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Case Report

METASTATIC COLON CANCER IN A PREGNANT WOMAN: A CASE REPORT

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Summary

Colorectal cancer in pregnant women is rare and represents a diagnostic and therapeutic challenge for clinicians. We present a case of a 38-year-old pregnant woman, diagnosed with colorectal cancer and liver metastases during the 29th week of gestation. After clinical evaluation and making the diagnosis, the patient underwent an emergency cesarean section (C-section) and bypass anastomosis between the transverse colon and sigmoid colon. The babies were born healthy without any complications. After recovery, the mother started treatment with chemotherapy, but two months later she died due to the spread of the disease. Cancer during pregnancy is always a challenge for diagnosis and treatment.
Key words: pregnancy, colorectal cancer, chemotherapy

Introduction

Cancer and pregnancy are associated with an incidence of 1 case per 1000 pregnancies. Colorectal cancer presenting during pregnancy is a very rare condition with an incidence below 0.01%, and there are less than 300 cases reported in the literature [1]. The combination of pregnancy and malignancy is a diagnostic and therapeutic challenge, which includes the mother and fetus. Information about age distribution, stage of the disease, prognosis and therapeutic strategy is sparse. The symptoms related to cancer such as abdominal pain, nausea and vomiting are common during pregnancy and lead to delayed diagnosis in such patients [2]. The late diagnosis and presentation with metastases is a major reason for a poor prognosis.

Case report

A 38-year old female patient was admitted in the department of obstetrics and gynaecology during her 29th gestational week of intrauterine twin-pregnancy with a two-day history of abdominal pain and vomiting. The patient had no previous or family history of cancer.

The physical examination revealed anaemia with haemoglobin levels of 98 g/L and hematocrit levels of 0.29. Liver enzymes, alkaline phosphatase (ALP) and *lactate dehydrogenase (LDH)* were highly elevated.

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Abdominal ultrasound was performed, where multiple hypoechoic lesions surrounded by a hyperechoic halo in both liver lobes were found, which suggested metastatic liver disease (Figure 1). Colonoscopy revealed a stenotic tumour formation in the sigmoid colon, and biopsy was taken. The diagnosis was fourth stage colon cancer.

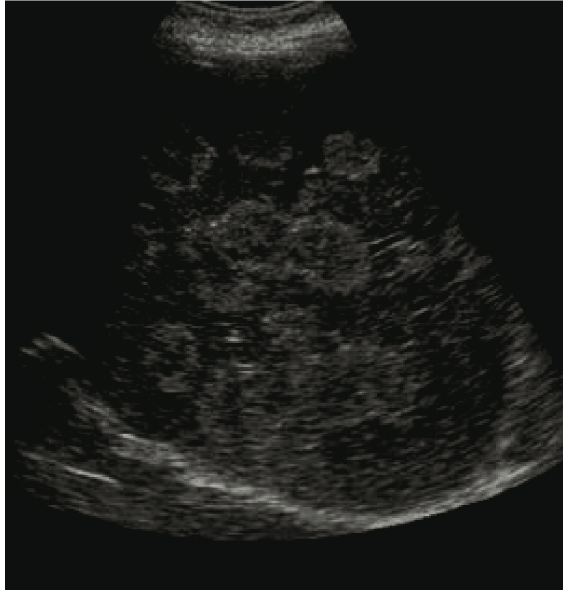

Figure 1. Ultrasound view of metastatic liver

After consultation with a surgical oncologist and an obstetrician, a planned cesarean section (C-section) was recommended because of the risk for bowel obstruction and the need for chemotherapy treatment. Corticosteroid therapy was administered for three days to ensure better lung maturation of the fetuses. Midline laparotomy and C-section was performed by a team of surgical oncologists and obstetricians on the fifth day after admission. The two babies were delivered, a female with a weight of 1450 g, 41 cm, and male – 1440 g, 40 cm. Intraoperatively, tumour formations in the descending colon with multiple liver metastases were found. Hand-sewn side-to-side bypass anastomosis between the transverse and distal sigmoid colon was made to prevent bowel obstruction. Biopsy from the liver tumours was taken. The diagnosis of metastatic, well-differentiated colorectal adenocarcinoma was confirmed.

The patient was discharged on postoperative day 10 with recovered bowel function and in good condition. Chemotherapy was initiated 25 days after surgery. Unfortunately, two months after surgery the patient died of liver failure. Three months after birth, the babies are healthy and normal developing.

Discussion

Although the combination of malignancy and pregnancy is rare, oncological diseases are one of the leading causes of death in pregnant women [3]. Oncological diseases in pregnancy include colorectal, ovarian and breast cancer, lymphomas, leukaemia and melanoma cancer, colorectal cancer being the most common [4, 5]. In a study on 215 patients with cancer during pregnancy, Van Calsteren et al. (2009) report only 2% of colorectal cancer cases, 46% of cases with breast cancer, followed by haematological cancers (18%), and skin cancer (10%) [6].

Colorectal cancer is more common in older people, and its incidence increases with age. Nonspecific symptoms of colorectal cancer and, predominantly, young age of pregnant women both lead to delayed diagnosis of the disease. In research on 205 pregnant women diagnosed with colorectal cancer (mean age was 31 years), 85% had cancer in the mid- or third part of the rectum [7].

Most signs of colorectal cancer, like abdominal pain, nausea, vomiting and anaemia are normal conditions during pregnancy. Often, the first signs in case of colorectal cancer and pregnancy are due to the metastasis like in the presented case. The standard diagnostic tool for colorectal cancer is endoscopy, but in pregnancy, there is a high risk for premature labour and miscarriage; therefore a colonoscopy should only be performed if there is a high degree of suspicion for cancer [8]. For staging of the disease in case of colorectal cancer computed tomography (CT) scan is the general imaging examination. There is no evidence for adverse effects of CT on the fetus due to the low dose ionizing radiation, and it can be used in a diagnostic setting in pregnant women [8]. Ultrasound of the liver is an option for diagnosing a case of metastatic cancer and may be used as the first step in unclear cases such as the one we present.

The therapeutic strategy for pregnant women with colorectal cancer is also a concern. The therapist is to take care of two lives and very often the decision about premature delivery or

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termination of the pregnancy must be taken. When deciding about a treatment plan, factors such as the stage of the disease and the period of pregnancy are crucial determinants. Surgery, when indicated, may be done during the entire pregnancy but in the third trimester, it may be proposed to delay treatment until the 32nd week of gestation to ensure for lung maturation of the fetus. Surgery is performed after delivery [8, 9]. Chemotherapy is an option when indicated and can be performed after the first trimester [8].

In the case presented, the decision for premature delivery was taken, because the children were in a viable stage and waiting for additional maturation of the fetuses lead to delaying the patient`s treatment and worsening the prognosis for the mother. On the other hand, a further delay of surgical treatment could lead to bowel obstruction and for emergent surgery with highly unpredictable results.

Conclusions

Diagnosis and treatment of colorectal cancer during pregnancy is a challenge. A multi-disciplinary approach should be taken, consistent with the period of pregnancy.

Acknowledgements

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