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Case Report

Late Diagnosis of Post-partum Colorectal Cancer in a Young Kazakh Woman

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Abstract:

Introduction: Colorectal cancer (CRC) is generally expected among population above 60 years of age and rarely occurs in younger age groups. Its occurrence in young individuals is sporadic and has poor prognosis.

Presentation of the case: A 24-year old woman,previously healthy, delivered her first child and subsequently developed pelvic problems. Despite multiple surgeries and diagnostic work-up, which included cross-sectional imaging, the patient's diagnosis remained unknown. At the time of diagnosis with a colonoscopic evaluation, the patientwas in the late stage of disease and died few months later.

Conclusion: CRC should be in the differentials list in all patient cases, when suggestive symptoms present, regardless of age and other factors. Its association with pregnancy may obscure symptoms and delay the diagnosis.

Keywords: Colorectal cancer; post-partum; young age

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Consent: Consent was taken from the patient's next of kin for publication of this case report.

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Introduction

Colorectal cancer (CRC) is the most common malignancy of gastrointestinal tract; its incidence in pregnancy is very low [1]. Traditionally believed to be a disease of "60+" population, the incidence in recent years has reportedly grown in patients below 40 years of age [2]. In patients in this latter group CRC is rarely suspected, so the diagnosis is often delayed [3]. Furthermore young individuals tend to have poorer cancer-related survival due to more aggressive histopathological subtypes compared to older patients [4]. These aspects make the clinical prognosis unfavorable with a median survival time of just one to two years in patients with advanced disease [5]. We report a case of colorectal cancer diagnosed post-partum and therefore pregnancy-associated (pregnancy-associated cancer is defined as a case diagnosed during the antenatal period or within the first post-partum year [6]).

Case presentation

A 24-year old Kazakh patient was admitted to the Intensive Care Unit of the National Scientific Center of Oncology and Transplantation (NSCOT) in Nur-Sultan city with lower abdominal and pelvic pain, periodical bloating, fecal discharge from the vagina, general weakness, occasional fever up to 40 °C, weight loss of 20 kg in the last four months. Physical examination showed a recto-vaginal fistula and a colorectal fistula. The patient had been transferred from a regional hospital.

The history revealed that four months earlier the patient had delivered a child by caesarian section which had been followed by total hysterectomy for acute endometritis. Two weeks later, the patient had developed symptoms of acute intestinal obstruction and had undergone ileocecal resection. Following discharge the patient continued to have occasional abdominal discomfort.

Two months after the ileocecal resection, the patient developed lower abdominal pain and fecal discharge from the vagina and was again admitted to the regional hospital. A physical exam revealed a solid mass of about 5 x 5cm above the pubis; intestinal peristalsis was present. The patient had stool discharge from the vagina. Two ultrasound (US) exams showed "a hypoechoic mass in segment V of the liver measuring 2.3 x 3.3cm, and a hypoechoic area with irregular margins in the retrouterine space measuring 2.5 x 2.7cm". A computed tomography (CT) revealed an "infiltrative lesion of the hepatic right lobe (possibly hemangioma) and moderate hepatosplenomegaly".

The liver mass was surgically removed and during surgery pelvic tissues appeared infiltrated but no connection to the large bowel was identified. The pathology report of the resected liver mass was "papillary adenoma with possible malignancy". A liver biopsy was performed one week later, and the histological examination showed a "poorly-differentiated hepato-cholangiocellular carcinoma" even though "a metastatic origin of the cancer could not be excluded". Meanwhile, the patient developed an enterocutaneous (colonic) fistula and a barium study was performed. According to the patient's record, the barium meal reached the rectal ampule with no leakage into the abdominal cavity. After twenty days of conservative treatment, the patient was transferred to our hospital in Nur-Sultan city.

Post-admission colonoscopy demonstrated, at a 10cm distance from the anus, a large, circular-shaped, brown solid mass with irregular edges, hemorrhagic at contact, with a narrowed rectal lumen that the colonoscope could not enter. Histology of the mass revealed an adenocarcinoma (polymorphic glands lined by stratified atypical epithelial cells with hyperchromic nuclei and high mitotic activity) (Figure 1).

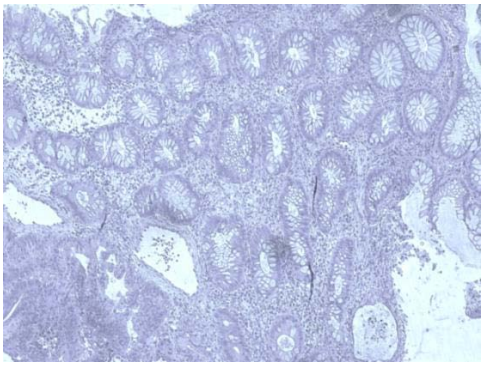

Figure 1 Hematoxylin and eosin stain of biopsy material from colonoscopy.

A colostomy was done, and intraoperative revision demonstrated an unresectable rectal mass and a mass in segment V of the liver. The rectal mass invaded the vagina and the peritoneal wall. Histological examination of a peritoneal wall biopsy showed a metastatic adenocarcinoma (Figure 2).

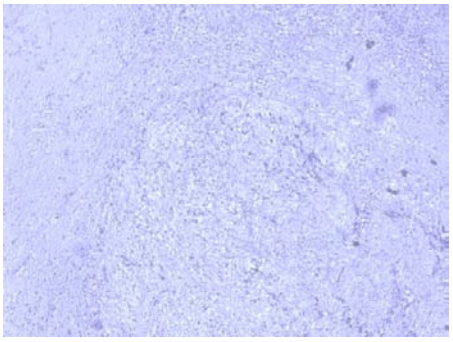

Figure 2 Hematoxylin and eosin stain of biopsy material from the peritoneal wall solid mass.

