

Caecal carcinoma: a review of 3 cases in a private hospital in Lagos

John Adi Ashindoitiang

Department of Surgery, Lagos University Teaching Hospital (LUTH), Idi-Araba, Lagos Nigeria

Abstract

Colorectal tumors are rare in the developing countries but common in the civilized world. With the event of westernization of the diet, the incidence is increasing in the developing countries such as Nigeria. Caecal tumors present late because of the anatomical features of this part of colon. The tumors in the caecum are insidious in onset and often attend large size. Barium enema and colonoscopy have limitation in accessing this region. Computed tomography (CT) scan is expensive and not readily affordable in the developing world. High index of suspicion is therefore necessary to the diagnosed carcinoma of the caecum as it is a curable disease if diagnosed early and treated. We present 3 cases of caecal tumors seen over a 5-year period that were treated with good outcome.

Introduction

Caecal tumors are rare but have insidious onset and cannot easily be diagnosed with barium enema and colonoscopy. The caecum is the dilated part of the right colon situated in the right iliac fossa. The etiology of tumor in this part of the colon may be similar to the tumor in the other parts of the colon.¹ Colorectal tumors are rare in the developing countries but common in the civilized world. With the event of westernization of the diet, the incidence is increasing in the developing countries such as Nigeria.² Caecal tumors present late because of the anatomical features of this part of colon. The tumors in the caecum are insidious in onset and often attend large size.³ Barium enema and colonoscopy have limitation in accessing this region.⁴ Computed tomography (CT) scan is expensive and not readily affordable in the developing world. High index of suspicion is therefore necessary to the diagnosed carcinoma of the caecum as it is a curable disease if diagnosed early and treated. We present 3 cases of caecal tumors seen over a 5-year period that were treated with good outcome.

Case Reports

Case #1

A 69-year-old man presented with 6 months history of change in bowel habit. He normally opens his bowel once a day but at presentation now opened bowel once in a week with intermittent episode of watering stool. Occasionally he complains of passing dark stool but no history of bleeding per rectum, he also complained of intermittent colicky abdominal pains that were generalized. There was no associated history of vomiting and no history of abdominal distension. He agreed he had lost a considerable amount of weight in spite of his normal appetite. No family history of bowel cancer. He does not smoke but drink alcohol occasionally; he was a known hypertensive of 10 years duration and was on regular Adalat 20 mg daily. Examination reveals an elderly man not pale, afibrile anicteric. Chest was clinically clear. Abdominal examination reveals tenderness in the right iliac fossa and a firm mass in the same area that was mobile. The liver, kidney and spleen were not palpably enlarged. Bowel sound was present and normoactive. Rectal examination reveals, circumferential anal tags but no fissure, no hemorrhoid and rectum were filled with pellet like faeces. Glove hand was stained with dark colour stool. He was evaluated with, full blood count, erythrocyte sedimentation rate (ESR), abdominal ultrasound and colonoscopy. A hematological result reveals no abnormality but the ESR was raised. Barium enema and colonoscopy were inconclusive. Chest x-ray and urinalysis were normal. A tentative diagnosis of intra malignancy due to carcinoma of the caecum was made. Patient had exploratory laparotomy and findings at surgery were a huge tumor arising from the caecum extending to about 5 cm short of the hepatic flexure. It was still confined within the colon. Liver was free but the paracolic lymph nodes were enlarged. There was no ascites. A right hemicolectomy was done. Histology results reveal mucinous adenocarcinoma Astler-Coller C1 (T2, N1, M0). Post operatively, the patient's recovery was uneventful. He had post operative chemotherapy with 5 fluorouracil and levamisole and presently patient is 5 years post surgery free of any symptoms.

