Gastric cancer with pregnancy: two case reports

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Summary: Gastric cancer with pregnancy is quite rare, and is often diagnosed at advanced stages with poor prognosis. This highlights the need to improve diagnosis by means of early endoscopy. We herein report two cases of advanced gastric cancer during pregnancy who sadly died within five weeks of diagnosis, to alert clinicians to this rare disease.

Keywords: gastric cancer, diagnosis, pathogenesis, prognosis, management

INTRODUCTION

The outcome of gastric cancer in pregnancy has generally been poor with death often happening within months of diagnosis. Delayed diagnosis is attributed to lack of awareness of this rare disease, presence of non-specific gastrointestinal symptoms in pregnancy and reluctance of physicians to undertake any invasive investigations during pregnancy.¹

CASE 1

A 33-year-old woman with no significant medical history presented at 28 weeks with loss of appetite and pre-eclampsia. At 32 weeks, ultrasound scan (USS) showed a growth-restricted fetus, maternal ascites and pericardial effusion, which were attributed to hypoalbuminaemia. A diagnosis of atypical pre-eclampsia was then made. Delivery was recommended after a course of steroids. During caesarean section, two litres of ascites were noted intraperitoneal with thickened peritoneum. After delivery, the patient had persistent abdominal pain, vomiting, generalized oedema and tense ascites. Bloods showed hypoalbuminaemia, anaemia and raised inflammatory markers.

Computed tomography (CT) scan showed normal abdominal organs and diffuse omental thickening, ascites and normal ovaries. Ascitic drainage for cytology showed atypical reactive mesothelial cells. Oesophago-gastro duodenoscopy (OGD) showed grossly abnormal stomach consistent with Linitis Plastica,² which could explain the normal CT findings. Biopsies confirmed poorly differentiated adenocarcinoma of stomach of intestinal type. Her condition deteriorated rapidly and she died five weeks after delivery under palliative care.

CASE 2

This case involved a 32-year-old woman, with no significant medical or family history. She presented at 20 weeks with upper abdominal pain and vomiting for two months. She was dehydrated and had moderate epigastric tenderness. Bloods were normal. She was diagnosed with gastritis and admitted for hydration, antacids and antiemetics. She improved and was

discharged. She presented again at 31 weeks with severe abdominal pain, persistent vomiting that was mainly postprandial and weight loss of 10 kg over two months.

USS showed hepato-splenomegaly with a soft tissue lesion between liver, stomach and pancreas. OGD showed large gastric tumour highly suspicious of malignancy. Biopsy confirmed poorly differentiated adenocarcinoma of stomach of signet ring cell type. Obstetric USS was normal. Bloods showed anaemia and hypoalbuminaemia. Staging CT showed advanced gastric cancer. Multidisciplinary care plan was for steroids and delivery. She had an elective caesarean section at 32 weeks. After delivery, she deteriorated rapidly and died one month after delivery.

DISCUSSION

The incidence of gastric cancer with pregnancy is low, at 0.03–0.1%.³ In the largest review, published in Japan in 2009, they analysed 137 cases till 2007. Advanced tumour stage was found in 92.5% but only 45.3% of patients underwent gastrectomy, including incomplete resection. Accordingly, the prognosis was very poor; the one- and two-year survival rates were 18.0% and 15.1%, respectively.³

The delay in diagnosis and the more aggressive biological behaviour of the disease in pregnant patients are possible reasons for a very poor prognosis, which could be improved by early detection.⁴ Increased use of endoscopy in women with atypical and refractory dyspepsia or vomiting is associated with early diagnosis of gastric cancer.^{1,4} Endoscopy is reported to be safe in pregnancy.¹

The pathogenesis of pregnancy-associated gastric carcinoma remains uncertain. In addition to the immunosuppressive effect of pregnancy, it has been reported that human chorionic gonadotrophin is present in up to 60% of gastric cancer and often associated with loss of differentiation.³ Also, increased circulatory blood flow during pregnancy could cause rapid growth and spread of the tumour.⁵ Others have suggested that the features and prognosis of gastric cancer in pregnant women are the same as in the non-pregnant.⁶ Currently, whether or not pregnancy accelerates gastric neoplasia is unknown.⁶

Our first patient had Linitis Plastica, which is a rare type of gastric cancer. It is characterized by diffuse proliferation of connective tissue resulting in tissue thickening so that the stomach is constricted and rigid.²

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Management of gastric cancer with pregnancy should be discussed in the appropriate multidisciplinary team meeting. It depends on gestation and stage of disease. In early pregnancy, termination must be considered to allow optimal treatment. At 28 weeks and beyond, delivery followed by radical management is usually offered.⁶ Between 22 and 27 weeks, the management is controversial due to the lack of data.⁴ Management of such cases should be individualized.²

In our cases, as in the unfortunate majority of patients, the tumours were advanced and poorly differentiated at the time of diagnosis. In our first patient, no specific gastrointestinal symptoms were recorded that might have facilitated earlier diagnosis and in addition a near normal CT scan contributed to late diagnosis. In our second patient, persistent gastric symptoms led to performance of a gastroscopy and diagnosis. It was late however and the tumour was advanced.

In conclusion, suspicion and early diagnosis by means of endoscopy and early intervention is the only way of dealing with this condition. It is important to remember gastric cancer as a differential diagnosis of protracted gastrointestinal symptoms that do not respond to empirical treatment.

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REFERENCES

- 1 Chong VH, Lim CC. Advanced disseminated gastric carcinoma in pregnancy. *Singapore Med J* 2003;**44**:471–2
- 2 Pocard M. Gastric linitis plastica. *Orphanet encyclopedia* 2002. See <http://www.orpha.net/data/patho/GB/UK-linitis.pdf> (last checked 7 July 2011)
- 3 Sakamoto K, Kanda T, Ohashi M, *et al.* Management of patients with pregnancy-associated gastric cancer in Japan: a mini review. *Int J Clin Oncol* 2009;**14**:392–6
- 4 Sacharl A, Huber P, Lorenzen J, Gohring UJ. Gastric cancer during early pregnancy, two case reports. *Arch Gynecol Obstet* 1996;**258**:151–4
- 5 Yoshida M, Matsuda H, Furuya K. Successful treatment of gastric cancer in pregnancy. *Taiwan J Obstet Gynecol* 2009;**48**:282–5
- 6 Tugba Unek I, Celtik A, Alacacioglu A, *et al.* Gastric carcinoma during pregnancy: report of a case. *Turk J Gastroenterol* 2007;**18**:41–3

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