CASE REPORT

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Can Acute Appendicitis be the First Sign of an Inoperable Gastric Cancer Metastasis? A Case Report

Akut Appandisit, İnoperabl Mide Kanseri Metastazının İlk Bulgusu Olabilir mi? Olgu Sunumu

DENİZ NECDET TİHAN[1], GÜLÇİN HEPGÜL[2], MELTEM KÜÇÜYILMAZ[2], OLGUN ÖZTÜRK[2], HAKAN GÜVEN[2], AYSEL ÇAĞLAR[3]

[1]Şevket Yılmaz Eğitim Ve Araştırma Hastanesi, Genel Cerrahi Kliniği, Bursa - Türkiye [2]Bağcılar Eğitim Ve Araştırma Hastanesi, Genel Cerrahi Kliniği, İstanbul - Türkiye [3]Bağcılar Eğitim Ve Araştırma Hastanesi, Patoloji Kliniği, İstanbul

ÖZET

Appendiksin primer non-karsinoid adenokanseri nadirdir. Daha da nadir olan ise, appendikse uzak organ metastazıdır. Genellikle mide adenokanserlerinde tanı konulduğunda, uzak metastaz da gelişmiştir. Kliniğe karın ağrısıyla başvuran ve anamnezinde özellik saptanmayan 31 yaşındaki erkek hastanın yapılan fizik muayenesinde sağ alt kadranda hassasiyet ve McBurney noktasında rebaund saptandı. Hasta, akut appandisit tanısıyla ameliyat edildi. Appendektomi materyalinin histopatolojik incelemesi sonucunda appendiks lümeninin adenokarsinom metastazı tarfından tıkandığı görüldü. Bunun üzerine hasta detaylı sistemik muayeneye alındı ve metastazın primerinin mide kaynaklı olduğu saptandı.

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Dr. Deniz Necdet Tihan
Yıldırım İlçesi Bursa-Türkiye
Tel: 0536.2224417
e-mail: dtihan@yahoo.com

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ABSTRACT

Primary non-carcinoid adenocarcinoma of the appendix is rare. Likewise, distant metastatisis of another organ or system cancer is even more rare. Generally, gastric adenocarcinoma may clinically be detected while it is spreaded. A 31-year-old man who had no specific medical history was admitted to the clinic with complaint of right lower abdominal quadrant pain and rebound tenderness over McBurney's point. Laparotomy was performed for a diagnosis of acute appendicitis. Histopathological examination revealed an obstruction of the appendicular lumen due to adenocarcinoma metastasis. Correspondingly, the patient was re-evaluated to detect the primary malignancy focus and underwent inoperable gastric adenocarcinoma diagnosis.

As our knowledge, there is only one other example in the literature; a patient with undiagnosed gastric cancer who had an acute appendicitis as the first clinical

Bu az rastlanır, ilginç ve komplike olguyu paylaşmak istedik.

Anahtar Kelimeler: Akut appandisit, Mide adenokarsinomu, Uzak metastaz, Tanısal laparoskopi

manifestation of an upper gastrointestinal malignancy. Thus we want to share this unusual, interesting and complicated case.

Key words: Acute appendicitis, Gastric adenocarcinoma, Distant metastasis, Diagnostic laparoscopy

Introduction

Acute appendicitis is the most common cause of the acute abdomen, and in almost every case, the primary reason is the obstruction of appendiceal lumen.[1-3] Usually the obstructions occur because of the coprolites in adults and lymphoid hyperplasia in childhood.[2] Acute appendicitis due to primary non-carcinoid appendiceal malignancies is seldom.[2] Besides, metastasis of a distant organ cancer into the appendix vermiformis presented with acute appendicitis clinic may be defined as an extraordinary entity.

Case Presentation

A 31-year-old man was admitted to the emergency room with sudden onset of acute right lower abdominal quadrant pain. He had no significant medical history. Physical examination revealed rebound tenderness over McBurney's point. Axillary body temperature was 37.7°C. The pulse was 88 beats/min and blood pressure 110/75 mmHg. Complete blood count showed mild leucocytosis with neutrophil dominance (WBC. 14700/mm3). Ultrasound (US) scan disclosed an incompressible and swollen appendix with 11-mm-diameter. Consequently urgent laparotomy with McBurney's incision was done for a diagnosis of acute appendicitis. The patient was discharged two days after the operation. Histopathological examination showed obstruction of the appendicular lumen due to infiltration of six-mm-diameter adenocarcinoma metastasis invading muscularis propria (figure 1a and 1b). According to this finding, the patient was re-hospitalized and evaluated to detect the primary focus of malignancy.

