

CLINICAL CASE

**TUMOR PERICECAL PLASTRON IN AN ENDERLY PATIENT –
DIAGNOSTIC AND THERAPEUTIC DIFFICULTIES. CASE
PRESENTATION**

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Abstract

Colon tumors in the elderly are often problematic regarding the differential diagnosis along with the appendicular plastron due to their low reactivity in case of tumor or inflammatory aggressions. The present paper presents the case of a 76-year-old patient, whose symptomatology indicated an appendicular plastron initially treated in a conservative manner, and then surgically approached and for which the anatomopathological result certified the diagnosis of a cecal mucinous adenocarcinoma. The discussions about this case stress the limitations of both the clinical examination and the imaging explorations such as colonoscopy and computed tomography for the differentiation of a benign inflammatory pathology of appendicular plastron from a possible malignant tumor localized at the level of the cecum. For uncertain cases, the surgical treatment of right radical ileohemicolectomy is the only means left to decide the proper diagnosis and to prevent the occurrence of severe complications specific to the neoplastic disease.

Keywords: colon tumor, elderly, plastron, differential diagnosis

Introduction

Right colon tumors in the elderly often cause differential diagnosis problems with the appendicular plastron due to their low reactivity in case of a tumor or an inflammatory aggression. Pseudotumor and pseudo-occlusive forms of acute appendicitis in elderly patients are described in the literature. Such cases need to be closely monitored and properly treated. The appendicular plastron is a possible evolutionary variant of acute appendicitis under the form of an adherent process which includes anatomical elements such as the greater omentum, parietal peritoneum, intestinal loops

that form a painful periappendicular pseudotumor, actually a form of localized peritonitis [1]. It is notable that this form of evolution is very frequent in children and elderly, which corresponds to an immune defense pattern [2].

The therapeutic conduct in case of an appendicular plastron consists in broad-spectrum antibiotic therapy, anti-inflammatory drugs, rest, local refrigeration, hydric diet and abstinence from any current surgical gestures. The patient's evolution is monitored, being admitted to the general surgery department [2]. Appendectomy will be performed later on, in a few months [3].

Case presentation

We present the case of a 76-year-old patient who is hospitalized urgently for intense pain in the low abdominal floor, predominantly towards the right iliac fossa, with an under febrile state, nausea and absence of the intestinal transit for feces and gases for approximately 5 days. The local examination reveals discrete flatulence of the abdomen, painful abdominal wall at palpation of the right iliac fossa, with tendency of muscle defense, positive Blumberg sign and the presence of a tumor formation at this level of approximately 12/8 cm, firm consistency, well-defined and matte at percussion. The laboratory examinations reveal: important leukocytosis (18000elem/mm³), fibrinogen-799mg/dl, ESR-82mm/h, slight anemia (Hb-10.95g/dl). The echographic examination reveals distended intestinal loops in the right iliac fossa, with no other information due to flatulence. A native abdominal CT scan is performed with intravenously administered contrast media which reveals a consistent parietal thickening at the level of the cecum and of the ascending colon, with irregular aspect, with densification of the fat around and of the parietal peritoneum, appendix with increased cross shaft (27 mm) and thickened wall (9mm), perilesional lymphadenopathies, the largest having a maximum diameter of 24.5 mm and retroperitoneal interaortocaval adenopathies (the aspects described suggest an inflammatory process or tumor) (Figure 1-4).

After the corroboration of symptoms, the clinical examination and the paraclinical data, we suspect the presence of an appendicular plastron. A specific conservative treatment is begun: a cephalosporin-metronidazole combination, painkillers, hydric diet and locally administered ice.

The evolution is favorable, pain is alleviated, the under febrile state disappears, and the intestinal transit is resumed. Moreover, the tumor mass decreases in size, the biologic leukocytosis is decreasing (12000 elem/mm³), all these contributing to a favorable evolutionary picture of a possible appendicular plastron.

However, the persistence of painful symptoms determines us to prepare the colon

for colonoscopy in order to make a differential diagnosis between an appendicular plastron and a possible cecal tumor, with the close monitoring of the patient.



Figure 1- Abdominal CT scan, sagittal section; isodense formations are noticed at the peritoneal level suggesting perilesional adenopathies



Figure 2- Abdominal CT scan, sagittal section; a hyperdense area is noticed around the parietal peritoneum

The colonoscopy, which is performed with difficulty, reveals a circumferential tumor formation at the level of the cecum, with irregular contour, which bleeds at touch, with no possibility of biopsy (the resulting fragments being too small, and the manipulation of the biopsy forceps being difficult because of both

the tumor mass position and numerous locally inflamed pericecal adhesences).



