

# Fecal Peritonitis: Presentation of a Rare Case

## Abstract

In this case report we present a patient who came to the hospital with fecal peritonitis, after she had previously visited their general practitioner 3 times, and the answer she was receiving for her condition was that she was suffering from a “cold in the belly”. The patient was admitted and a CT was performed only to reveal free air in the peritoneal cavity and fluid in several peritoneal compartments. In this case report the aim is to note that despite a wrong diagnosis, despite the delay in the management of the patient, following the elementary “rules” of managing such an acute patient, a positive outcome is possible.

## Review Article

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## Introduction

A 62 years old woman came in the emergency department of the hospital complaining about acute abdominal pain, and that she could not take it anymore. After a thorough history taking, the patient said that she had visited her general practitioner three times, complaining about the pain in her abdomen, but initially he said that she had a “cold” in her belly, the second time he told her that the cold was getting worse, and the third time he advised her to take hot water baths to manage the pain. After these three days, the patient was admitted with signs of acute abdomen in our clinic, where IV fluids were instituted, laboratory examinations were made, and of course image studies were performed.

## Presenting symptoms & clinical findings

Patient presented with generalized acute and severe pain all over the abdomen. There was rebound tenderness, distended belly, and a silent abdomen. There also was shortness of breath, tachypnea, and tachycardia, while the patient was irritated but not disoriented. There was no fever, but there was nausea and actually the patient had two episodes of vomiting. The patient had no appetite and she mentioned that in the last days she did not want to receive any solid food. No gases were passed, and there was moderate urine output according to her recall. Her pulse was strong but very rapid. Examination and auscultation of the chest revealed no finding from the pulmonary fields, apart from the tachycardia.

## Diagnostic focus & assessment

WBC count was elevated reaching levels of  $24 \times 10^3/\mu\text{L}$ , with more than 92% neutrophils, the PLT count was normal, and although the Hemoglobin levels were normal for the patient’s age, hematocrit was elevated (46,5%) probably as a result of dehydration and hemoconcentration. CRP was greatly elevated (> 55), as were urea and creatinine respectively due to the dehydration. No other electrolytic imbalances were noted.

On the chest x-ray no significant pathology was revealed, and the CTR was normal. On the abdominal x-ray the findings were striking: 1. there was free air in the peritoneal cavity, 2. the small intestine appeared distended at a degree that it was pressing against the large bowel, and 3. the typical “ladder” sign of ileus was present, but no sign of obstruction could be detected.

CT scanning set the diagnosis, since it validated the findings of the abdominal x-ray, but it also revealed a mass around the anatomic position of the appendix, although the appendix itself could not be identified, gas distention of the large bowel was prominent, while the presence of fluid was evident around most of the enteric loops all over the peritoneal cavity. Despite the patient’s history of removal of her right fallopian tube, it was identified on the CT and presented with edema. The patient was prepared for emergency surgery and after less than 45 minutes the patient was taken to the OR.

## Management & therapeutic approach

During the operation the main findings were, generalized peritonitis with pus all over the peritoneal cavity (Figure 1), after the pus was drained and the peritoneal cavity was thoroughly washed with warm saline solution (about 3 liters), the finding included a small lesion of rupture on the ileus (about 20cm from the ileocecal valve) with diameter of less than 2cm (Figure 2), a rupture site on the caecum (Figure 2), a gangrenous appendix (Figure 3), and an inflamed right fallopian tube, with ischemic changes on its surface.

The initial approach of removing the fallopian tube, the appendix, and the repair of the small bowel rupture was dropped once the rupture site on the cecum was revealed. So the plan included dissection and removal of the fallopian tube, removal of the gangrenous appendix, and right hemicolectomy, with end to side anastomosis of the ileus and the stump of the upper ascending colon, and finalization of the operation with a loop ileostomy to protect our anastomosis, and two drainage vinyl catheters

placed (one by the anastomosis, and the other in Douglas's space) in order to be able to drain but also "watch" the reaction of the bowels to our maneuvers and handling.

Postoperatively we followed an aggressive rehydration strategy, that included not only enriched normal solution and Ringer's solutions, but also 2 units of fresh frozen plasma (FFP) in order to manage the generalized oozing of blood resulting from the massive mobilization of the whole small bowel, the removal of symphyses, and the removal of pseudomembranes. Broad spectrum antibiotic therapy was installed, and included metronidazole 500mg every 8hs, second generation cephalosporin 750mg every 8hs. We need to make notice that a single dose of aminoglycoside was given intraoperatively.

