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Spontaneous Enterocutaneous Fistula: An Uncommon Clinical Condition: A Case Report

Abdelillah El Bakouri[1*], El Batloussi Yousra[2], Majd Abdessamad[2], Mounir Bouali[1], Fatimazahra Bensardi[1], Khalid El Hattabi[1] and Abdelaziz Fadil[1]

[1]Department of Visceral Surgical Emergencies, University Hospital Center Ibn Rochd, Faculty of Medicine and Pharmacy, Hassan II University, Casablanca, Morocco.
[2]Department of General Surgery, University Hospital Center Ibn Rochd, Faculty of Medicine and Pharmacy, Hassan II University, Casablanca, Morocco.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Spontaneous enterocutaneous fistulas are a rare complication, defined by an abnormal communication between the digestive tract and the skin surface giving rise to the exteriorization of digestive fluid through the newly formed fistula path.

The diagnosis is easily raised. Spontaneous enterocutaneous fistulas are diagnosed by a flow of digestive material or fluid from the abdominal wall, scar or drainage hole. This flow, which makes the diagnosis clinically obvious, is sometimes preceded by the formation of a local inflammatory patch around the skin opening.

Our work concerns a patient admitted to the visceral surgical department of the university hospital Ibn Rochd of Casablanca for a spontaneous enterocutaneous fistula. The abdomino-pelvic CT scan objectified a deep intra-abdominal collection and a fistula pathway. The patient was then operated after conditioning. The postoperative follow-up was simple.

Keywords: Spontaneous enterocutaneous fistula; caecal fistula.

**Corresponding author: E-mail: elbatloussiyousra@gmail.com;*

1. INTRODUCTION

Enterocutaneous fistulas are defined as any communication between the digestive tract and the skin of the abdominal wall. This condition typically bears a major negative impact on the quality of life of patients, and treatment requires several months/years to resolve. There is a stepwise approach to treating this condition, and patients must be evaluated with attention [1].

Enterocutaneous fistulas present a myriad of challenges for patients and clinicians. Seventy-five percent of enterocutaneous fistulas occur following abdominal surgery, and 25% occur spontaneously in the presence of intestinal disease such as a malignancy [2].

Spontaneous enterocutaneous fistula is a rare entity [3].

2. CASE PRESENTATION

We report the case of Mrs E.C, 52 years old, been followed for left breast cancer for over a year having benefited from 6 chemotherapy sessions and 20 radiotherapy sessions, the last of which dates back 8 days before admission to the surgical emergency department. The patient was admitted for the appearance of an enterocutaneous fistula between the right flank and the right iliac fossa, exteriorizing stool and pus without any vomiting, externalized digestive hemorrhage or transit disorders all evolving in a context of apyrexia and deterioration of the general condition.

The clinical examination found a conscious patient, hemodynamically stable, BP: 12/07, respiratory rate of 20 cpm, Heart Rate: 80 bpm, Temperature: 37.8°C, with a discolored conjunctiva.

The abdominal examination noted a Pfannenstiel scar, tenderness of the right flank and an fistula measuring 6 centimeters in diameter, which was inflamed with exteriorised stool and pus (Fig. 1).

The digital rectal exam found a normal anal margin, good sphincter tone, empty rectal ampulla.

The vaginal examination was without peculiarities.

The examination of the left breast: Patey's incision scar without any inflammatory signs.

The examination of the right breast: absence of orange peel appearance or nodules without any inflammatory signs opposite.

Absence of lymphadenopathy in the two axillar hollows.

The rest of the somatic examination was without peculiarities.

In the paraclinical assessment, abdomino-pelvic CT scan objectified a deep intra-abdominal collection and a fistula pathway. An extravasation of gastrograffin through one of the fistula pathways communicating the cecum to the wall was clearly visible.

In addition, the scan showed a collection of the soft parts of the superior external quadrant of the right gluteal region fistulized to the skin. A thickening of the posterior wall of the cecum was seen aswell (Fig. 2).

The biological blood test was as followed: Urea: 0.38 g/l, Creat:6,7 mg/l,

AST: 16 IU/l, ALT: 12 IU/l, Albumin: 32 g/l,

Hb: 7,5 g/dl, WBC: 4860 /mm3, blood platelets: 340000/mm3 .CRP: 117,4 mg/l.