Figure 3- Abdominal CT scan, cross section, with isodense areas suggesting adenopathies, thickening of the cecal wall and of the ascending colon and the appendix with an increased cross shaft



Figure 4- Abdominal CT scan, cross section, with hyperdense areas at the retroperitoneal level

Given this result, with the likely diagnosis of cecal tumor, we decided to perform an open classical surgery. Laparoscopy is not taken into account due to the intense adherent process in the right iliac fossa. An intense pericecal adherent process is indeed revealed intraperitoneally, which involves the great omentum, the terminal ileal loops and the appendix. After adhesiolysis, pericecal pus is found (from which a sample is drawn for the bacteriological examination and the result indicates the presence of *Streptococcus* spp), and the appendix is dilated, with edematous and cartoon walls (Figure 5).

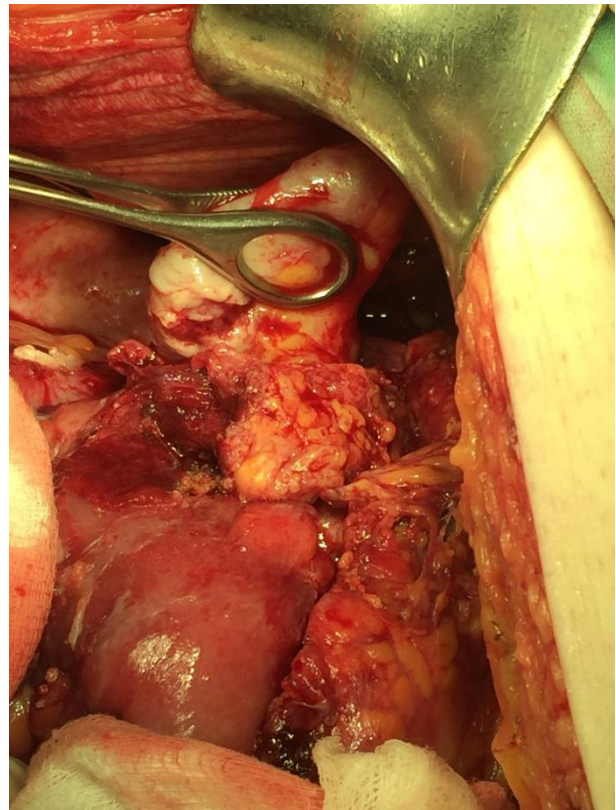


Figure 5- Edematous cartoon appendix, with pus and numerous adhesences



Figure 6- The aspect of the tumor (inflammatory) block

The cecum has a rough consistency (possibly tumor-like), while the ascending colon

is also involved in the adherent process, with reduced dimensions and a firm consistency as well.

