Journal of the Egyptian National Cancer Institute (2014) **26**, 175–179

Cairo University

Journal of the Egyptian National Cancer Institute

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Case Report

Rectal cancer in pregnancy: A diagnostic and therapeutic challenge

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Received 15 February 2014; revised 13 March 2014; accepted 13 March 2014
Available online 13 April 2014

KEYWORDS

Rectal cancer;
Pregnancy;
Diagnosis;
Treatment;
Prognosis

Abstract *Introduction:* The occurrence of colorectal cancer during pregnancy is rare and is associated with diagnostic and therapeutic challenges. Herein, we report such a case of rectal cancer in pregnancy and review the literature.

Case report: A 31-year-old multiparous, pregnant woman, in the 20th week of gestation, presented with rectal bleeding progressing to spasmodic abdominal pain and right flank vague pain. A flexible rectosigmoidoscopy showed a large ulcerative mass located in the rectosigmoid junction, 15 cm away from anal verge. Imaging studies and biopsy proved it to be rectal adenocarcinoma with single liver metastasis. The patient's pregnancy was terminated and neoadjuvant therapy followed by curative surgery was performed. She is currently receiving adjuvant systemic therapy to eradicate potential micrometastatic disease.

Conclusion: This case suggests that colorectal cancer can mimic the signs and the symptoms of pregnancy and tends to present at an advanced stage in pregnant women.

Introduction

In developing countries, colorectal cancer is the fifth most common cancer in men and third in women [1]. However, the occurrence of colorectal cancer in women under 40 is uncommon and it is very rare during pregnancy [2]. The incidence of cancer in pregnancy ranges from 0.02% to 0.1%. Colorectal cancer is one of the eight most frequent malignant neoplasms in pregnancy [3]. This rare condition is associated with diagnostic and therapeutic challenges [4]. The signs and

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Peer review under responsibility of The National Cancer Institute, Cairo University.

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http://dx.doi.org/10.1016/j.jnci.2014.03.003

the symptoms of the pregnancy can mask colorectal cancer in a pregnant woman and lead to late diagnosis in advanced stages and poor treatment outcome [5]. In the present study, we report such a case of advanced rectal cancer presented during pregnancy.

Case report

A 31-year-old multiparous, pregnant woman (gravid 3, para 1), in the 20th week of gestation, presented with a 4-week history of rectal bleeding progressing to spasmodic abdominal pain and right flank vague pain. The patient's past medical and family history was negative for malignancy. An abdominal and pelvis ultrasound showed an alive single 20th week fetus, wall thickening of rectosigmoid junction and a large single hypoechoic lesion in right posterior liver lobe. A flexible rectosigmoidoscopy showed a large ulcerative lesion in rectosigmoid junction 15 cm to 22 cm away from anal verge. Transrectal biopsy of the rectal lesion revealed well differentiated adenocarcinoma of the rectum (Fig. 1). An ultrasound-guided core needle biopsy of the liver lesion confirmed metastatic rectal adenocarcinoma (Fig. 2). The patient was discussed in a multidisciplinary medical council including specialities of gynecologic oncology, perinatologist, surgical oncology, medical oncology and radiation oncology. Therefore, termination of pregnancy and neoadjuvant chemotherapy and chemoradiation were suggested for the patient's potentially resectable stage IV rectal cancer. According to the medical council suggestion, as well as the patient's desire for therapeutic abortion, a computed tomography (CT) scan of the chest, abdomen and pelvis was performed for precise staging. In abdominal and pelvic CT scan, there was a single fetus (Fig. 3), and a locally advanced rectal tumor as significant wall thickening of rectosigmoid junction associated with enlarged perirectal and mesenteric lymph nodes. In addition, there was a large single mass in right posterior liver lobe (Fig. 4).