Case #2

A 70-year-old man presented with 2 days history of abdominal pains, abdominal distension and vomiting. Prior to the onset of these symptoms, he noticed a change in his bowel habit of about 6 months duration. He previously opens his bowel once a day but noticed that with increasing doses of laxative he could only now move his bowel once in every 5 days. The abdominal pains were colicky in nature, generalized and were accompany by abdominal dis-

Correspondence: John Adi Ashindoitiang, Department of Surgery, Lagos University Teaching Hospital (LUTH), Idi-Araba, Lagos Nigeria. E-mail: ashindoitiang@yahoo.com

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tension and vomiting several times before presentation. He also complained of loss of weight but attributed this to poor intake of food due to persistent abdominal bloated ness. Physical examinations reveal pallor and moderate dehydration. The chest was clinically clear but the abdomen was grossly distended, more in the flanks, tense and slightly tender, tenderness was more marked in the right lower quadrant. Bowel sound was present but hyperactive and percussion note was tympanic. The liver, spleen, and kidney were not enlarged. A rectal examination did not reveal any abnormality. Other systems were essential normal. A diagnosis of acute intestinal obstruction secondary to colorectal carcinoma was made. The patient was initially managed conservatively with intravenous fluids, nasogastric decompression and antibiotics. The obstruction resolved. He was then evaluated with barium enema and colonoscopy. The barium enema was not diagnostic. The colonoscopy reveals only polyp at the descending colon (60 cm from the anus). Hematological results show hypochromic anaemia. While he was been prepare for CT scan, he developed acute intestinal obstruction and hence had emergency laparotomy and findings at surgery were a huge tumour at the caecum and ascending colon. The tumour was still confined to the colon. Paracolic lymph nodes were enlarged, no liver metastases and no ascites. There was no synchronous tumour at the descending colon, as noted by a presence an adenoma at colonoscopy. Patient had right hemicolectomy and post operative recovery was uneventful. The histology reveals invasive moderately differentiated colonic adenocarcinoma Astler-Coller C2 (T3, N2, M0). The patient has follow up chemotherapy with 5 fluorouracil and levamisole. Presently patient is 4 years post surgery and without any evidence of

cancer. He is on the yearly colonoscopy screening because of the polyps in the descending colon.

Case #3

A 70-year-old farmer presents with abdominal pains of 3 weeks duration. The pains started gradually at the right lower quadrant but were severe enough to disrupt his activity; there was no relieving or aggravating factor. Pains were colicky in nature but there was no associated vomiting or abdominal distension. He had previous history of constipation 4 months prior to presentation. He noticed that he was passing pellet like stool that was dark compared to his normal brown colored stool. There was positive history of loss of weight. Three days prior to presentation, he developed high-grade fever associated with chills and rigors. His past medical history reveals nothing significant. He had no known drug allergy and was not on any regular medications. He is married in a polygamous setting with 2 wives and 7 children. He does not smoke but take alcohol occasionally. On examination, the patient was acutely ill looking, febrile, pale and in mild respiratory distress. The chest was clear and cardiovascular examination reveals tachycardia of 120 beats per minute and blood pressure of 90/60 mmHg. The abdomen was full and not distended but it was tense and tender. Tenderness was generalized but more on the right lower quadrant.

There was a mass in the right iliac fossa. There was also guarding, rigidity and positive rebound tenderness in right lower quadrant. The liver was enlarged 8 cm below the right costal margin with a span of 24 cm. The spleen was enlarged, 6cm below the left costal margin. Rectal examination did not reveal any abnormality. A diagnosis of generalized peritonitis secondary to appendix mass and septicemia was made. The patient was resuscitated with intravenous fluid, antibiotics (ceftriaxone, metronidazole and gentamycin) and blood transfusion. He had emergency exploratory laparotomy and a finding at surgery was a huge caecal tumor, which extend beyond the serosa and is infiltrating the anterior abdominal wall and the right ureter causing hydronephrosis of the right kidney. The liver was enlarged but no macroscopic evidence of metastasis. The spleen was also enlarged but there no tumor in the spleen. The paracolic lymph nodes were all enlarged and there was moderate ascites. He had a right hemicolectomy and ileotransverse anastomosis. The histology reveals poorly differentiated adenocarcinoma of the colon (T4, N2, M1). He had a turbulent postoperative recovery but survive. He is presently 6 months post surgery and appears to be in a reasonable state of health.