Due to the severity of the case, and the complications that can arise from fecal peritonitis the patient was moved after the operation in the ICU for monitoring and postoperative treatment. On the 3<sup>rd</sup> postoperative day the patient was returned to her bed on the floor, and on the 8<sup>th</sup> day she was discharged from the hospital, in a very good condition. The patient is followed by our team, and she is expected to return in the end on January 2017 to repair/close the loop ileostomy.

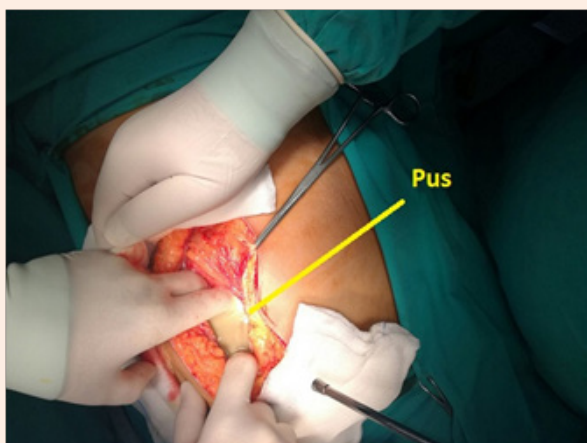


Figure 1: Free pus in the peritoneal cavity.

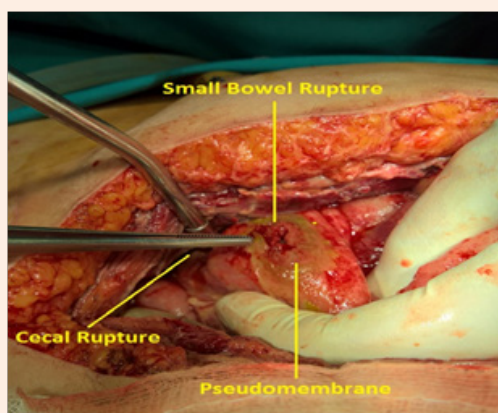


Figure 2: Small bowel rupture, pseudomembrane.



Figure 3: Gangrenous appendix.

## Discussion

What makes this case relatively rare is the fact that the patient visited her GP not once but 3 times before she was brought in to the clinic by her family. It is important to understand that usually time is of the essence in such cases since the septic effects resulting from fecal peritonitis are detrimental and usually lead to poor outcomes when delays arise in their management. In this case the delay was so severe, it could cost the life of the patient. Fortunately enough, the patient had no other comorbidities, she is not a smoker, she rarely has a drink (not even typical social consumption of alcohol) and she tries to follow a healthy diet and a healthy way of living (although she is not athletic, she walks almost 5-6 km per day). All these fact contribute greatly to the end result, which in this case was amazing, considering the severity of the case.

From the surgical point of view a few points must be noted: 1. During the opening of the patient, we decided a middle section to be done, since it allows for better approach to the lesions, allows more movement around demanding anatomic positions and also allows for a thorough inspection of the left peritoneal cavity. 2. The patient was informed that she had her right fallopian tube removed in a previous operation, yet not only she had her tube, but also it is possible that inflammation of the tube led to this condition. 3. The major problem in this case is the lack of suspicion from the GP. We believe that some rules must be instituted for such cases, especially rules that follow the classic saying in surgery "better safe than sorry". All physicians, when in doubt should ask for a consult, or if no consult is available should refer the patient to a hospital or to a surgeon, so as therapy and management start on time, and not placing the patient's life into any danger. 4. Through our experience in fecal peritonitis, all cases with peritonitis that have been left untreated for more than 48 hours, should be treated with hemicolectomy of the appropriate site of the colon, and completed with a loop ileostomy that will be closed after 60 to 90 days. Our main and primary target is to save and preserve life, so we need to take steps that will add to it, even if ileostomy is something no one (patients, family of the patient, spouses like to see and take care of, even if it is only temporary) wants. Finally I want to underline the importance of the use of drainage in such cases, since the tube is essentially our eye in the patients abdominal cavity, plus it allows us for manipulation even if it is limited [1-8].

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