Therefore, the patient's pregnancy was terminated and 2 weeks later she was referred for neoadjuvant therapies. The patients received a cycle of neoadjuvant chemotherapy consisting of capecitabine 1000 mg/m^2 twice daily for 14 of every three weeks cycle, plus oxaliplatin 130 mg/m^2 intravenously on day 1 (CAPEOX regimen); followed by concurrent neoadjuvant chemoradiation. Concurrent chemotherapy consists of oxaliplatin 130 mg/m^2 intravenously on day 1, plus oral capecitabine 825 mg/m^2 twice daily during the whole period of radiotherapy with weekend breaks. Two weeks after

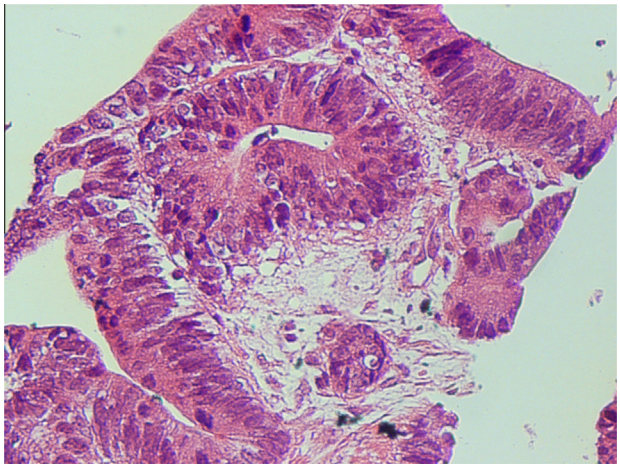

Figure 1 Rectosigmoid adenocarcinoma showing well differentiated glands containing atypical cells with high N/C ratio, hyperchromatism and stratification, H&E, ×400.

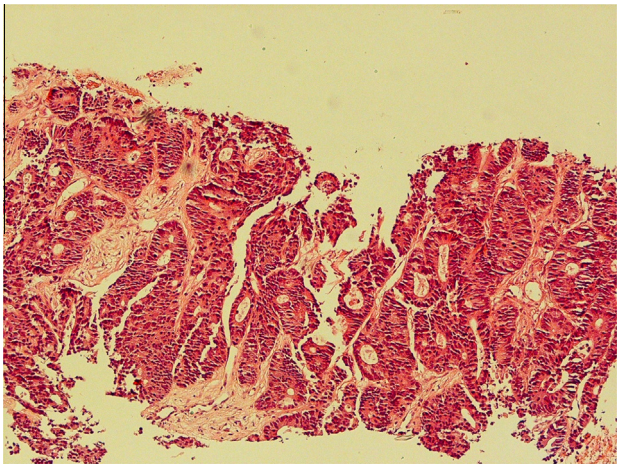

Figure 2 Trucut biopsy of the liver which shows involvement by well differentiated adenocarcinoma, H&E, ×100.

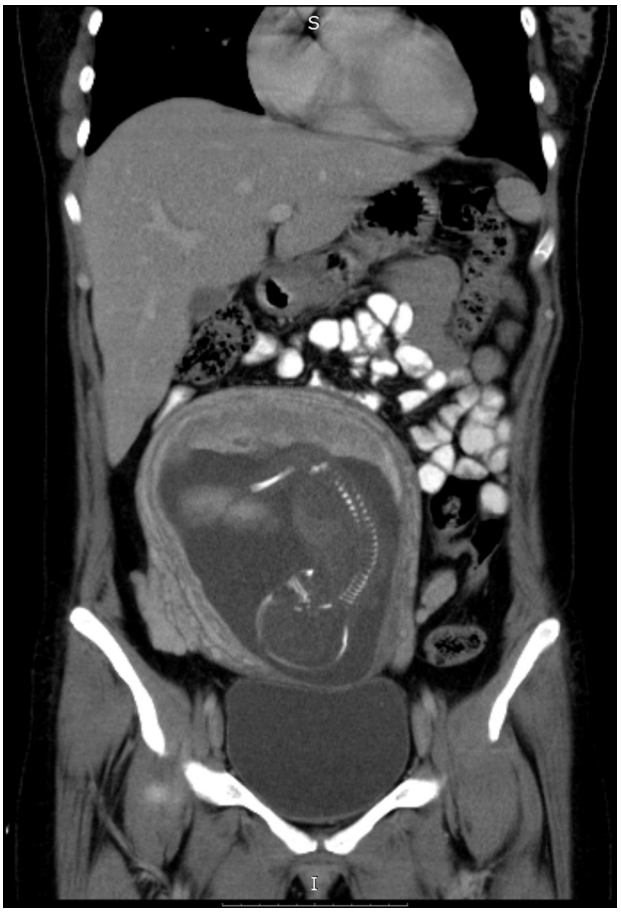

Figure 3 Contrast enhanced CT image of the abdomen and pelvis showing a single intrauterine fetus.