Discussion

The peak incidence for colorectal carcinoma is 60-79 years, fewer than 25% of cases occur before the age of 50 years. All the 3 patients were within the peak incidence suggesting that colorectal tumour in our environment has similar epidemiologic risk factors like the developed world except that all the 3 patients are male. Colorectal cancer has higher incidence in females. Colorectal carcinoma has a worldwide distribution with the highest death rate in the United States and Eastern European Countries but up to tenfold lower rate in Mexico, South Asia and Africa.⁵

Environmental factors particularly dietary practices are implicated in the striking geographic contrast.^{6,7}

In addition, dietary studies implicated obesity and physical inactivity as risk factors for colon cancer. It is theorized that reduced fiber contents leads to decreased stool bulk increased faecal transit time in the bowel and altered bacteria flora of the intestine. These will lead to toxic metabolites held in contact with the colon for a longer period thereby inducing carcinogenesis.

It may be probable that it is due to westernization of our diet, that we are now witnessing a higher incidence of bowel cancer. Our diet has change from the traditional high fiber diet rich in carbohydrates to low residue diet rich in protein and fats resulting in decrease transit time, bacterial fermentation and toxic metabolites leading to colon cancers.

Caecal carcinoma most often present either acutely with distal small bowel obstruction as the second patient or at outpatient with insidious anaemia or intermittent obstruction characterized by abdominal pains or altered bowel habit as seen in all 3 patients.

They may be relatively asymptomatic and present with mass in the right iliac fossa. They may perforate and lead to peritonitis as in the 3rd case. Occasionally they can intussuscept. They may cause acute appendicitis or they may invade the surrounding structures. A case of caecovesical fistula has been reported.

Caecal tumor may account for up to 35% of colonic tumors. The etiology of the cancer is similar to those of the rest of the colon.¹ The etiology of colorectal cancer include, adenoma carcinoma sequence, environmental factors (dietary red meat, animal fat and lower fiber diet), heredity cases, polyposis syndrome, lynch syndrome, chronic inflammatory disease like ulcerative colitis and Crohn's disease.⁸ These risk factors which are well established in the developed countries may be similar to risk factors in the developing countries.^{2,9} In the second case, the colonoscopy was able to visualize adenoma in the descending colon. This may probably be the initiating factor in

the etiology of his caecal tumor suggesting adenoma carcinoma sequence. Although chronic inflammatory diseases are rare in our environment. There has been an emerging trend in westernization of our diet. Most people now abandon the traditional diet rich in fiber and cellulose in favor of low residue and refined diet rich in protein and animal fat.

The role of mutant genes such as APC, DCC, K-ras and p53 in our environment needs evaluation. Clinical presentation of caecal tumor varies as seen in the different presentation in our patients. The usual presentations include: i) iron deficiency anemia due to occult blood loss; ii) weight loss; iii) right iliac fossa mass, as seen in all the 3 patients. However there are several reported cases of atypical presentation such as caecovesical fistula,¹⁰ mimicking acute appendicitis¹⁰ and perforation with generalized peritonitis as seen in the third case report. Distal small bowel obstruction as in the second case and haematochezia when it occurs secondary to chronic inflammatory bowel disease has also been reported.¹¹

The standard evaluation for colorectal carcinoma is a combination of colonoscopy sigmoidoscopy and double contrast enema. However these investigative tools have limitation in evaluating caecal tumors.³ Colonoscopy may have limitation because of technical difficulties to visualize the caecum especially in our environment where the technical expertise is lacking. Barium enema may not be diagnostic and often films are of poor quality. CT scan has high sensitivity and specificity but it not widely available in Nigeria and not readily affordable. Therefore a high index of suspicion is advocated if we are to diagnosed and treat this tumor that has a high rate of cure. It is recommended that any patient above the age of 40 years in our environment with altered bowel habit should be properly evaluated to rule out colorectal cancer. Also it is a clinical maxim that iron deficiency anaemia in an older man means gastrointestinal cancer until proven otherwise. In conclusion, caecal tumors are treatable, early diagnosis depends on high index of suspicion in our environment.

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