

CASE REPORT

## Two-Type Synchronous Colonic Adenocarcinoma with Appendiceal Carcinoid

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### ABSTRACT

*Colorectal carcinoma is the most common malignancy of the gastrointestinal tract. It makes colorectal cancer the second most lethal cancer in the United States. Carcinoid tumors occur most commonly in the gastrointestinal tract, and up to 25% of these tumors are found in the rectum. The risk of synchronous or metachronous colorectal carcinoma ranges from 5% to 40%, but synchronous carcinoma of two different types is rare. We report a 28-year-old female with a partial obstruction and abdominal pain that did not respond to conservative medical therapy. After 48 hours, she was operated with midline incision; a two-level obstruction (sigmoid and rectosigmoid) was found with mucinous and non-luminous (Nos) type adenocarcinoma and appendicular mass with carcinoid pathology. Total abdominal colectomy with end ileostomy and Hartmann pouch was done. Synchronous colon cancer is an indication for total colectomy and postoperative assessment for metastatic lesion and other organ malignancy for emergent operation. During the resection of a colorectal tumor, a thorough investigation of the abdominal cavity should be undertaken. Because of the slow-growing carcinoid tumor, the discovery of asymptomatic gastrointestinal carcinoid tumor during the operation requires resection alone, or in the case of synchronous carcinoid and adenocarcinoma, management is directed toward the carcinoma.*

**Key words:** Carcinoid, Synchronous, Adenocarcinoma

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### ÖZET

#### Apendiks Karsinoidi ile Birlikte İki Tip Senkranöz Kolon Adenokarsinomu

*Sindirim sisteminin en sık görülen malignitesi kolorektal kanserdir. Bu durum kolorektal kanseri Amerika Birleşik Devletleri'nde en çok öldüren ikinci kanser yapar. Karsinoid tümörler en sık sindirim sisteminde görülür ve bu tümörlerin %25'i rektumdadır. Senkron veya metakron kolorektal kanser görülme riski %5-40 arasındadır ancak iki farklı tip senkranöz kanser oldukça nadirdir. Karın ağrısı ve kısmi bağırsak obstrüksiyonu ile başvuran ve ağrısı medikal tedavilere yanıt vermeyen 28 yaşında bir kadın hastayı rapor ediyoruz. Kırk sekiz saat sonra orta hat kesisiyle batına girildiğinde iki farklı düzeyde (sigmoid ve rekto-sigmoid) obstrüksiyon olduğu ve beraberinde de apendiküler bir kitle olduğu görülüyor ve hastaya total abdominal kolektomi ve uç-ileostomi-Hartmann poşu yapılıyor. Histolojik inceleme musinöz ve nonluminöz iki farklı tip tip adenokarsinoma ve apendiküler karsinoid olarak rapor ediliyor. Senkranöz kolon kanseri total kolektomi endikasyonudur ve ameliyat sonrası metastatik odaklar ve acil operasyon için diğer organ tümörler aranmalıdır. Kolorektal tümörün rezeksiyonu sırasında karın detaylı olarak değerlendir-*

*dirilmelidir. Asemptomatik karsinoid tümör bulunması durumunda sadece rezeksiyon yapılmalı ancak adenokanser ve karsinoid birlikteliği durumunda tedavi adenokarsinom tanısına göre planlanmalıdır.*

**Anahtar kelimeler:** Karsinoid tümör, Senkron, Adenokarsinom

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## INTRODUCTION

Synchronous carcinomas are not uncommon, and in recent reviews, the incidence was found to range from 2% to 8% in colon carcinoma patients<sup>[1,2]</sup>. In view of this, it behooves the treating surgeon to evaluate the entire colon, if possible, to determine the presence of other neoplastic lesions. Hereditary non-polyposis colorectal cancer is a familial disorder characterized by high incidence of colon cancer without the excessive polyps as identified in classic familial adenomatous polyposis (FAP); it accounts for 5% to 6% of colorectal cancers<sup>[3,4]</sup>. Its phenotypic features include early-onset colorectal cancer with a mean age of 46 years, synchronous or metachronous colorectal cancers (noted in 35% of cases), and a proclivity for right-sided tumors<sup>[5]</sup>.

There is an association with early onset of adenocarcinoma of the ovary, pancreas, breast, bile duct, endometrium, stomach, genitourinary tract, and small bowel<sup>[6]</sup>. Carcinoids of the appendix are relatively common neoplasms, with a prevalence of 0.32% among 34,505 patients undergoing routine appendectomy<sup>[7,8]</sup>.

