. Os fatores de risco mais frequentemente relacionados à evisceração são: aumento da pressão intra-abdominal, câncer do aparelho digestório, cirurgia de urgência e estomias na incisão cirúrgica. Os autores relatam o caso de um paciente do sexo masculino, com 62 anos, portador de adenocarcinoma do reto médio com abdômen agudo obstrutivo, sendo submetido à transversostomia em alça, com finalidade descompressiva. No quarto dia de pós-operatório com crise de broncoespasmo, apresentou evisceração do cólon e íleo pelo orifício abdominal colostômico. A associação de alguns fatores desencadeantes, como a cirurgia de urgência, a doença neoplásica colorretal maligna, o aumento da pressão intra-abdominal e a falha técnica na confecção da colostomia, foram determinantes para o desenvolvimento desta rara complicação pericolostômica.

Palavras-chave: deiscência; evisceração; colostomia; técnicas de fechamento de ferimentos; complicações.

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