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Incidental Diagnosis of Gastric Cancer Following Cesarean Section - A Case Report

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Abstract: ***Gastrointestinal system malignancy with pregnancy is a very rare condition and is not common outside Japan. Gastric cancer diagnosed during pregnancy or lactation occurs in a rare probability of only 0.025 to 0.1% of all pregnancies. The most common cause of this condition is that the symptoms such as vomiting, nausea, loss of appetite and abdominal growth are mistaken with pregnancy and malignancy is overlooked. Especially in the second trimester, symptoms such as nausea and vomiting, weight loss, melena, hematemesis and deep anemia should suggest malignancy. Endoscopic examination should not be delayed in suspected cases. The prognosis of gastric cancer during pregnancy is poor because most cases present at an advanced stage; the diagnosis is delayed because the symptoms are all nonspecific for cancer and are attributed to the pregnancy.***

Keywords: Gastric cancer, Pregnancy

1. Introduction

Gastric cancer is one of the most common cancers, with very specific geographical, ethnic and socioeconomic differences in incidence[1].Gastric cancer diagnosed during pregnancy or lactation occurs in a rare probability of only 0.025 to 0.1% of all pregnancies and the majority of these cases have been reported in Japan[2].Gastric cancer associated with pregnancy is most often associated with a poor prognosis since at the time of diagnosis the cancer is usually in advanced stage. The symptoms are frequently hidden by factors related to the normal pregnancy and diagnostic approaches are restricted by physical and psychological clinical events[3]. The management of a pregnant patient with gastric cancer is very challenging and needs a multidisciplinary team. There are two conflicting issues in pregnancy associated gastric cancer: early treatment of the maternal gastric cancer and the continuation of pregnancy[4].We report a rare case of signet cell carcinoma diagnosed incidentally.

2. Case Report

A 38-year-old presenting at 38 weeks of gestation came to emergency with complaints of pain in abdomen and abdominal distension since 10 days. Patient went into spontaneous labor and was prepared for cesarean section in view of breech in labor. Intra operatively-ascitic fluid of approximately 3liters aspirated and fluid sent for biochemical analysis and TB culture. Fragile small nodular lesion noted all over the omentum, peritoneum, bladder base, pouch of Douglas, bilateral tubes and ovaries, biopsy taken from peritoneum and sent for histopathological examination.

Ultrasonography whole abdomen done postoperatively in view of abdominal girth increasing trend – showing moderate ascites, dilated bowel loops with sluggish peristalsis probably ileus or intestinal obstruction. Histopathology of peritoneum-metastatic poorly differentiated carcinoma favours signet ring cell carcinoma. Upper gastrointestinal endoscopy done showing-irregular growth seen in the proximal stomach involving the cardia and GE junction, Z line-35cm. Patient has been referred to higher institute for further management.

3. Discussion

Although gastric cancer is most common during the fifth and sixth decades of life, approximately 5–15% of patients with gastric cancer are <40years of age[4].There is an increased risk of diffuse and scirrhous type carcinomas in this group of patients[5]. On the other hand, among patients under 40 years of age, it is found to be more common in females and more aggressive with a male to female ratio of 1:1.5[5].The etiology of this disease remains unknown; however, risks for the disease include pernicious anaemia, family history, Helicobacter pylori infection, tobacco usage and blood group A[6].

The pathogenesis of pregnancy-related gastric cancer is an issue of debate. There are conflicting data about the hypothesis. On the other hand, pregnancy itself is suggested an etiologic factor due to hormonal status. Estrogen hormone predominance is thought to contribute to the development of neoplastic cells, and 55.8% of gastric tumours have been proven to be positive for estrogen receptor in clinical studies. Estrogen receptors are found in about 22% of gastric cancer cells, especially the undifferentiated type[2].

Immunosuppressive influence of pregnancy may be an additional factor in the development of the malignant process. On the other hand, clinical features and prognosis in

pregnancy gastric cancer cases were not significantly different from other young patients. Furthermore, in pregnancy the acid secretion in stomach decreases and mucus production increases. Additionally, placenta secretes histaminase which degrades histamine function, hence the patient shows no deterioration of symptoms caused by the cancerous ulcer. As it is known, blood circulation increases during pregnancy, pregnant women are particularly susceptible to the rapid growth and spread of cancer[5].

Patients can complain of dyspepsia, anorexia, and weight loss, early satiety to acute upper gastrointestinal bleeding with hematemesis or melena. Physical examination is rarely helpful because gastric mass is palpate in <20% of cases. Signs of metastatic spread include left supraclavicular lymph node (Virchow node), umbilical nodule (Sister Mary Joseph nodule), ovarian metastases (krukenberg tumour), or rigid rectal shelf (Blumer shelf)[6].

Management during pregnancy can be lined according to the stage of the tumour and the gestational age of the fetus. In inoperable cases, chemotherapy is the first choice. If disease is operable, suitable time for operation must be decided according to the gestational age of fetus. Above all, if it is inoperable, chemotherapy is the first choice and a proper regimen must be given considering the fetus[5].Usually, termination of pregnancy is recommended if gastric cancer is diagnosed at an early stage of pregnancy. The optimal management strategy for cases diagnosed between 22 and 27 weeks remains controversial. Chemotherapy is a possible choice, although it is associated with the risk of teratogenicity in the early stages of pregnancy[7].

The usual recommendation is to use the standard dose with reduction if blood toxicity occurs. Another consideration is the potential for chemotherapy induced fetal adverse effects. Anticancer drugs are transferred to the fetus through the placenta and possibly cause fetal adverse effects, such as bone marrow suppression. After the mother has received anticancer treatment, depending on the timing of delivery, the fetus may be at risk for complications such as myelosuppression and increased vulnerability to infection, in addition to the usual risks of preterm delivery[1].Even though, the pregnancy associated gastric cancer is rare there may be Placental or fetal metastasis from maternal origin of malignancy. Study conducted by **Selyaoga et al.** encountered a rare case of gastric cancer during pregnancy with placental involvement. Routine examination of the placenta is warranted in patients with advanced gastric cancer to assess the risk of fetal metastasis[7].

Since it has been known that the prognosis in gastric cancer is poor, 80% die in the first year and 3-year survival rate is 8%, early diagnosis is critical. Early recognition and diagnosis is the only possibility for a better outcome[5]. Although it is rare under the age of 30, it must be included in the differential diagnosis of epigastric discomfort, nausea, vomiting, and weight loss beyond the first trimester of pregnancy. Endoscopic examination should not be delayed in suspected cases[2].

The prognosis of gastric cancer during pregnancy is poor because most cases present at an advanced stage; the diagnosis is delayed because the symptoms are all nonspecific for cancer and are attributed to the pregnancy[8]. Tumor grade and histology are important prognostic indicators of this disease[6].Survival rates in cases of gastric cancer are strictly bound to the diagnostic times. Early detection is critical. The literature shows that 80% of the patients diagnosed die in the first year and the 3-year survival rate is only8%[9].

4. Conclusions

Gastric cancer cases are characterized by preponderance to female sex, proximal localization of the tumour, poor differentiation, more aggressive clinic, and overall poorer prognosis. Early recognition and diagnosis of gastric cancer during pregnancy is the only possibility for a positive outcome although it is extremely rare, pregnancy-associated gastric cancer should be considered in the differential diagnosis of refractory gastrointestinal symptoms. A multidisciplinary approach is necessary for appropriate decision-making in this difficult and rare situation

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