## CASE REPORT

A 28-year-old Afghan female was admitted to the hospital due to chronic abdominal pain over the past two months. The patient was completely pale, and vital signs were blood pressure 100/70 mmHg, pulse rate 110, and respiratory rate 14. She was illiterate, and had given birth to her fourth child about six months before. She was conscious during the physical examination and could reply to our questions.

The patient described that these colicky abdominal pains had started six months ago. She did suffer a loss of appetite and accordingly experienced a weight loss. A severe blood loss and lack of blood transfusion during the delivery caused anemia. Due to breastfeeding, she had irregular menstrual cycles. The physical examination demonstrated temporal atrophy and presence of abdominal distension. Auscultation of the lungs and heart sound was normal. There was no sign of abdominal tenderness or rebound tenderness, and there was an absence of the left breast (aplasia). With

some suspicion of partial obstruction, the main three graphs were taken, in which various air fluid levels could be seen (Figure 1). Foley catheter and nasogastric tube were placed. Urine measured almost 300 cc and was dense. The patient was hydrated. Her preliminary blood test was sent and the results were as follows: hemoglobin: 7.9, serum calcium: 7.3, platelets: 653, blood urea nitrogen (BUN): 25, albumin: 2.5, creatinine: 1, and total protein: 5.3.

The patient admitted with partial obstruction, and was having initial resuscitation. Due to anemia and lack of albumin, the patient received blood transfusions and peripheral parenteral nutrition (PPN). She was under supervision for 48 hours. During this period, computed tomography scans of the abdomen and pelvis were obtained. In the performed graph, the following were notable: the computed tomography image showed absence of the left breast (Figure 2); the patient's stomach was completely dilated (Figure 3). No dye entered the colon and there was complete colon distension (Figure 4). In the computed tomography, two suspicious masses could be seen in the large intestine (Figures 5, 6), the appendiceal base was wide, and the lumen of the appendix could be seen (Figure 7).

Results of other tests showed increases in carcinoembryonic antigen (CEA) and cancer antigen (CA)-125. Due to severe abdominal distension and the patient's failure to respond to symptomatic treatment, laparotomy was performed. The abdomen was thoroughly clean; only the intestines were totally distended (Figure 8).

On abdominal exploration, two masses were palpated in the pelvic area, one in the area above the rectum and another in the sigmoid area of the colon (Figure 9).

The upper rectal mass was mobile, but the mass of the sigmoid area was attached to both the pelvic wall and left ovary. In exploring other areas, in the appendix area and at the base of the appendix, a 2 cm circular mass was palpable (Figure 10). Due to obstruction, the patient was a candidate for a segmental colectomy, but in this case, because she suffered from a synchronous lesion, she underwent a total abdominal colec-



Figure 1. (A) Up right chest X-ray, (B) Up right abdominal X-ray, (C) Supine abdominal X-ray.

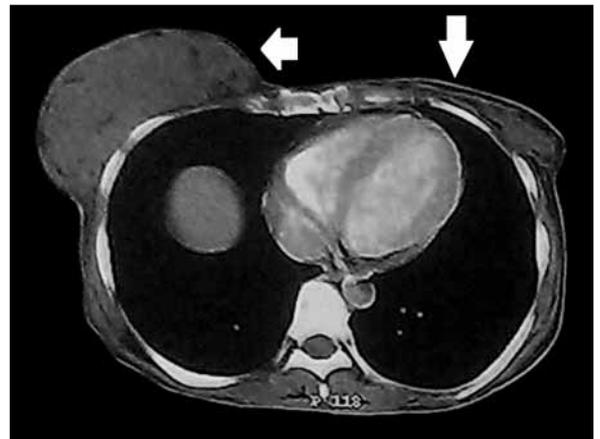


Figure 2. Breast aplasia.



Figure 3. Distended stomach.

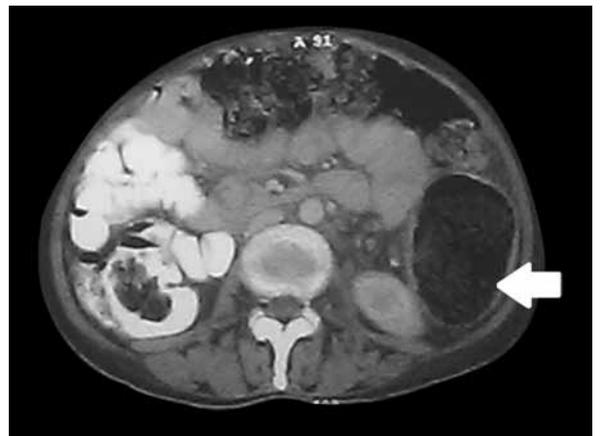


Figure 4. Distended left colon.

