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38 Years Old Female with Colon Cancer Metastasized to Liver

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Abstract A 38 years old lady presented to her local hospital with acute abdominal pain. To evaluate the cause of her abdominal pain, she had a computed tomography (CT) scan of her abdomen that showed thickening of the distal portion of the transverse colon. For further evaluation, patient underwent colonoscopy that revealed a circumferential colonic mass in the distal portion of the colon that was suspicious for colon cancer. The colonic mass was biopsied and tissue pathology reported adenocarcinoma. Subsequently, magnetic resonance imaging (MRI) scan of her abdomen was obtained that showed the presence of numerous lesions throughout the liver. She underwent laparoscopic hemicolectomy and subsequently chemotherapy with significant improvement of her symptoms and disease burden.

Keywords: *metastatic colon cancer, colorectal cancer screening*

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1. Introduction

In United States (U.S), colorectal cancer (CRC) is the 3rd most common cancer diagnosed in both men and women. It is the 2nd leading cause of cancer-related deaths in men and the 3rd leading cause in women. Screening for CRC, which usually starts at age 50 for the general population, has resulted in early detection and thus, a decrease in the incidence of CRC. However, incidence of CRC has significantly increased in people less than 50 years of age which has led to a serious reconsideration about the starting age of screening for CRC in the young population. We report a case of a 38 years old healthy lady, with no reported signs or symptoms of CRC, who was found to have colon cancer that had metastasized to liver.

2. Case

Our patient is a 38 years old lady who presented to her local hospital with complaints of sudden onset of severe abdominal pain, nausea and vomiting. She was in a good state of health and didn't have any medical problems or surgeries in the past. On physical examination she was found to have diffuse abdominal tenderness. Laboratory data was unremarkable. CT scan of abdomen was obtained that showed thickened distal portion of the transverse colon. Her symptoms improved with supportive treatment and she was discharged in a stable condition with recommendations to obtain an outpatient colonoscopy for further evaluation of the findings on CT scan.

A few days later, patient presented to the same hospital with worsening abdominal pain. A repeat CT scan of her abdomen was obtained that showed thickened distal portion of the transverse colon causing proximal obstruction and hypo-dense lesions throughout the liver. She also reported that she was under a lot of stress because her father was recently diagnosed with colon cancer. She was admitted to the inpatient service and underwent colonoscopy that showed a circumferential colonic mass in the distal portion of the transverse colon suspicious for colon cancer. Biopsy of the colon mass was obtained for further testing. Patient was transferred to our hospital for surgical and oncological evaluation.

For further evaluation, patient underwent magnetic resonance imaging (MRI) of abdomen that showed significant distention of the small bowel loops with several air-fluid levels concerning for small bowel obstruction and numerous hypo-vascular lesions throughout the liver with restricted diffusion compatible with metastasis (Image 1 & Image 2). She was evaluated by the surgery team and underwent laparoscopic right hemicolectomy with omentectomy. Tissue pathology report became available and stated poorly differentiated infiltrating colonic adenocarcinoma. She was also seen by the oncology team for management of metastatic colon cancer. Patient tolerated the surgery well and was able to tolerate oral diet. She was discharged home in a stable condition with recommendations to follow up with the oncology team for further management. She continued to be seen by the oncology team and received chemotherapy with significant improvement of her symptoms and disease process.

Image 1. MRI abdomen showing irregular hypo-dense masses in liver (red arrows)