The colonoscopy was without abnormalities.

A median laparotomy, above and below the umbilicus, was performed with the following findings: a Lack of intra-abdominal collection. The Caecum was attached to the lateral wall (Fig. 3A).

A caeco-parietal fistula with individualization of both edges, one in the right gluteal region and the other in the right thigh (Fig. 3B).

A biopsy of the edges of the caecal fistula was taken.

A plastic surgery notice was solicited: Loss of substance from the upper outer quadrant of the right gluteal region measuring 4 by 6 centimeters. Its exploration finds a fistulous path communicating with the abdominal wall with fecal matter and the presence of several cubicles over 3cm on the infero-external part of the thigh.

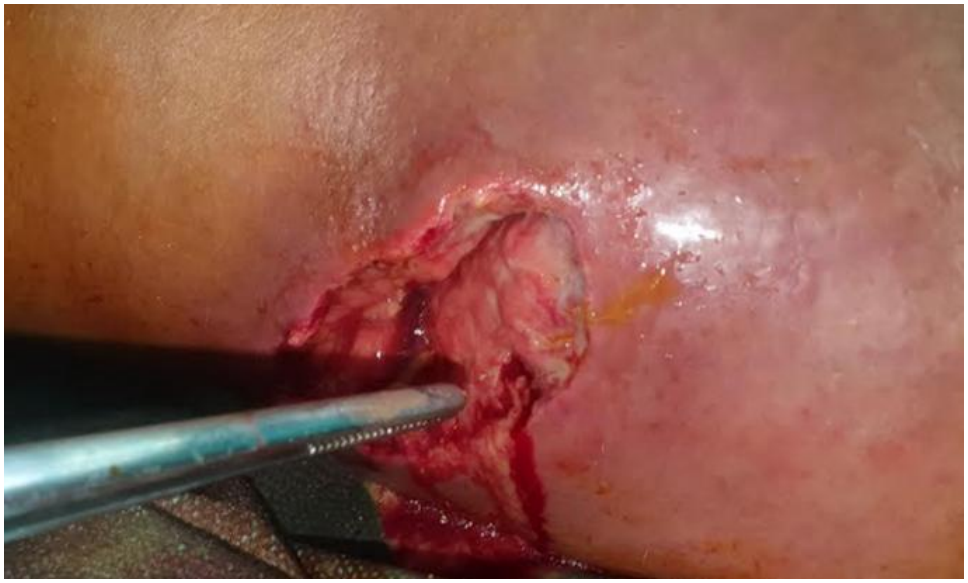

Fig. 1. Pre-operative image illustrating the enterocutaneous fistula located between the right flank and the right iliac fossa

