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Case Report

Hidden Malignancy in Pregnancy: Metastatic Adenocarcinoma of Colon Disguised as Liver Hemangioma Leading to Maternal Mortality

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Abstract:

Introduction: Colorectal cancer during pregnancy is a complex and rare condition often presenting with benign gastrointestinal symptoms that overlap with normal pregnancy related changes, leading to delayed or misdiagnosis. Further, hepatic metastases may complicate recognition, especially when initially interpreted as benign lesions such as hemangiomas. So, early identification and management are crucial and remain challenging for optimizing maternal and fetal outcomes. **Clinical Description:** A case of 39-year-old gravida 5 para 4 at 24 weeks+1 day with chronic hypothyroidism, longstanding anemia and a one year history of epigastric + right upper quadrant pain with suspected hemorrhage from a known liver hemangioma. Further imaging suggested a malignant hepatic lesion where colonoscopy and biopsy confirmed stage IV metastatic colon adenocarcinoma with liver and adrenal metastases. Her condition deteriorated and delivered a stillborn infant at 26 weeks of 780 grams following placental abruption. She continued to decline despite supportive care and died. **Conclusion:** This case illustrates the diagnostic challenges of colorectal cancer in pregnancy where nonspecific symptoms and inaccurate imaging results contributed to delayed diagnosis. The aggressive nature of the disease emphasizes the importance of prompt diagnosis and integrated care approach to improve both maternal and fetal outcome.

Keywords: Colorectal Carcinoma, Metastatic Colon Cancer, Liver Hemangioma, Metastasis, Pregnancy, Maternal Mortality

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1. Introduction

Colorectal carcinoma **(CRC)** is a rare and highly progressive carcinoma complicating 1 in 13,000 pregnancies [1]. However, it has been suggested that due to advanced maternal conception, the number of CRC cases expected to rise during pregnancy [2]. It is often diagnosed late due to non-specific symptoms making delayed diagnoses with poor outcome [3]. Moreover, physiological changes of pregnancy such as abdominal discomfort, anemia and altered bowel habits can obscure the early symptoms of CRC [4]. The Royal College of Obstetricians and Gynecologists (RCOG) also emphasizes the importance of considering CRC in pregnant women presenting with persistent non-specific gastrointestinal symptoms particularly with a family history or other risk factors [5]. The British Journal of Obstetrics and Gynecology (BJOG) highlights the delayed diagnosis of CRC in pregnancy is common and results in poor prognosis thus

recommends a high index of suspicion in women presenting with abdominal pain, anemia or altered bowel habits [6]. Similarly, the American College of Obstetricians and Gynecologists (ACOG) also suggests that CRC is one of the most common non gynecologic malignancies diagnosed during pregnancy and thus focuses the need for vigilance in assessing the symptoms [7].

2. Case Report

A 39 years old gravida 5 para 4, previous 4 cesarean deliveries at 24 weeks+1 day of gestation with chronic hypothyroidism, iron deficiency anemia and a year of intermittent epigastric + right upper quadrant pain presented in Emergency Department with severe abdominal pain and anemia (Hb:7.4 g/dl). She was diagnosed with gallstone and presumed liver hemangioma one month before pregnancy.

On arrival, was stable hemodynamically but distressed with marked epigastric and right hypochondrial tenderness with a fundal height of 24 weeks. Multidisciplinary management was initiated. Ultrasound revealed multiple heterogeneous liver lesions while CT Angiogram revealed multiple exophytic large focal liver lesions (suggestive of giant hemangioma), a left adrenal mass and extensive venous thrombosis. MRI abdomen indicated bilobed multifocal infiltrative hepatic lesions likely metastatic and a large left adrenal soft tissue mass. CA19-9 was also markedly raised(>12,000U/ml).

Colonoscopy showed a large fungating partially obstructing mass in proximal descending colon and histopathology confirmed moderately differentiated colonic adenocarcinoma which colorectal surgeons suggested inoperable. The patient was managed by a multidisciplinary team including Obstetrics, Gastroenterology, Oncology, Surgery, MICU and received therapeutic anticoagulation, anemia correction and palliative care. Despite Obstetricians found no immediate indication of termination with NICU highlighted a fetal survival rate of approximately 30 %, she went into preterm labor on day 14 of admission and delivered a stillborn fetus at 26 weeks of gestation with placenta showing signs of abruption.

