

CASE REPORT

DIFFICULTIES IN DIFFERENTIAL DIAGNOSIS OF COLON PATHOLOGY

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ABSTRACT

Introduction. Colorectal cancer and diverticular disease are conditions with high prevalence, the number of new cases diagnosed annually reaching millions. Diverticular disease progresses to diverticulitis in 4-15% of cases. Diverticular disease and colorectal cancer can have similar clinical presentations, making the differential diagnosis difficult, especially in an acute stage.

Case presentation. We present the case of a 79 year-old female, who presented to the emergency room complaining of diffuse abdominal pain, diarrhea within the previous three days, a weight loss of ten kilograms in the previous month, fatigability and asthenia. During the physical examination, a palpable tumor mass in the right flank was found. From the paraclinical results, a severe anemia and leukocytosis could be noted.

Conclusion On the basis of these results alone, a final diagnosis could not be established. Additional imaging tests were needed: CT scan and repeated colonoscopies. These confirmed the final diagnosis of complicated diverticular disease, the initial presumption being of an ascending colon tumor.

Key words acute diverticulitis, colorectal cancer.

RÉSUMÉ

Difficultés dans la mise du diagnostic différentiel de la pathologie du côlon

Introduction. Le cancer colorectal et la maladie diverticulaire sont des pathologies à prévalence élevée, le nombre de nouveaux cas chaque année dans le monde étant de l'ordre de millions. Les patients atteints de la maladie diverticulaire développent, dans 4 à 15% des cas, une diverticulite. La maladie diverticulaire et le cancer colorectal peuvent avoir une présentation clinique similaire, le diagnostic différentiel étant difficile, en particulier dans les formes aiguës.

Rapport de cas. Un cas particulier de difficulté diagnostique est celui d'une femme de 79 ans en situation d'urgence, accusant une douleur abdominale diffuse, une diarrhée au cours des trois derniers jours, une perte de poids de dix kilos au cours du dernier mois, de la fatigue et de l'asthénie. Pendant l'examen physique, une formation tumorale palpable du côté droit a été dépistée et une anémie sévère et une leucocytose ont été trouvées.

Conclusion. Le diagnostic n'a pas pu être établi en fonction seulement d'éléments cliniques et paracliniques, nécessitant des investigations imagistiques supplémentaires (tomographie et répétition de la colonoscopie) afin de mettre le diagnostic d'une maladie

diverticulaire compliquée, bien que l'hypothèse diagnostique initiale soit la tumeur du côlon ascendant.

Mots-clés diverticulite aiguë, cancer colorectal.

INTRODUCTION

Colorectal cancer (CRC) and diverticulitis are diseases with high prevalence in the Western world, with a rise in recent years. In worldwide cancer prevalence, CRC occupies the third place in men and second in women, with over a million new cases every year¹ISSN : "00079235", "PMID" : "21296855", "abstract" : "The global burden of cancer continues to increase largely because of the aging and growth of the world population alongside an increasing adoption of cancer-causing behaviors, particularly smoking, in economically developing countries. Based on the GLOBOCAN 2008 estimates, about 12.7 million cancer cases and 7.6 million cancer deaths are estimated to have occurred in 2008; of these, 56% of the cases and 64% of the deaths occurred in the economically developing world. Breast cancer is the most frequently diagnosed cancer and the leading cause of cancer death among females, accounting for 23% of the total cancer cases and 14% of the cancer deaths. Lung cancer is the leading cancer site in males, comprising 17% of the total new cancer cases and 23% of the total cancer deaths. Breast cancer is now also the leading cause of cancer death among females in economically developing countries, a shift from the previous decade during which the most common cause of cancer death was cervical cancer. Further, the mortality burden for lung cancer among females in developing countries is as high as the burden for cervical cancer, with each accounting for 11% of the total female cancer deaths. Although overall cancer incidence rates in the developing world are half those seen in the developed world in both sexes, the overall cancer mortality rates are generally similar. Cancer survival tends to be poorer in developing countries, most likely because of a combination of a late stage at diagnosis and limited access to timely and standard treatment. A substantial proportion of the worldwide burden of cancer could be prevented through the application of existing cancer control knowledge and by implementing programs for tobacco control, vaccination (for liver and cervical cancers. Diverticulosis' prevalence in the Western nations increases with age, numbers varying by study parameters between 5-45%²; the majority of diverticula have a sigmoid localization. Of the cases of diverticulosis, 4 to 15 percent develop diverticulitis³.

These two pathologies, CCR and diverticulitis, share many clinical signs, such as: changes of gastrointestinal transit, gastrointestinal bleeding, abdominal pain, weight loss, which can lead to diagnostic difficulties.