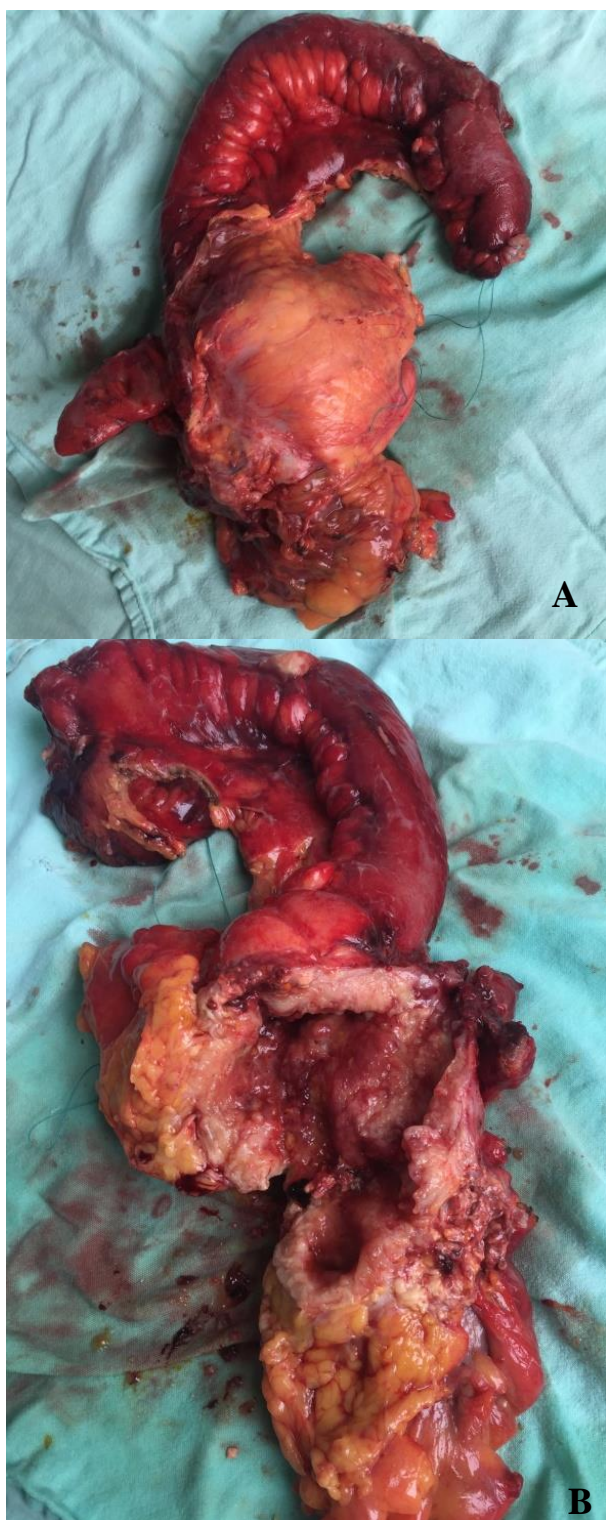


Figure 7 - The aspect of the excised part. We notice the edematous cartoon appendix (A) and the circumferential ulcerative vegetative cecal tumor invading the appendix (B)

The size of the entire tumor (inflammatory) block described is approximately 15/12 cm.

The perilesional adenopathies revealed at the CT scan cannot be seen due to the intense pericecal inflammatory process and no other intraperitoneal pathological changes could be macroscopically seen either. Since neither the preoperative paraclinical examinations (corroborated with the clinical evolution) nor the intraperitoneal macroscopic aspect can distinguish between an appendicular plastron and a tumor plastron, we decided to perform right radical ileohemicolectomy with mechanical ileo-transverso-anastomosis, peritoneal lavage and drainage. An extemporaneous histopathological examination of the right ileohemicolectomy piece was not considered to be necessary (it was impossible to have a tumor fragment for such an investigation, since the entire cecum and the ascending colon were practically a tumor or an inflammatory block). The paraffin examination will be the one to determine the nature of the tumor mass and also the subsequent medical approach.

The postoperative evolution was favorable, with the resumption of the intestinal transit, the patient developing only a slight parietal suppuration treated conservatively.

The result of the histopathological-paraffin examinations revealed colonic mucinous adenocarcinoma tumor proliferation, the neoplasm fully comprising the cecum, with direct invasion of the cecal appendix and the pericecal adipose tissue. Moreover, the resection margins are described as not being invaded by the tumor and the neoplasm invades 11 lymph nodes (pT4N2M0R0).

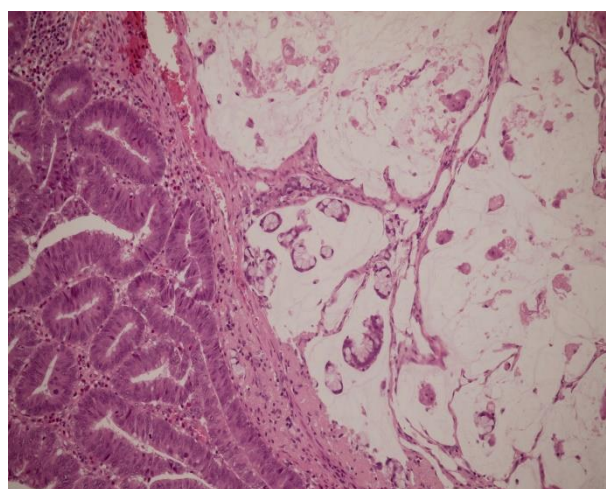


Figure 8- Aspect of Optic Microscopy, Hematoxylin-Eosin coloration; the inflammatory process is revealed

