

Right Colon Tumor Caused Lower Gastrointestinal Massive Bleeding

Alt Gastrointestinal Masif Kanamalara Neden Olan Sağ Kolon Tümörü

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Abstract

Colon cancer is a major health problem all over the world. Colon cancer can be diagnosed with an elective diagnosis as well as during emergencies such as perforation, obstruction or bleeding. Tumor-related bleeding is usually seen in right colon tumors, while left colon tumors usually present with obstructive symptoms. In this case report, it is aimed to present the diagnosis and treatment process of massive lower gastrointestinal bleeding caused by a giant right colon tumor. A 57-year-old male was admitted to general surgery clinic with lower gastrointestinal massive bleeding. He had hypotension, tachycardia and lower hemoglobin level (5.4 g/dL). He became hemodynamically stable after intravenous fluid replacement and blood product transfusion. After evaluation with colonoscopy and computed tomography, he had resectable giant right colon tumor. Emergency right hemicolectomy with anastomosis was performed. He was discharged on the 6th postoperative day. Pathology of the operation material was consistent with adenocarcinoma. The tumor dimensions were 120*80*25 mm. Surgical border was negative and there was a metastatic lymph node with 49 reactive lymph node.

Keywords

Colon tumor, Gastrointestinal bleeding, Hemodynamic shock

Özet

Kolon kanseri tüm dünyada önemli bir sağlık sorunudur. Kolon kanseri, elektif bir tanı ile teşhis edilebileceği gibi, perforasyon, tıkanıklık veya kanama gibi acil durumlarda da konulabilir. Tümöre bağlı kanamalar genellikle sağ kolon tümörlerinde görülürken, sol kolon tümörleri genellikle obstrüktif semptomlarla karşımıza çıkar. Bu olgu sunumunda dev bir sağ kolon tümörünün neden olduğu masif alt gastrointestinal sistem kanamasının tanı ve tedavi sürecinin sunulması amaçlanmıştır. 57 yaşında erkek hasta alt gastrointestinal masif kanama ile genel cerrahi polikliniğine başvurdu. Hipotansiyon, taşikardi ve düşük hemoglobin (5,4 g/dL) vardı. Hasta intravenöz sıvı replasmanı ve kan ürünü transfüzyonundan sonra hemodinamik olarak stabil hale geldi. Kolonoskopi ve bilgisayarlı tomografi ile değerlendirildikten sonra hastada rezektabl dev sağ kolon tümörü mevcuttu. Anastomoz ile birlikte acil sağ hemikolektomi yapıldı. Postoperatif 6. günde hasta taburcu edildi. Ameliyat materyalinin patolojisi adenokarsinom ile uyumluydu. Tümör boyutları 120*80*25 mm idi. Cerrahi sınır negatif, 1 metastatik lenf nodu ve 49 reaktif lenf nodu mevcuttu.

Anahtar Kelimeler

Kolon tümörü, Gastrointestinal kanama, Hemodinamik şok.

INTRODUCTION

Colon cancer is a major health problem all over the world. Due to Cancer Statistics 2021 report of Siegel et al., 104,270 new colon cancer cases are thought to be seen in the USA. Also, at the same report it is estimated that 52,980 people will die due to colon cancer in the USA. In addition, colon cancer ranks 3rd in the world due to the number of new cases of both sexes of all ages in 2021 with 8 percent. On the other hand, colon cancer ranks 3rd in the world due to the number of deaths of both sexes of all ages, 9% at males and 8% at females (1).

MATERIAL and METHODS

A 57-year-old male was admitted to general surgery clinic of Erzurum Regional Education and Research Hospital, Erzurum, Turkey in September 2021 with massive rectal bleeding for 2 days. He had abdominal pain, occasional nausea and vomiting for about 6 months. However, he had not been admitted to the hospital before because of these symptoms. He had no additional disease and operation history.

On evaluation, vital findings of the patient were as follows: blood pressure: 78/45 mm Hg, pulse rate: 122 beats per minute, oxygen saturation on room air: 94%, and body temperature: 36.9o Celsius. On abdominal physical examination, the patient had abdominal tendancy in deep palpation and a palpable mass in the right lower quadrant. He had hematochezia on digital rectal examination. Other system examinations were normal.

Laboratory tests showed severe anemia (hemoglobin level of the patient was 5.4 g/dL). Prothrombin time, creatinine, and urea levels were within the normal ranges. The patient was admitted in the intensive care unit (ICU). Intra venous fluid resuscitation and blood transfusion, requiring 5 packed red blood cells unit in 24 hours, was started. There was no evidence of bleeding in the inserted nasogastric tube.

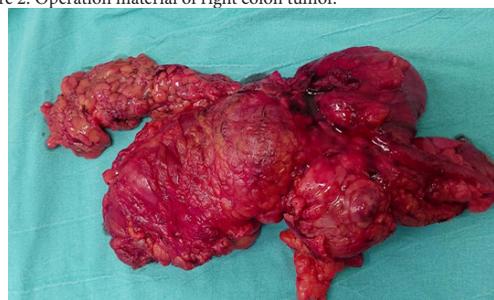
After blood transfusion, his hemoglobin levels increased to 10.2 g/dL. His vital findings were as follows: blood pressure: 118/75 mm Hg and pulse rate: 102 beats per minute. After the patient's vital signs were stabilized, endoscopy and colonoscopy were performed to investigate the bleeding focus. There was no feature other than antral gastritis in endoscopy, but a tumoral mass occluding almost the entire lumen was found in the right colon in colonoscopy. However, there was no active bleeding focus. A computed tomography with contrast enhancement showed a right colon carcinoma 100*80 mm in size (Figure 1).

Figure 1. A right colon carcinoma 100*80 mm in size on computed tomography scan.