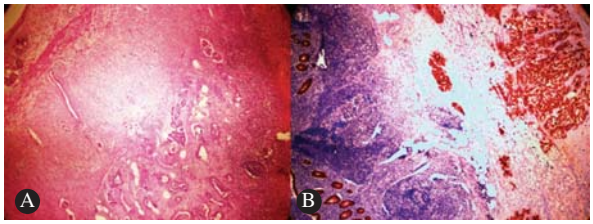

Figure 1A. Adenocarcinoma invasion in the appendix vermiformis wall and exulcerated epithelium (H.E, x40); 1B. Immunohistochemical pancytokeratin positivity of the adenocarcinoma cells' cytoplasms (pancytokeratin, x40).

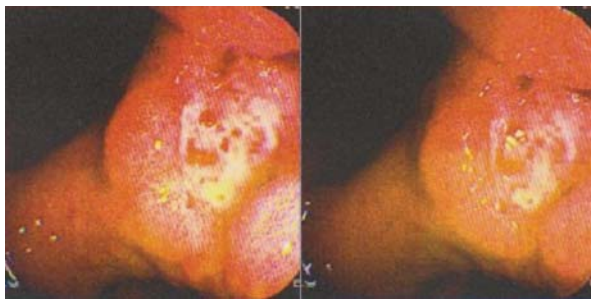

Figure 2. Gastroscopic view of exulcerated mucosal area localized on the incisura.

Gastroscopy and colonoscopy was performed and the patient underwent intramucosal gastric adenocarcinoma diagnosis (figures 2 and 3). Subsequent to determination of a hypermetabolic lession with malignant aspect on the ileocaecal region on the fluorodeoxyglucose positron emission tomography (FDG-PET) scanning, laparoscopic exploration was performed.

Multiple biopsies were taken from the suspect areas of diaphragm and peritoneum (figure 4). Also peritoneal lavage with %0.9 NaCl was performed for cytopathological examination. Frozen histopathological examination's data of laparoscopic biopsies was concordant with infiltration of adenocarcinoma. The cancer was considered inoperable and the patient discharged on the second postoperatively day after the laparoscopy. He is still having chemotherapy treatment with FUFA protocol (fluorouracil 425 mg/m2 and folinic acid 20 mg/m2 for 5 days, every 4 week for 6 cycles).

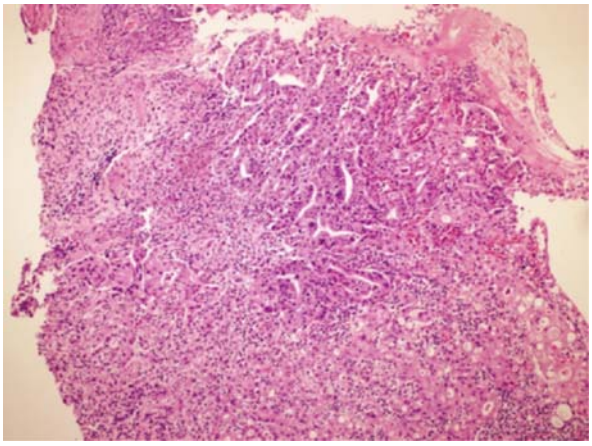

Figure 3. Adenocarcinoma associated with gastric epithelium detected in the gastric endoscopic biopsy specimen (H.E, x100).

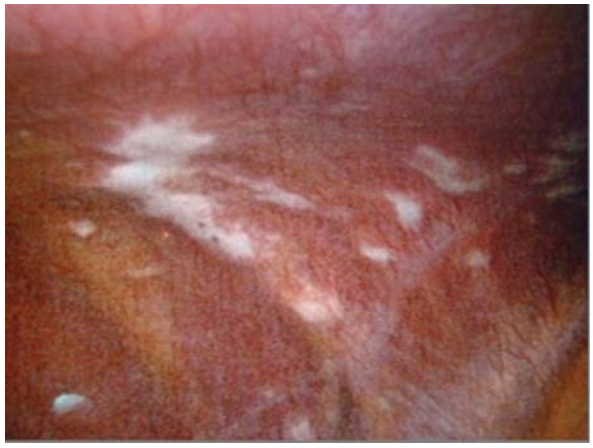

Figure 4. Peritoneal carcinoma implants detected in laparoscopic exploration.