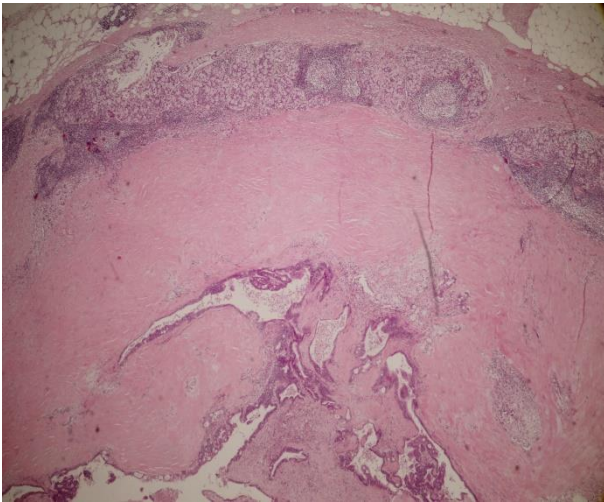


Figure 9- Aspect of Optic Microscopy, Hematoxylin-Eosin coloration; the invasion of the tumor mass in the appendix is noticed

After discharge, the patient was referred to the territorial oncologic service in order to establish the subsequent therapeutic conduct.

Discussions

The choice of a proper diagnosis in an elderly patient with a painful tumor formation at the level of the right iliac fossa is often difficult. Thus, we could also take into account ileocecal tuberculosis, Crohn's disease (terminal ileitis), right renal tumor on a floating kidney, retroperitoneal tumors, besides right colon tumors and appendicular plastron.

The most sensitive problem remains the differentiation between the ascending colon and cecal tumors and the appendicular plastron in patients over 40, since colon cancer in such patients could have clinical manifestations identical with those that occur in case of acute appendicitis, especially when it complicates with appendicular plastron [11]. The data in the literature indicate that there is a connection between colonic cancer and acute appendicitis especially in patients over 40 [4]. Given all these aspects, in case of an elderly patient suspected with the diagnosis of right colon neoplasm we should also take into account a possible acute appendicitis with appendicular plastron [5].

The clinical examination is not eloquent, the only signs specific to right colon tumors and

absent in the case of an appendicular plastron are weight loss and rectalgia or melena, while paraclinical explorations such as hemoleucogram could indicate hypochromic microcytic anemia (due to iron deficiency) in case of colonic carcinoma [6].

Radiologic explorations such as irigography and computed tomography bring information about the cecoappendicular and pericecal areas, but they are often not enough and inconclusive in supporting the diagnosis of cecal tumor [7]. The CT scan with contrast media administered P.O and intravenously are usually used for the identification of possible hepatic or peritoneal metastases and for the identification of the degree of penetration at the level of the colonic wall. Biopsy colonoscopy is the investigation that could make a proper diagnosis, but it is usually avoided because of the perforating risk in the context of suspicion of appendicular inflammation and appendicular plastron. Moreover, another limitation of colonoscopy in such cases resides in the non-satisfactory preparation of the colon for investigation and also in pericolonic inflammatory reshuffling which characterizes the appendicular plastron, often the endoscope could not exceed the hepatic flexure of the colon. Studies have also revealed that age is one of the factors that negatively influence the percentage of ended colonoscopies [8].

A PET-CT scan is a very accurate investigation for the determination of the stage of malignant tumors and for the identification of recurrent tumors. Previous studies show that this investigation permits the differentiation between colonic inflammatory processes and tumor processes (still, it is not routinely used for diagnostic purposes), although it also falsely indicated positive results mentioned by some authors [7, 9].

Often, only the anatomopathological examination of the right ileohemicolectomy part clearly makes the diagnosis, as in the case of the patient presented by us.

The radical surgical treatment is rarely possible, most cases requiring urgent surgery for locally advanced tumors [8, 10]. If the intraoperative aspect is not very convincing regarding the inflammatory etiology of the pericecal adherent process, right ileohemicolectomy is preferred followed by the

anatomopathological paraffin examination which will reveal the inflammatory or tumor nature. An extemporaneous histopathological examination could also be taken into account, but, this is very difficult to achieve in cases in which we have to deal with a tumor (or an inflammatory) block.

Conclusions

The diagnosis of cecal tumors in elderly patients is often difficult and delayed, while radiologic explorations such as irigography or computed tomography should be seen in a clinical context, with a thorough medical monitoring. Biopsy colonoscopy is the investigation used for differentiating a cecal tumor from a possible appendicular plastron. Eventually, an accurate diagnosis can only be made through exploratory laparotomy (through the histopathological examination of the resected part).

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