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CASE REPORT

Left-Sided Colonic Obstruction Due to Brid Ileus and Coexisting Right Colon Cancer without Palpable Mass

Sol Kolon Kaynaklı Brid İleus ile Seyreden Ele Gelmeyen Sağ Kolon Kanseri

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ABSTRACT

This is a case of a 70-year-old man presenting with caecum perforation and obstruction in the splenic flexure. During surgical exploration, calcified lymph nodes were found in the mesocolon. Right hemicolectomy was performed according to oncological surgical principles. Pathology revealed a 1 cm tumor of moderately differentiated adenocarcinoma in the caecum and 3 metastatic lymph nodes. Two weeks after discharge, pulmonary thromboembolism was diagnosed and was successfully treated. Chemotherapy had to be delayed during the thromboembolic event. The patient is currently alive but has three millimetric metastatic nodules in the liver and left lung. While right colon perforations almost always arise from a distally located obstruction, there may be co-existing pathologies. Palpable calcified lymph nodes in the mesocolon are a good indication for cancer. Therefore, an extended resection according to oncologic surgical principles is more beneficial if malignancy is suspected. The patient may not always be suitable for a completion surgery.

Keywords: Colon perforation, emergency colon tumour resection, adhesion ileus, colonic obstruction

ÖZ

Yetmiş yaşında erkek hasta splenik fleksurada obstrüksiyona bağlı gelişen çekum perforasyonu ile başvuruyor. Cerrahi eksplorasyon sırasında mezokolonda kalsifiye lenf nodları saptandı. Onkolojik cerrahi prensiplerine uygun olarak sağ hemikolektomi uygulandı. Patoloji sonucu çekumda 1 cm tümör ve 3 adet metastatik lenf nodu saptandı. Hasta sorunsuz taburcu olduktan sonra 2 hafta sonra pulmoner emboli gelişti ve tedavi edildi. Ancak bu sebeple kemoterapinin ertelenmesi gerekti. Hasta şu anda hayatta olmakla beraber karaciğerinde ve akciğerinde metastatik nodülleri mevcuttu. Sağ kolon perforasyonlarının en sık sebebi distal obstrüksiyon olmakla birlikte eşlik eden başka patolojiler de bulunabilir. Mezokolonda palpe edilen kalsifiye lenf nodları iyi bir kanser göstergesi olabilir. Eğer kanserden şüpheleniliyorsa onkolojik cerrahi prensiplerine uygun olarak daha geniş bir eksizyon yapmak daha faydalı olacaktır. Hasta her zaman ikinci bir ameliyat için uygun durumda olmayabilir.

Anahtar Kelimeler: Kolon perforasyonu, acil kolon tümörü rezeksiyonu, brid ileus, kolon tıkanıklığı

Introduction

Emergency surgery for colon cancer, especially those due to perforations, is a challenging situation with poor prognosis. This is mostly because these cases often present as advanced disease, rather than problems arising from emergency surgery.[1,2] Approximately 80% of emergency colon surgeries are performed due to obstruction and 20% are due to perforations.[3,4] Mortality is specifically high in the early postoperative period. Even early stage disease has been associated with poor disease-free survival and high recurrence rates.[5] However, all these reports are based on the spontaneous perforation of the tumor and perforation secondary to obstruction of tumor. We are presenting a case of right colon perforation due to brid ileus related obstruction on the splenic flexure. Right hemicolectomy was performed according to oncologic surgical principles due to suspicion arising from calcified lymph nodes in the right mesocolon. This decision was proved to be correct after 1 cm tumor was found during pathologic evaluation.

Case Report

Seventy-year-old man presented to the emergency room due to abdominal pain and vomiting which started 3 hours

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ago. Pain was intermittent and spreading to all quadrants of abdomen. On physical examination, the patient had a large incisional hernia from xyphoid to midpoint between umbilicus and symphysis pubis with 10 cm width. Hernia was result of a peptic ulcer surgery which was performed approximately 30 years ago. The patient also had distension, which is largely due to hernia, generalized tenderness. The patient's bowel sounds were hyperactive suggesting intestinal obstruction. Vital signs were stable. Laboratory work-up including chest X-ray was normal. Abdominal X-ray revealed dilated colon and suggested colonic obstruction. Computerized tomography was also performed and revealed an obstruction located at the splenic flexure of colon. Surgery was offered to the patient but was refused. Nasogastric tube and Foley catheter were inserted, and the patient was closely monitored to see if the obstruction would resolve on its own. Two days later patient's body temperature rised to 38.3 °C and the intensity of the pain increased. Chest and abdominal X-ray were performed, and subdiaphragmatic free air was observed, suggesting perforation (Figure 1). Emergency surgery was carried out. Abdominal cavity was opened through incisional hernia without injuring any organs. Exploration revealed large, dilated right and transvers colon. There was a perforation on the right colon. An omental band was pressing on the splenic flexure of colon and was the cause of the obstruction. The omental band was incised, and the obstruction was resolved. Right hemicolectomy was decided to be performed. However, inspection of right mesocolon revealed calcified lymph nodes. This was suspicious of cancer. Therefore, right hemicolectomy, double barrel ileostomy and colostomy were performed following oncological surgery principles. Abdomen was irrigated and only skin was sutured, as it was impossible to bring fascial planes together due to a huge incisional hernia. Initial postoperative period was uneventful except for serous discharge from the wound due to lack of fascial closure. Discharge ended within the week and patient was discharged successfully. Pathology revealed a 1 cm tumor of moderately differentiated adenocarcinoma on caecum and 3 out of the 10 lymph nodes were metastatic. Tumor had infiltration to the subserosal fatty tissue (pT3N1Mx), distal and proximal margins were tumor free. Two weeks after surgery, while patient was waiting for recovery prior to chemotherapy, he had to be hospitalized with the diagnose of a pulmonary thromboembolism. Angiography revealed multiple clots at segmentary arteries of lower and mid zones of both lungs and distal of right pulmonary artery. Chemotherapy had to be postponed due to patients' poor performance. Three months later patient was reevaluated for chemotherapy. Computerized tomography revealed an 8 mm mass on left upper lobe apicoposterior segment and two 5 mm masses on segment 2 of liver. Folinic acid, fluorouracil and oxaliplatin chemotherapy regimen is now being planned. Patient has given written consent for publication of this case report.