Discussion

The ratio of primary non-carcinoid appandiceal cancers in all gastrointestinal tract malignancies is less than 0.5%.3 In general, clinical presentation of these patients is acute appendicitis due to tumoral obstruction of the lumen.[2,3] The majority of all cases are misdiagnosed preoperatively, even intraoperatively. Usually, the lesions are identified after the histopathological examinations.[3] In the circumstances, it is difficult to diagnose a distant metastasis into the appendix presented with only acute appendicitis symptoms and no other significant medical history or physical examination findings.

Any types of malignancy may spread to the appendix vermiformis. Appendiceal metastasis of colorectal, prostate and even lung cancers were reported.[4-6] Regarding to the literature, the gastric adenocarcinomas are the most common neoplasm types which tend to spread to the appendix.[7-9]

Gastric carcinoma metastasis to the appendix was first described by Goldfarb and Zuckner in 1951.10 The metastasis process begins as serosal implants. Therefore malignant cells infiltrate progressively all layers of the appendix wall. Tumoral mass and the environmental inflammation occlude the lumen and cause the stasis of appendiceal secretions which lead to the catarrhal infections and result in acute appendicitis. Once in a while, the direct obstruction of the metastatic cells without serosal infiltration may also occur and speeds up the process, thus appendix can be perforated and generalized peritonitis symptoms appear.

There is only one reported case of appendiceal metastasis of an undiagnosed gastric cancer, detected incidentally on colonoscopy which is not presented as acute appendicitis.[9] In our case, the initial sign of a gastrointestinal adenocarcinoma is the acute appendicitis and as our knowledge, this is the second similar case in the literature. Møller *et al*.[8] reported an undiagnosed gastric tumor case primarily presented with symptoms of acute appendicitis. However, other cases of distant adenocarcinoma metastasis to the appendix vermiformis, mentioned about metastasis after the diagnosis of primary cancer.

The prognosis of the acute appendicitis due to distant cancer metastasis is poor. However, in patient with solitary appandiceal metastasis - especially in case of metastasis from rectum or colon - a right radical hemicolectomy can be added if primary tumor is also radically resectable and in such case, the patient should not be considered as inoperable. In our case, diagnosis of peritoneal carcinomatosis took away the opportunity of radical surgery.

Though the majority of acute appendicitis caused by benign obstruction, malignancy - and even more distant metastasis - also should be kept in mind.

Kaynaklar

1. Parks NA, Schroeppel TJ. Update on imaging for acute appendicitis. Surg Clin North Am. 2011;91:141-54.
2. Sieren LM, Collins JN, Weireter LJ, *et al*. The incidence of benign and malignant neoplasia presenting as acute appendicitis. Am Surg. 2010;76:808-11.
3. Hartley JE, Drew PJ, Qureshi A, *et al*. Primary adenocarcinoma of the appendix. J R Soc Med. 1996;89:111P-3P.
4. González-Vela MC, García-Valtuille AI, Fernández FA, *et al*. Metastasis from small cell carcinoma of the lung producing acute appendicitis. Pathol Int. 1996;46:216-20.
5. Gopez EV, Mourelatos Z, Rosato EF, *et al*. Acute appendicitis secondary to metastatic bronchogenic adenocarcinoma. Am Surg. 1997;63:778-80.
6. Ratanarapee S, Nualyong C. Acute appendicitis as primary symptom of prostatic adenocarcinoma: report of a case. J Med Assoc Thai. 2010;93:1327-31.
7. Lin CY, Huang JS, Jwo SC, *et al*. Recurrent gastric adenocarcinoma presenting as acute appendicitis: a case report. Int J Clin Pract Suppl. 2005;147:89-91.
8. Møller P, Lohmann M. Acute appendicitis as primary symptom of gastric cancer. Ann Chir Gynaecol. 1984;73:241-2.
9. Fu K, Horimatsu T, Sano Y, *et al*. Metastasis to the appendix from gastric cancer detected incidentally on colonoscopy. Endoscopy. 2007;39:7.
10. Goldfarb A, Zuckner J. Acute suppurative appendicitis with perforation resulting from metastatic carcinoma: report of a case. Surgery 1951;29:137-141.