A contrast-enhanced pelvic CT revealed a thickened-wall rectum because of a large mass measuring 9cm on axial slice (84x93x73mm) with invasion to adjacent structures (Figure 3).

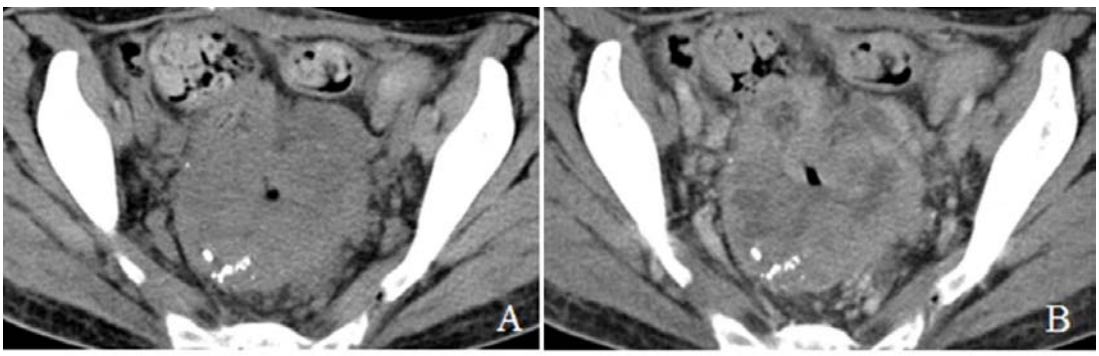

Figure 3 Rectal axial computed tomography: non-contrast (A) and contrast-enhanced (B).

A pelvic magnetic resonance imaging(MRI) showed an enlarged, thickened rectum filled with annular constricting lesions with everted edges causing obstruction of the intestinal lumen (Figure 4). The tumor is mainly homogenous on T1 weighted images with vivid heterogeneity on post-contrast studies due to areas of necrosis and cystic transformation with latter presented on T2-weighted images as areas with high signal intensity. Mesorectal fat is occupied by the cancerous rectum, extending beyond the mesorectal fascia.

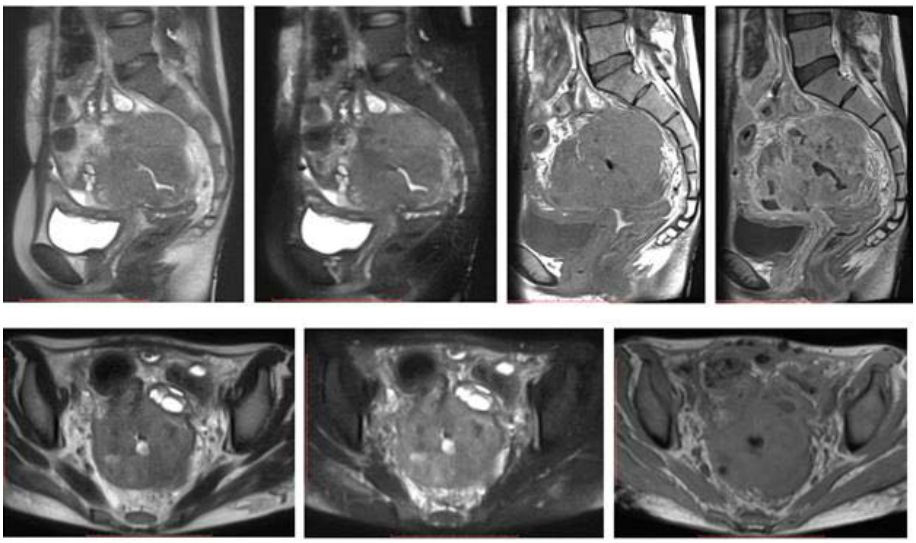

Figure 4 MRI of pelvis.

The patient was discharged with a diagnosis of stage IV (T4B cN1 pM1) colorectal cancer, Duke stage D. She died three and a half months later while on adjuvant chemotherapy. The patient's female child has not had any signs of metastatic disease thus far.

Discussion

The incidence of CRC in pregnancy ranges from 0.002% to 0.1% of cases with a patients' mean age of 31 years (range 16-48 years) [7]. The diagnosis is based on clinical symptoms, barium enema, optical colonoscopy with tissue biopsy, or CT colonography (CTC). In our case, we were not able to determine whether the patient experienced any symptoms before pregnancy onset, and we are therefore unable to establish whether diagnosis could have been made during pregnancy. The case still demonstrates that association of CRC with pregnancy may obscure symptoms of the disease and delay its diagnosis.

At the same time, the cancer diseasein our patient could have been suspectedwhen pelvic pain, enterocutaneous and recto-vaginal fistulas had appeared and an ultrasound exam had shown a liver mass with a hypoechoic area in the retrouterine space. Even though barium enema has an up to 26.6% miss rate of cancer [8], the classic "apple-core" appearance [9] is generally present in stenosing lesions of the rectum (especially inlarge size colon carcinoma).Colonoscopy and CTC, which have high sensitivity (94.7% and 95.7% respectively) [10],[11] compared to barium enema, were not included in the patient's work-up until later. Additionally, the quality of pathology examination is of importance for timely diagnosis, which may be inadequate in settings with limited resources.

Conclusion

This case highlights that a CRC diagnosis can unfortunately benot considered and therefore delayed in a young patient. Independently of patient's age, in the presence of suggestive symptoms and signs appropriate investigations should be pursued and a diagnosis made.

Consent

Consent was taken from the patient's next of kin for publication of this case report.

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