In addition, a 4 mm hypodense lesion at segment 4A of liver without lymph node metastasis was detected. Surgery was planned for the patient, and right hemicolectomy was performed with ileotransversostomy (Figure 2). A drain was inserted into right pararectal area. He was taken to the intensive care unit in the postoperative period. Oral intake was regained on the 3rd postoperative day. The drain was removed on the 5th postoperative day, and he was discharged on the 6th postoperative day.

Figure 2. Operation material of right colon tumor.



Pathology of the operation material was consistent with adenocarcinoma. The tumor dimensions were 120*80*25 mm. Surgical border was negative and there was a metastatic lymph node with 49 reactive lymph node.

DISCUSSION

Lower gastrointestinal (GI) bleeding originates from the organs distal to the ligament of Treitz (5). 85% of lower GI bleedings originate from the colon, 10% from the upper GI tract, and 5% from the small intestine (6). The incidence of GI bleeding is 20-27/100.000, and it increases with age. Mortality reaches up to 10 percent with increasing age (7).

Patients usually present with bright red bleeding (hematochezia) noticed in the rectum (90%). Hematochezia is the most common finding of lower GI bleeding (8). The majority of patients (85%) have self-limiting hemodynamically insignificant bleeding, as in hemorrhoids, colon polyps, colon cancer, or colitis. Only 15% of patients have severe, hemodynamically significant, ongoing hematochezia (9). In our case, a bleeding case included in this 15% group is presented.

Colonic bleeding focus can be detected in 74% of patients. In severe bleeding from the colon detected by colonoscopy or angiography, 75% of the bleeding is in the right colon. Despite intensive diagnostic evaluations, 6% of patients with severe hematochezia cannot detect a bleeding focus (10). In this case, no active bleeding focus at tumour was seen by colonoscopy, but the tumor detected in the right colon in the computed tomography scan was thought to be the focus.

Vital signs should be evaluated for the presence of shock or orthostatic hypotension. Determining the volume of blood loss is the most important parameter in a patient with active GI bleeding (11). Mortality is highest in the first few hours in acute bleeding. Therefore, volume replacement should be as early and adequate as possible. The abdomen

should be palpated for tenderness (ischemic colitis, perforation) and mass (malignancy). With rectal examination, stool color and presence of blood in stool, hemorrhoids, tumor in anal canal and rectum, anal fissure and fistula should be evaluated (10). Fresh blood or clot from the rectum suggests lower GI bleeding or massive upper GI bleeding. If upper GI bleeding is severe and bowel movements are rapid, passage in the form of hematochezia may be seen. Upper GI tract bleeding should be excluded in the patient presenting with hematochezia with nasogastric lavage (11).

Laboratory findings are helpful in determining the degree of bleeding and possible bleeding site, as well as in directing treatment (6). Laboratory tests include complete blood count, urea, creatinine, transaminases, bilirubin, albumin, coagulation studies, prothrombin time, partial thromboplastin time and bleeding time. Abnormal liver enzymes may predispose the clinician to a previously undiagnosed liver disease and consequent varicose bleeding. Frequent evaluation of hematocrit values is useful in evaluating whether bleeding continues or bleeding has started again. It also provides important clues to the clinician about transfusion of blood, fresh frozen plasma or platelets. Electrocardiographic examinations are important in patients with cardiac risk factors. Chest and abdominal radiographs should be taken in patients with suspected perforation or obstruction (12).

Although many different methods have been developed in the diagnosis and treatment of lower GI bleeding, the only consensus is that the bleeding site must be determined. Anoscopy, flexible sigmoidoscopy, colonoscopy, enteroscopy, angiography and nuclear scintigraphy are helpful in determining the localization of bleeding (10). In addition, pathologies that may be encountered according to the age of the patient can be known. Diverticulitis bleeding is the most common cause before geriatric age (adults to 60 years of age), and angiodysplasia is the most common pathology after adults older than 60 years (13). However, as in our

case, colon malignancy should be kept in mind as a bleeding etiology independent of geriatric age.

The first thing to do in the treatment of lower GI bleeding is to control the hemodynamic parameters of the patient (14). Aggressive fluid replacement and, if necessary, blood transfusion (erythrocyte suspension and/or fresh frozen plasma) should be given to hemodynamically unstable patients. Emergency surgery should be performed in patients who need more than 4 units of erythrocyte suspension in 24 hours, continuation of bleeding despite transfusion of more than 1500 ml at the initial resuscitation, bleeding that does not stop for 72 hours and significant bleeding that recurs within 1 week (15). Emergency surgery is required in 10-20% of lower GI bleeding. For ideal surgical treatment, the cause and location of bleeding should be known. The patient should be hemodynamically stable, the part to be resected should be known beforehand. Otherwise, bleeding recurs in 75% of blind resections and mortality increases to 57% (16).

In the past, surgery was the first option for lower GI bleeding, but today it has become the last option with the development of radiology and endoscopy. In surgical treatment, resection of the pathological bowel segment should be performed in cases with known bleeding focus, and total or subtotal colectomy should be performed in patients with unknown bleeding focus (17). In our case, right hemicolectomy with ileotransversostomy was performed because the bleeding localization was in the right colon and the patient was suitable for surgery according to tumor staging.

CONCLUSION

Massive lower GI bleeding from a right colon tumor that is not properly treated can be mortal. The first thing to do in the treatment of lower GI bleeding is to control the hemodynamic parameters of the patient. Aggressive fluid

replacement and, if necessary, blood transfusion (erythrocyte suspension and/or fresh frozen plasma) should be given to hemodynamically unstable patients. Bleeding focus should be determined in patients who are stable after fluid and blood replacement. However, emergency surgery should be applied in patients who are unstable despite replacement.

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