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A Case of Synchronous Colorectal Carcinoma Manifested as Three Separate Colon Masses

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Synchronous Colorectal Carcinoma Manifested as Three Separate Colon Masses: A Case Report and Review of Literature

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INTRODUCTION

Colorectal cancer is the second leading cause of cancer-related deaths in the United States amongst cancers that affect both genders. A small entity of this common disease is synchronous colorectal carcinoma. Research on this topic is becoming more prevalent, however, more answers are still needed. Below is a case of synchronous colorectal carcinoma in which three separate colon masses were discovered on initial presentation.

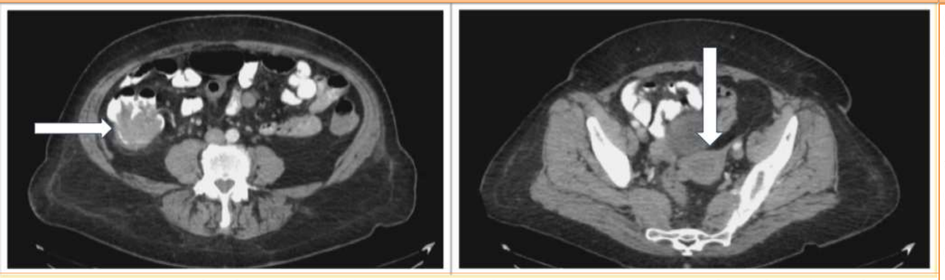
CASE PRESENTATION

78 year-old female who presented with shortness of breath on exertion for two weeks. She complained of associated lightheaded-ness and a remote history of intermittent black stools but no bright red blood per rectum or hematemesis. Past medical history significant for PE currently on Xarelto and left-sided breast cancer that was treated with neoadjuvant chemotherapy two years prior. Patient has never had a colonoscopy or EGD. Family history pertinent for sister dying of stomach cancer 30 years ago but no known history of inflammatory bowel disease. Physical exam on presentation was benign with no abdominal tenderness or organomegaly. Vital signs significant for sinus tachycardia.

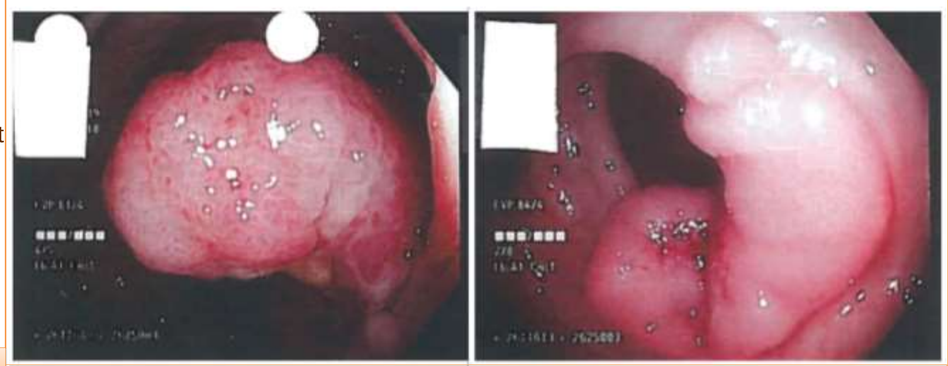
CLINICAL COURSE

- Hemoglobin found to be 5.0 with iron deficiency and heme-occult positive stool: two units packed red blood cells transfused
- Gastroenterology consulted: plan for EGD/colonoscopy
- V/Q scan ruled out PE, anticoagulation held for possible GI bleed
- Taken to endoscopy suite: three polypoid lesions in rectum and three separate colon masses located in the cecum, sigmoid colon and rectosigmoid seen; all of which were biopsied and inked
- CT scan post-procedure: 4.2x2.7 cm mass at the cecum in region of terminal ileum and areas of bowel wall thickening at proximal descending colon, proximal sigmoid colon, and distal rectosigmoid colon
- General surgery consulted: plan for OR after multidisciplinary discussion
- Pre-operative CEA 2.19
- Preliminary pathology: high grade dysplasia in the cecum and carcinoma in situ in rectal polyp
- Taken to the operating room: rectal exam under anesthesia and laparoscopic subtotal colectomy
- Final pathology post-operatively: moderately differentiated invasive adenocarcinoma arising from tubulovillous adenomas with lymph-vascular and perineural invasion, five out of twelve lymph nodes sampled were involved
- Immunohistochemistry stains for mismatch repair proteins: low probability of microsatellite instability
- Uncomplicated post-operative course and stable for discharge on post-op day four