A positive diagnosis for acute colonic diverticulitis can be made based on the clinical presentation with left lower quadrant pain, fever and leukocytosis. The imaging gold standard is high resolution computed tomography (CT), which yields an accuracy of 80-100%⁴ but it is primarily used only in the US. In Europe, Asia and Africa, echography is preferred, especially in an emergency setting, because it is a cost-effective, faster and radiation-free option. A 2015 study has compared the two imaging modalities and found them equivalent in terms of diagnostic accuracy⁵CT is overwhelmingly performed as the initial diagnostic test, particularly in the acute setting. Our study evaluated potential radiation and turnaround time savings associated with performing sonography instead of CT as the initial diagnostic examination in the workup of suspected uncomplicated acute diverticulitis. METHODS We retrospectively reviewed medical records from January 2010 to December 2012 for patients presenting with clinical symptoms of acute diverticulitis. Patients were categorized as a whole and subgrouped by age (>40 and <40 years. Because colorectal cancer can mimic both the symptoms and the imaging findings of diverticulitis, a colonoscopy is recommended. Some physicians prefer to delay this procedure due to risks of perforation⁶localized bowel wall thickening > 4 mm, and an increase in soft tissue density within the adjacent abdominal fat is highly sensitive (e.g. 94%, but this was not confirmed by a 2006 study⁷.

Depending on the location of the diverticulum, a differential diagnosis of diverticulosis can include the following: acute appendicitis – right colon localization, pancreatitis, cholecystitis or peptic ulcer disease – transverse colon localization and renal disease, if there is retroperitoneal involvement. In women, it could also mimic a gynecological pathology.

CASE PRESENTATION

We admitted a 79 year-old female, who presented for diffuse abdominal pain, weight loss of ten kilograms over a one-month period, diarrhea, pallor, fatigability and asthenia. One month previously, she

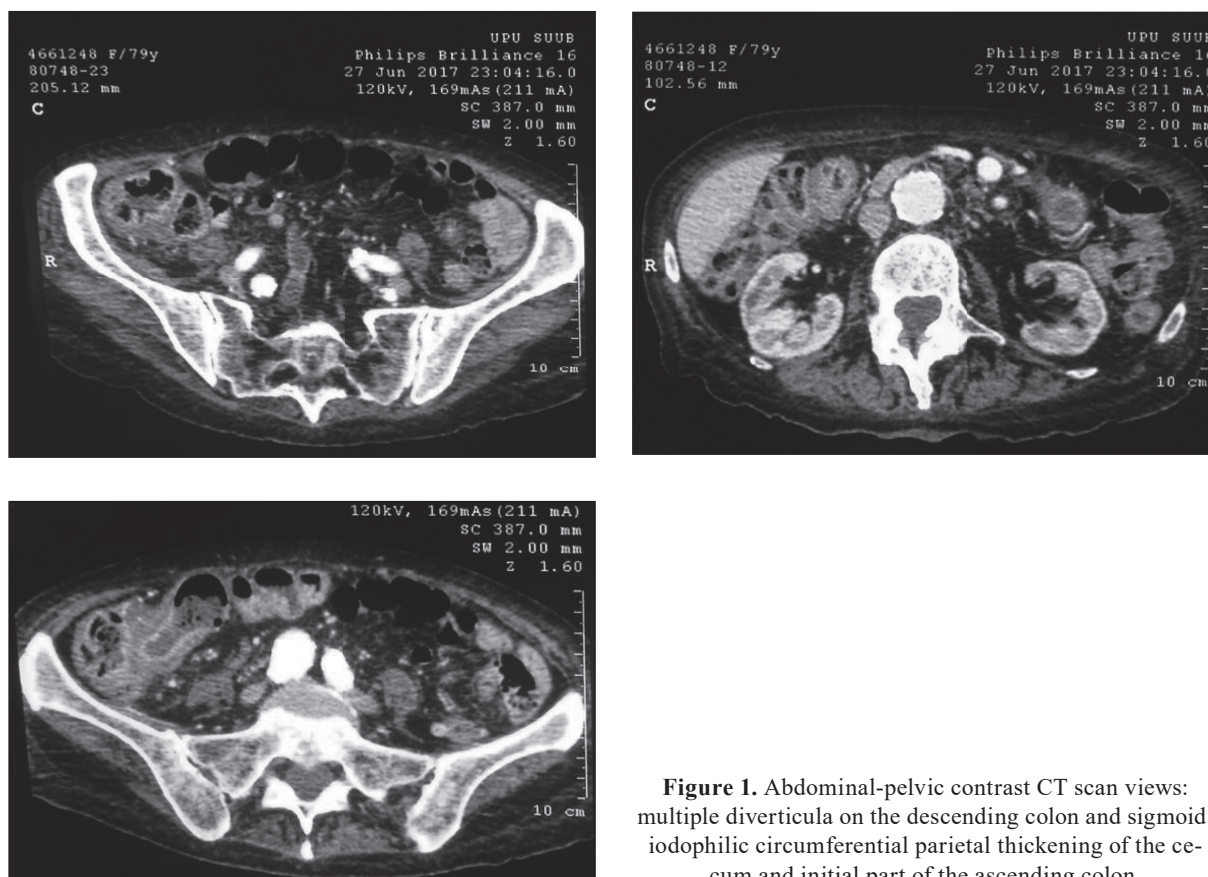


Figure 1. Abdominal-pelvic contrast CT scan views: multiple diverticula on the descending colon and sigmoid; iodophilic circumferential parietal thickening of the cecum and initial part of the ascending colon.