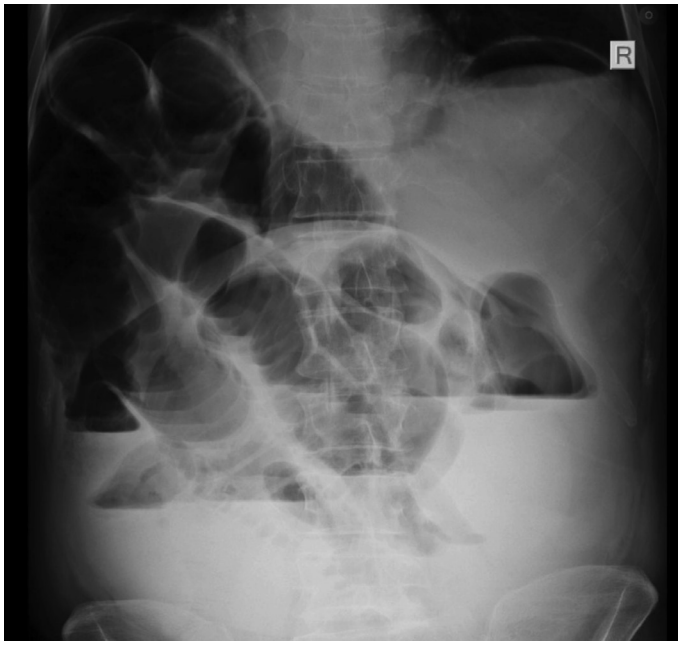


Figure 1. Abdominal X-ray showing colonic obstruction and free air under diaphragma suggesting perforation

Discussion

Laplace's law indicates that the tension on the wall of a sphere is the product of the pressure times the radius of the chamber and the tension is inversely related to the thickness of the wall. What this implicates in our practice is that unresolved colonic obstruction in left colon would cause perforation in the right colon, because right colon wall is thinner.[6,7] Thus, distal obstruction is blamed whenever a right colon perforation occurs. However other pathologies must also be evaluated even though the cause may seem obvious. This was the case here. Right colon perforation in this case was the result of a brid in the splenic flexure of the colon. Calcified lymph nodes were alarming enough to perform a wider resection. Dystrophic calcification in lymph nodes are associated with malignant lymphoma or metastatic adenocarcinomas, often after chemotherapy or radiotheraphy. *De novo* calcification in lymph node metastases from carcinoma, such as in this case, are very rare and only few such cases have been reported so far.[8,9] Pathology revealed three of these lymph nodes to be metastatic. Right hemicolectomy without inclusion of these lymph nodes would have been detrimental to the patient's welfare. Frozen section evaluation would have been helpful. Since operation was performed during night time, it was not available. This patient was also plagued with postoperative pulmonary thromboembolism on day 15 which indirectly

effected the prognosis of the cancer. He was given therapeutic doses of low molecular weight heparin and survived the complication. Thromboprophylaxis is usually recommended for all abdominal oncologic resections. Postdischarge thromboembolism is defined as newly onset of thromboembolism at least 30 days after procedure and often associated with colon surgery, especially surgery due to ulcerative colitis.[10,11] Arterial thromboembolism consequently caused a delay in systemic therapy, which ultimately lead to pulmonary metastasis. In conclusion, while the right colon perforations almost always arising from distal obstruction; other pathologies need to be considered. Calcified lymph nodes in the mesocolon can be considered as a sign of malignancy. If such suspicion arises, application of oncologic surgical principles is highly recommended.

Ethics

Informed Consent: Informed consent was recieved from the patient prior to writing of this manuscript.

Peer-review: Internally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: K.B., M.A.Ü., B.Ç., Concept: K.B., M.A.Ü., B.Ç., Design: K.B., M.A.Ü., B.Ç., Data Collection or Processing: K.B., M.A.Ü., Analysis or Interpretation: K.B., M.A.Ü., B.Ç., Literature Search: K.B., Writing: K.B.

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