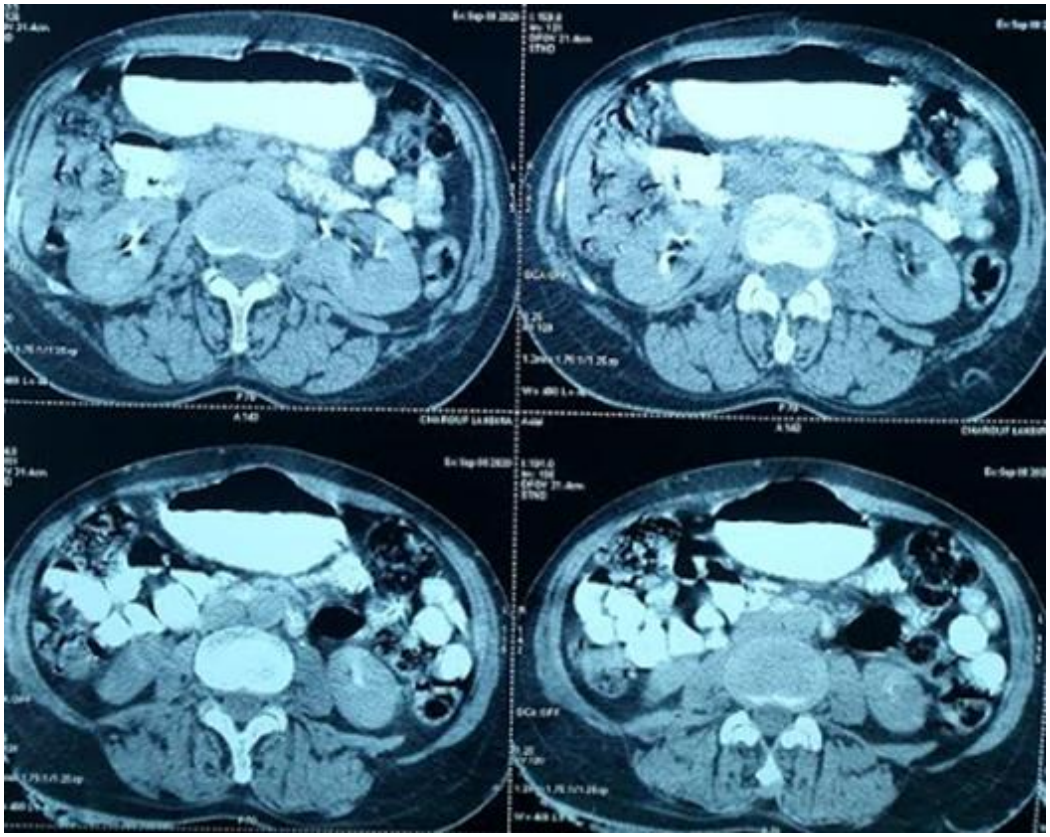

Fig. 2. Abdomino pelvic CT scan objectivizing a deep intra-abdominal collection, a fistula pathways and an extravasation of gastrograffin through one of the fistula pathways communicating the cecum to the abdominal wall