presented at another hospital complaining of three days of diarrhea and diffuse abdominal pain. She was hospitalized and, following a CT scan and colonoscopy, she was diagnosed with diverticulosis. She was discharged under a treatment with Rifaximin. The symptoms did not disappear and she presented at our hospital with the complaints previously stated.

From her history, we noted a total hysterectomy and bilateral adnexectomy performed about 40 years ago for uterine fibromatosis, primary arterial hypertension and habitual constipation.

The physical examination revealed a left paraumbilical mass, of 3/5 centimeters in diameter, nonadherent to the profound layers, a supple abdomen with no tenderness on palpation, and lower leg edema.

On the day of hospitalization, she had severe hypochromic microcytic anemia of 5 g/dL and leukocytosis (12.900 /microL).

Considering the age, symptoms and having only an incomplete history of the patient (which did not include the previous CT scan results), as well as the paraclinical findings, our working diagnosis were CRC and acute diverticulosis, for which we performed an abdominal-pelvic contrast CT scan and colonoscopy. The CT scan revealed iodophilic circumferential parietal thickening of the cecum and initial part of the

ascending colon, but with maintained integrity, and iodophilia of the mucosa and multiple diverticula on the descending colon and sigmoid, some presenting calcifications (Figure 1). The colonoscopy could only visualize the rectum and part of the sigmoid, where it met a blockage. So, it was impossible to exclude firmly the possibility of neoplastic disease of colon. The diagnosis was acute diverticulitis.

Under conservatory treatment (multiple blood and plasma transfusions, Ringer solution, intravenous pantoprazole, etamsylate, adrenocorticotropin and ferric carboxymaltose), the symptoms ameliorated and the patient was discharged with a good general status. At the follow-up colonoscopy, no signs of CRC were found (Figure 2).

DISCUSSION

The topic of acute diverticulitis and CRC is challenging, some authors claiming a causal relationship between the two diseases. Two of the mechanisms proposed are a trapping in the diverticulum of carcinogenic compounds formed by bacterial decomposition of feces^{8,9} and chronic inflammation of the diverticulum resulting in metaplasia¹⁰. An analysis of a Danish registry found that over the 18 years period of

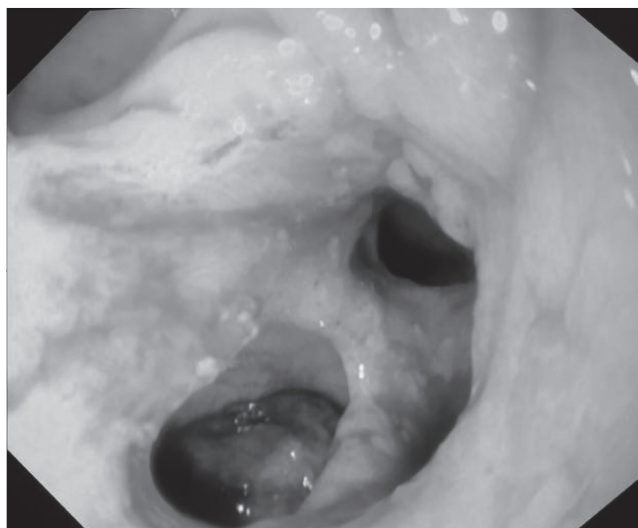


Figure 2. Follow-up colonoscopy view: large right colon diverticula

the study, patients diagnosed with diverticulitis had a twofold increase in colon cancer risk. The authors thus recommend colonoscopy surveillance of the patients with diverticular disease¹¹.

While acute diverticulosis is typically treated with antibiotics, we chose another option. We have found evidence in the literature supporting our approach in a 2017 Dutch trial (DIABLO), that involved over 500 patients with a first-episode, acute, uncomplicated, diverticulosis, divided in two groups: observation or antibiotic therapy¹². The outcomes were similar. We support a minimal therapeutical approach, in which the patient receives the best outcomes with a minimal price of complications and side effects.

CONCLUSIONS

Often, clinical symptoms and paraclinical investigations are not able to confirm a presumptive diagnosis, multiple imaging investigations being necessary in order to differentiate between possible diagnoses. The case presented is an example in which the final diagnosis could be established only after treating the complications of diverticulitis and the subsequent exclusion of colorectal cancer.

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