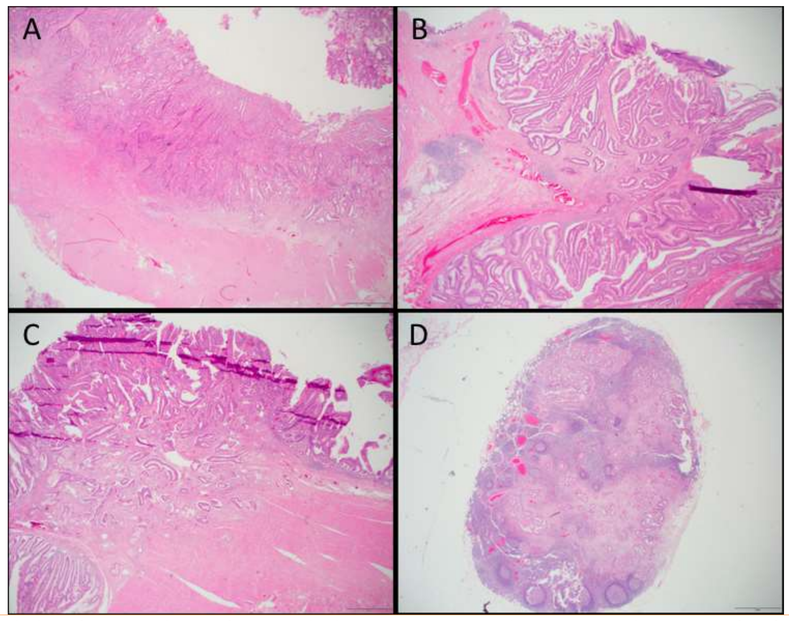
IMAGES



CT scan abdomen/pelvis with oral and IV contrast: 4.2 x 2.7 cm mass at the cecum in region of terminal ileum (left). Areas of bowel wall thickening at distal rectosigmoid colon (right).



Colonoscopy: Large spreading masslike lesion in cecum and ascending colon occupying at least half of the lumen (left). Another large spreading mass lesion over multiple folds in the sigmoid colon, approximately 40 cm from the anal verge (right).



Final Pathology (2x magnification): A. Cecal adenocarcinoma invades into muscularis propia (pT2). B. Splenic flexure adenocarcinoma invades into submucosa (pT1). C. Sigmoid adenocarcinoma invades into muscularis propria (pT2). D. Lymph node showing metastatic adenocarcinoma. Five of 12 lymph nodes were positive in the resection specimen.

DISCUSSION

Synchronous colorectal cancer is defined as two or more primary adenocarcinomas detected within a six-month time frame that are distinctly separate. The overall incidence has been documented as low as 0.5% and has been reported to be as high as 8%. This range depends on whether patients with polyposis syndromes or inflammatory bowel disease are included or not. It has been shown that those with these disorders have a higher predilection to developing synchronous colorectal carcinomas, with a common association to microsatellite instability. This case had a low probability of this factor. Among those with synchronous colorectal cancer, only less than 15% are patients with three or more primary lesions and the highest reported tumor count in a single patient thus far is six lesions. Varying data has been published on factors associated with this presentation. The most common information states that synchronous tumors appear to occur more with advanced age. However, these still occur in the middle-aged population.

It can be argued that the most important aspect of synchronous colorectal cancer is diagnosis. It is common to miss another lesion on imaging or if a full colonoscopy cannot be completed prior to taking the patient to the operating room. Being able to inspect the entirety of the bowel is a vital step in determining how to proceed with treatment, particularly to what extent of surgery to perform.

Surgery is a major component of treatment of synchronous colorectal cancer. The main goal of surgery is an en bloc resection with adequate margins as well as removing the regional lymph node basin. If this cannot be achieved, palliative surgery is another option for many patients. There is some controversy over what procedure a patient should undergo. Some studies conclude that an extended resection does not improve overall survival, whereas other studies found results stating that a radical resection can increase survival rate if diagnosed early enough. Along those lines, a higher risk of post-operative complications and reoperation is associated with this population. But most importantly, this does not confer a higher 30-day mortality rate when compared to solitary tumors. Five-year survival rate has been reported to be as high as 53%, almost equal to that of solitary tumors. Further research is needed to hone in on the most appropriate surgical treatment for these multiple lesions.

Follow-up is another key factor in patients with synchronous colorectal carcinoma, as they are found to have a higher incidence of associated polyps that can undergo neoplastic transformation and a higher rate of metachronous cancer than those with single tumors. Therefore, continued management with close follow-up colonoscopy and imaging is critical in keeping any future progression at bay.

CONCLUSION

Synchronous colorectal cancer may be more prevalent than even documented secondary to not fully diagnosing or patients undergoing palliative surgery prior to complete diagnosis. This is a topic that could benefit from a large research experiment or meta-analysis to better answer the question as to how to effectively manage these patients.

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