Following delivery, patient's condition started to deteriorate and developed jaundice, ascites, delirium and progressive respiratory failure. Multidisciplinary team along with Oncology and MICU recommended symptom directed and comfort focused care as maternal mortality risk >90% with survival rate of <6 months were expected. Despite supportive measures, she developed refractory shock and died on day 24 of admission.

3. Discussion

The management of colorectal cancer is challenging due to its nonspecific symptoms, and is frequently diagnosed at advanced stages as its symptoms mimic normal physiological changes of pregnancy [1]. Abdominal pain, constipation, nausea and anemia are often attributed to pregnancy resulting in delayed evaluation [3]. In this case also intermittent abdominal pain and severe anemia were initially attributed to previously diagnosed benign condition including a presumed liver hemangioma, delaying the timely diagnostic work up.

Hepatic hemangiomas are common benign lesions but enlarging or atypical lesions may mimic metastatic lesions on imaging [8]. The initial CT scan in this case suggested a giant hemangioma but however subsequent MRI demonstrated infiltrative hepatic masses consistent with metastases [9]. This diagnostic change is consistent with RCOG recommendations highlighting the importance of alternative or repeat imaging when clinical presentation doesn't align with initial findings [5].

Liver involvement is the most common metastatic site of CRC [10] and this patient's markedly elevated CA19-9 and adrenal lesion further supported advanced disease.

Colonoscopy is safe in the second trimester when malignancy is suspected [7] and was essential in this patient to confirm a partially obstructing colonic adenocarcinoma.

Published data indicate that more than 60% of CRC'S detected during pregnancy present as stage 4 disease [11].

Managing metastatic CRC in pregnancy is guided by maternal stability, gestational age and treatment modalities. Systemic therapy is usually contraindicated in critically ill patients [12] and surgery is limited for obstruction or perforation cases [13]. Given the widespread metastases and the patient's poor status, conservative management was an appropriate option in this case.

Both RCOG and ACOG stress individualized decision-making regarding continuation of pregnancy, prioritizing maternal health and the need for urgent treatment [14]. The severity of illness and multisystem failure led to spontaneous preterm labor, IUFD and placental abruption which are known complications in critically ill pregnant patients [15].

Despite intensive care, patient ends up with respiratory failure and hemodynamic collapse reflecting terminal metastatic disease. Moreover, comfort focused care was consistent with international oncology and critical care recommendations [16].

One case of 38 yrs at 25 weeks pregnancy with abdominal pain and rectal bleeding was misdiagnosed as IBD but later colonoscopy revealed rectal carcinoma. She had cesarean delivery at 28 weeks and then surgery in postpartum period but died 1 yr later due to metastases [5]. Another case of 29 yrs old at 20 weeks with abdominal pain and weight loss was initially diagnosed as IBD but colonoscopy revealed sigmoid colon cancer. She had surgery at 22 weeks but died 6 months later due to advanced stage 4 [1]. One more case documented by ACOG where 30 weeks pregnant with abdominal pain and anemia was initially diagnosed as iron deficiency anemia but later colonoscopy confirmed a cecal cancer and died after 3 yrs due to metastases [7].

4. Learning Points

1. Colorectal cancer is rare but often diagnosed at an advanced stage in pregnancy due to overlap of symptoms with normal pregnancy changes.
2. Persistent abdominal pain and refractory anemia during pregnancy should be evaluated beyond obstetric cases and may involve multidisciplinary approach if needed.
3. MRI is safe and plays an important role in pregnancy for abdominal malignancies.
4. Advanced disease in pregnancy is high risk for preterm labor, placental abruption. fetal and maternal mortality.

5. Conclusion

This case highlights the challenges of diagnosing colorectal cancer during pregnancy where malignant lesions initially may mimic benign findings. Persistent abdominal symptoms, unexplained anemia and atypical hepatic imaging should trigger further assessment with early multidisciplinary involvement. Thus, enhanced clinical vigilance may improve outcomes in such rare but serious condition. However, the prognosis of CRC in pregnancy is generally poor with a reported 5 year survival rate of 30-40 % [3] which is most likely due to the delayed diagnosis and aggressive nature of the disease.

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