Metastatic Colorectal Adenocarcinoma at Twenty Six

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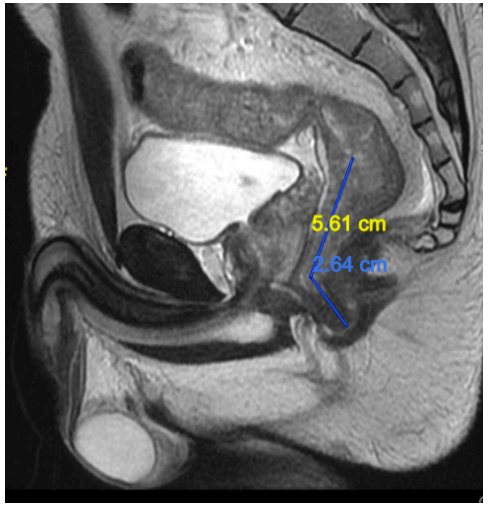
INTRODUCTION

Colorectal cancer before the age of 50, otherwise known as early-onset colorectal cancer (EO-CRC), has an increasing incidence. Its nonspecific symptoms in an unsuspecting population make EO-CRC difficult to diagnose.

CASE

A 26-year-old healthy Caucasian man developed diffuse abdominal pain, mild hematochezia, constipation, nausea and vomiting for 3 days. Five months prior to this, he noticed intermittent bloody stools. He denied family history of colorectal cancer, travel, fever, substance use, cigarette smoking, alcohol intake, or weight loss. He was hemodynamically stable and had mild diffuse abdominal tenderness. His hemoglobin/hematocrit were 10.5/31.8 g/dL and stool occult blood test was positive. The remainder of the complete blood count, complete metabolic panel, urinalysis, amylase, and lipase levels were normal. Contrast-CAT-scan of abdomen-pelvis showed colonic stricture with 7 hypodense, solid hepatic nodules. MRI confirmed an apple-core-type mass in the sigmoid colon, 10 cm from the anus with multiple perirectal lymph nodes. Colonoscopy and detailed histopathological analysis concluded as colonic obstruction due to metastatic colorectal adenocarcinoma (CRC) stage IV; ypT3 ypN1a ypTM1 a; NRAS mutation+, pMMR; immunohistochemical stains further confirmed the tumor cells reactive for CDX2, villin, and SATB2; CK20 shows patchy positivity while CK7 was negative. He underwent colonic stenting, low anterior resection, diverting loop ileostomy, and received RFA ablation to four hepatic metastases, followed by 12-cycles of FOLFOX, Bevacizumab and maintenance 5-FU. He maintained an excellent performance status. Considering absence of family history of cancers and young age of onset he was advised for genetic counseling, which revealed no reportable genetic variants.



Apple core type mass found on CT scan of abdomen-pelvis

REFERENCES

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DISCUSSION

Around 5% of all CRCs occur in patients under age 45 years. The incidence of EO-CRC has been increasing 1-2%/year while the overall CRC frequency has been decreasing. Approximately 30% of cases are associated with known hereditary cancer syndromes, and 20% have familial CRC. EO-CRCs are molecularly distinct from CRCs found in older patients and have unique signaling aberrations particularly among patients aged 18-29 years. EO-CRCs have lower occurrence of BRAF V600 mutations and KRAS mutations, and the combined MAPK pathway mutations happen to be lowest among patients aged 18-29 years. EO-CRCs often present with advanced stage at the time of diagnosis, have poorly differentiated tumors, and occur predominantly left-sided and rectal. EO-CRCs are diagnosed approximately six months later than symptom onset due to low level of suspicion in the young adult population. This case demonstrates the difficulty in early diagnosis of EO-CRC due to the patient's absence of significant family history, medical history, and risk factors (obesity). A high index of clinical suspicion and additional work-up is critical for diagnosis.

CONCLUSION

The rising incidence of EO-CRCs, commonly diagnosed months after symptom onset and at an advanced stage, necessitates earlier age surveillance. Treatment is based on staging and molecular characteristics.