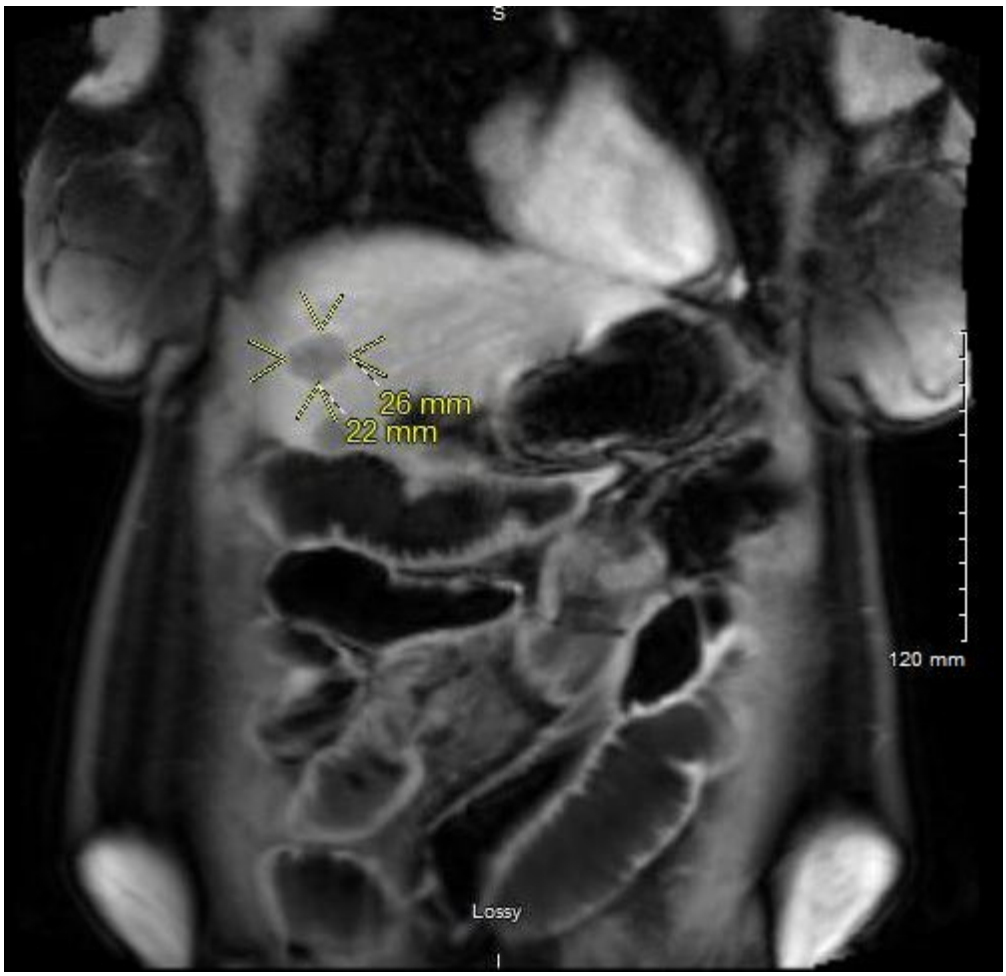

Image 2. MRI abdomen showing hypo-dense masses in liver (red arrows) and dilated small bowel loops (blue arrow)

3. Discussion

Colorectal cancer is the 3rd most common and 2nd most lethal cancer in the U.S. It is widely considered a disease that affects people after the 5th decade of life, as for the vast majority of adults the most important risk factor is older age [1] and thus screening is generally not indicated before 50 years of age, when the risk is lower.

Screening is essential for prevention and early diagnosis of CRC. The United States Preventive Services Task Force (USPSTF) recommends screening for CRC beginning at age 50 years for the general population [1]. American College of Gastroenterology has additional recommendation that people with a family history of CRC in a first-degree relative diagnosed at <60 years should undergo colonoscopy every 5 years beginning at age 40 years or 10 years before the age the relative was diagnosed, whichever comes first [2]. Screening is relevant only for asymptomatic individuals, once CRC symptoms arise, an expeditious work-up is essential for all patients [3].

A review of literature shows that in U.S there has been an increase in the incidence of CRC in people younger than 50 years of age. A study by Siegel RL et al., [4] showed that in sharp contrast to the overall declining rates of CRC in the United States, incidence rates among adults younger than age 50 years are increasing. Although, the reasons for this rising incidence of CRC remain unclear and the relative incidence in persons under age 50 remains low, the increasing incidence in young people is a major public health concern [2]. The mechanisms responsible for the increasing incidence of CRC in young persons are not clear. There are a number of risk factors associated with the development of CRC. A family history of CRC in a first-degree relative increases the risk of CRC regardless of the age at diagnosis of the affected relative [5]. Other risk factors for CRC, obesity, diabetes mellitus, physical inactivity are also common or increasing [3].

A comprehensive study by Dozois et al., found that majority of young-onset CRC patients were symptomatic at the time of presentation, patients with rectal cancer most commonly presented with rectal bleeding and change in bowel habits, while patients with colon cancer were more likely to present with chronic abdominal pain, nausea and vomiting, and rectal bleeding [6]. They also found that these patients had predominantly left-sided lesions (rectal and left colon), and also presented at a relatively late stage in their disease [6].

In the case of our patient, she was 38 years old at the onset of her symptoms. She didn't have any significant past medical history, risk factors or signs and symptoms for colon cancer. The only significant event in her case was the recent diagnosis of colon cancer in her father, who was 60 years of age at the time of diagnosis. The question arises, when to start screening in a population with an average risk of CRC or in individuals who are young with a first degree relative with CRC diagnosed at a later age. In the first case, evidence is currently insufficient to justify initiation of population-wide CRC screening among asymptomatic, average-risk patients who are younger than 50 years [3]. The second case is more complicated and there is no straight forward answer to it. As evident in our patient who didn't have any risk factors or long standing signs and symptoms of CRC and her father being diagnosed at a later age, there is no specific screening criteria to follow.

There are a number of steps that can be taken for primary prevention and early diagnosis of CRC. Both the patient and primary care physician have to work together. By discussing CRC risk factors and symptoms, the importance of screening, and the value of early detection during routine visits, PCPs may help young patients be alert to symptoms and seek care earlier [3]. Factors leading to a delay in diagnosis of CRC are contributed by both the primary care physician and the patient. They include lack of awareness about the increasing incidence and low suspicion of disease, delay in seeking or receiving medical attention and missed diagnosis are a few among others [3].

4. Conclusion

Incidence of CRC has increased substantially in the young population in the past decade. Although there are guidelines for screening for CRC starting at an early age in persons with familial cancers, many people with CRC remain undiagnosed till the disease has advanced and spread to distant locations. PCPs and the patients have to work together for primary prevention and early diagnosis of CRC for a better outcome.

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