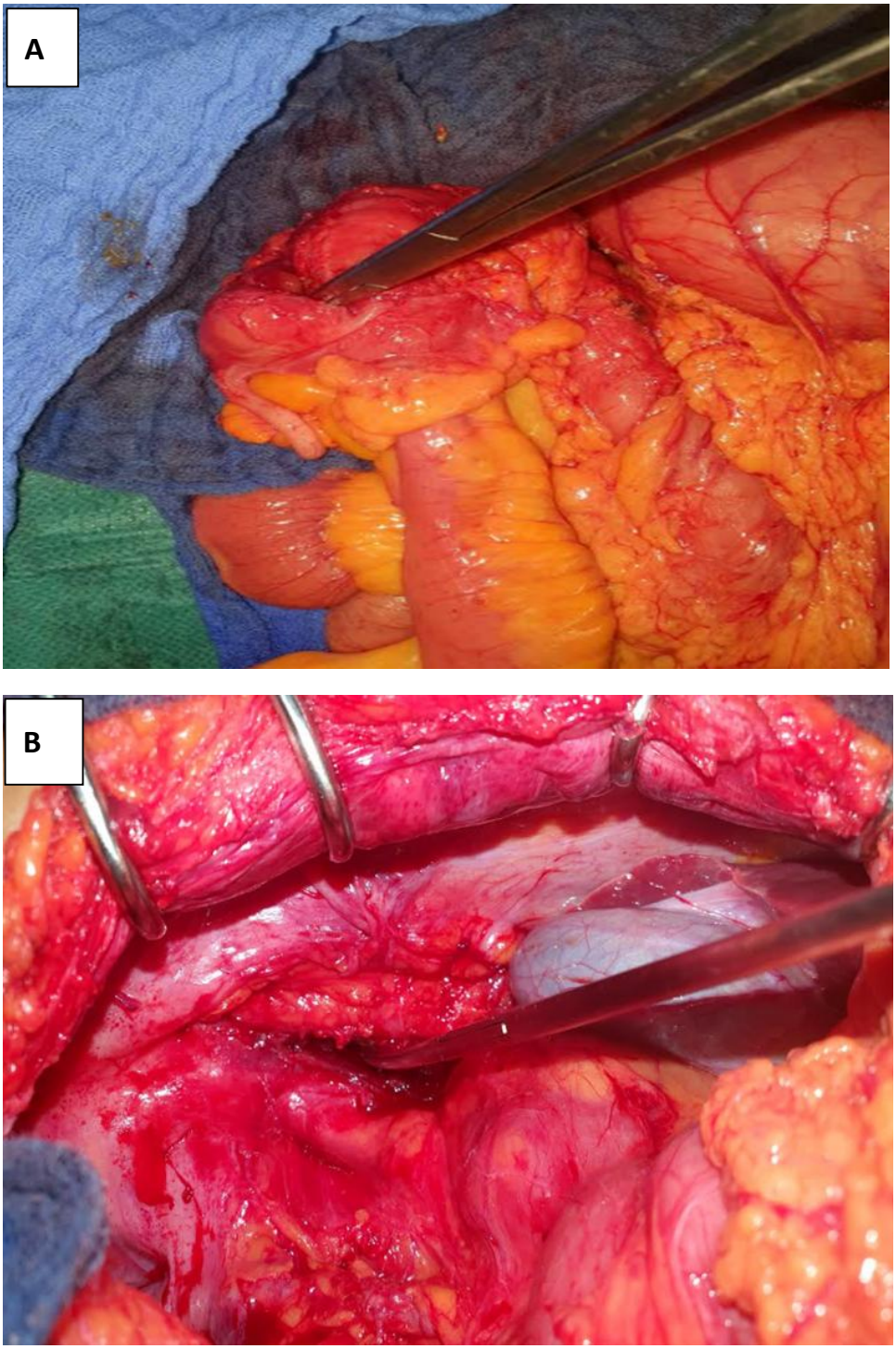

Fig. 3. Intraoperative images
A. The enterocutaneous fistula.
B. The fistula pathways communicating the cecum to the abdominal wall

The patient underwent a right lateral caecostomy and a retrograde appendectomy. The intervention consisted of flattening of the caeco-parietal fistula and drainage of the right iliac fossa through the fistula path by 2 Delbet blade, as well as the drainage of the Douglas cul-de-sac by a Redon drain and subcutaneous drainage by Delbet blade.

The postoperative follow-up was simple; the patient was discharged after the sixth day with a one year follow-up.

The anatomopathological study of the surgical specimen showed a chronic appendicitis without specificity or sign of malignancy. The Biopsy of the caecal edges showed chronic inflammatory changes in acute, ulcerated and fistulized colorectal mucosa.

3. DISCUSSION

The treatment of fistulas has advanced significantly since Susruta, the father of Indian medicine, described the management of an ECF by resection and closure using the severed heads of ants. The treatment of ECF/EAF is very challenging and requires a multidisciplinary approach for optimal outcomes [4].

Several factors may contribute to the persistence of fistulas, including the presence of foreign body/material at the fistula site, prior radiation exposure to the involved bowel, active infection/unaddressed sepsis, Inflammatory bowel disease (IBD), epithelization of the fistula tract, neoplasm, presence of a distal obstruction, and active steroid use [5].

The role of negative pressure wound therapy (NPWT) in both the management and etiology of ECF remains controversial. However, there are patients who can benefit from this therapy, yet selection remains difficult [6,7,8]. In our case, the treatment was surgical by flattening the caeco-parietal fistulas and a right lateral caecostomy.

A multidisciplinary approach is essential, including an experienced wound/ostomy nursing team. Once the wound care issues have been addressed, the next phase of management is to categorize the fistula as either low or high output [1].

The enterocutaneous fistulas have an important impact on the health care system at the population level. ECF accounted for over 28,000 admissions annually, over 230,000 hospital days. According to a study made in the United States of America and recently published in January 2020 [9].

It is important to stress that the best way to approach an EAF is to prevent its occurrence altogether. Although this disastrous event may be unavoidable, there are clearly factors that increase its risk such as having an open abdomen for a prolonged time [10].

4. CONCLUSION

Most of the enterocutaneous fistulas are postoperative. Spontaneous enterocutaneous fistula is an uncommon clinical condition [3].

The ECFs remain a formidable challenge to surgeons facing affected patients. Awareness of its causes, contributing factors, potential preventive measures, and various management strategies are crucial to achieving optimal outcomes in the care of the patients [10].

The post-radiotherapy enterocutaneous fistula for breast cancer is an exceptional complication.

CONSENT AND ETHICAL APPROVAL

As per international standard or university standard guideline patients consent and ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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