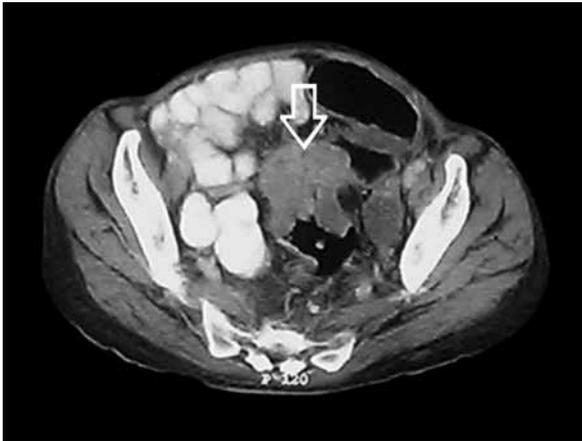


Figure 5. Upper rectum mass.



Figure 6. Sigmoid mass.



Figure 7. Appendix with wide base.



Figure 8. Clean abdomen with distended intestine.

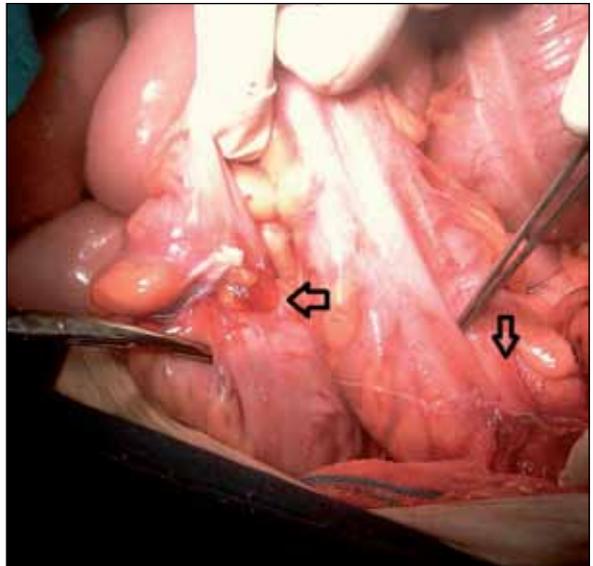


Figure 9. Two colon masses.

tomy. The distal rectum was closed in form of Hartmann's procedure, and an ileostomy was embedded on the lower right side of the abdomen. Due to severe edema of the rectum and colon, anastomosis not performed. The portion attached to the pelvic wall was resected with macroscopic safe margins and the left ovary was removed as left salpingo-oophorectomy. The operation was finished by rinsing out the abdominal cavity.



**Figure 10. Appendix.**

The pathology was well-differentiated mucinous and non-mucinous (nos) adenocarcinoma and a 1 cm carcinoid tumor of the appendix. The tumor invaded the subserosa (T3) with 2 of 13 lymph node involvement and also neural and vascular invasion. The carcinoid tumor was classic type.

Upper endoscopy was performed in this patient to consider the issues of upper synchronous mass as well. After recovery, the patient was sent for chemotherapy and radiotherapy, if needed.

#### **DISCUSSION**

In emergency surgical patients, segmental resection of the colon, if it is resectable, is preferred except in the case of fulminant colitis or FAP; however, in synchronous lesions of colon, total colectomy is the treatment. When two masses are found synchronous during surgery, the patient is a candidate for total colectomy.

Based on individual and familial characteristics associated with synchronous colorectal neoplasms, it has been possible to identify a subgroup of patients with colorectal carcinoma prone to multicentric neoplasms, with potential implications on the delineation of preventive strategies. If technically and logistically possible, it would be ideal to perform a preoperative colonoscopy examination in all patients who are scheduled to undergo elective resection of the carci-

noma. If not possible, it is suggested that patients undergo a postoperative colonoscopy<sup>[9]</sup>. The discovery of asymptomatic gastrointestinal carcinoid tumor during the operation requires resection alone, or in the case of synchronous carcinoid and adenocarcinoma, management is directed toward the carcinoma<sup>[5]</sup>.

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