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Adenocarcinoma of the stomach in pregnancy — ultrasonographic diagnosis

A case report

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Summary

The ultrasonographic findings in a rare case of adenocarcinoma of the stomach in pregnancy are described. The patient presented with hyperemesis gravidarum in the second trimester.

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Nausea and vomiting occurs during the first trimester in approximately 50% of pregnancies. Hyperemesis gravidarum, the most severe form of the disorder, is seen in 1 - 2% of cases and may result in weight loss, ketonuria, acetonuria and volume depletion.¹ When the vomiting is severe or persists for a prolonged period — especially after the first trimester — causes unrelated to pregnancy as such, should be excluded.

The ultrasonographic findings in a case of adenocarcinoma of the stomach in pregnancy are presented, not only because of the rarity of the condition, but also to emphasise the importance of taking a careful history and thoroughly examining the pregnant patient referred with severe vomiting in the second trimester.

Case report

A 31-year-old gravida 3, para 2, coloured woman was referred for

ultrasonographic examination with the diagnosis of hyperemesis gravidarum.

She had a history of nausea, vomiting and epigastric pain for 3 weeks. On physical examination she appeared cachectic and dehydrated. The fundal height palpated to approximately 22 weeks' gestation. The patient could give no accurate date for her last menstrual period.

Ultrasonographic examination of the uterus showed a single normal fetus with a mean gestational age of 24 weeks. The fetal anatomy, movement and heart rate were normal. The amniotic fluid volume appeared to be within normal limits. The placenta was situated in the uterine fundus.

During the examination of the maternal abdomen a thick-walled fluid-filled structure, greater than 10 cm in diameter, was noted in the epigastrium; the posterior wall was hyperechoic and it contained fluid of mixed echogenicity. It was in the anatomical position of the stomach (Fig. 1). A provisional diagnosis of gastric outlet obstruction was made. A nasogastric tube was inserted and the stomach contents aspirated. Emptying of the stomach could be demonstrated ultrasonographically. Subsequently an oval mass measuring 20 x 13 x 18 mm was seen inferior to the diaphragm and posterior to the liver. The mass had a 'target' appearance, i.e. a hypo-echoic rim with a highly reflectant central core (Fig. 2). This finding was considered diagnostic of gastric disease. An epigastric mass could now be palpated clinically.

Endoscopy showed extensive carcinoma of the stomach, the tumour infiltrating the antrum and the corpus. The pyloric region could not be seen.

The patient aborted spontaneously 8 days later.

An exploratory laparotomy revealed unresectable carcinoma involving the distal gastric corpus, the gastric antrum, the pylorus and the proximal duodenum. A palliative gastro-enterostomy was performed. Histology of a resected node confirmed metastatic, poorly differentiated, adenocarcinoma.

Discussion

Of the many causes of hyperemesis gravidarum, the two most likely to be diagnosed by ultrasonography are multiple

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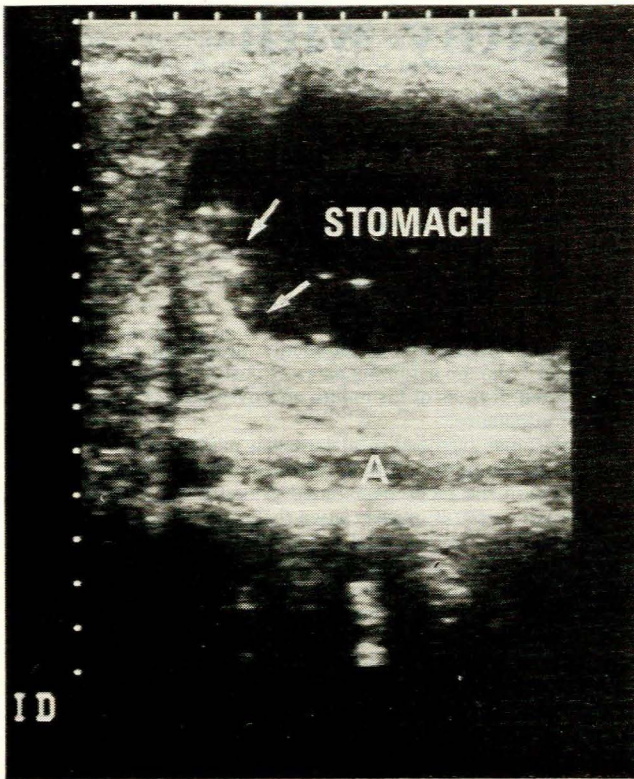


Fig. 1. Longitudinal scan of the dilated stomach with mixed echogenic fluid and irregular posterior wall (arrows) (A = aorta).

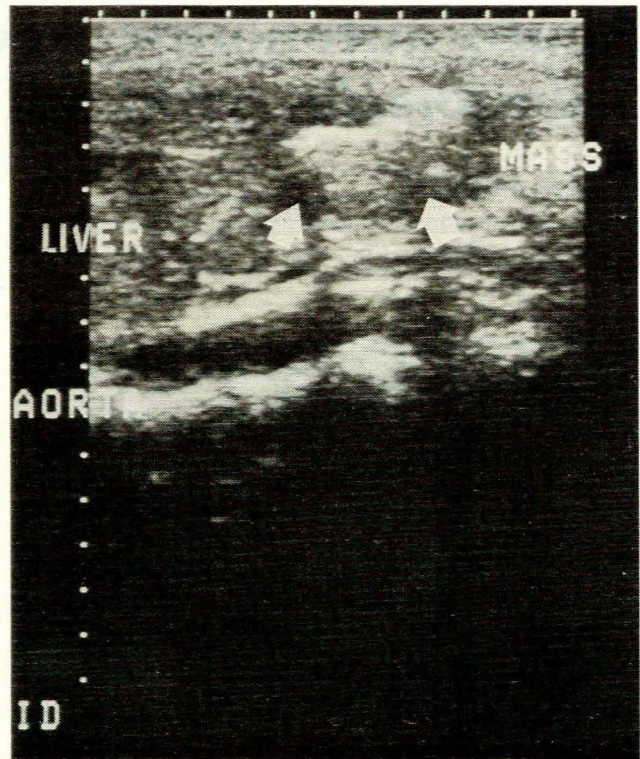


Fig. 2. The 'target' appearance of the mass with hypo-echoic rim (arrows) and highly reflectant central core. The liver is seen to the left of the tumour.

pregnancy and trophoblastic disease. Nausea and vomiting occurring after the first trimester should, however, alert the physician to a possible non-pregnancy-related condition.

Carcinoma of the stomach is common among the coloured population in the Western Cape, with the men in this population group having the fourth highest incidence of the disease in the world.² During the period 1979 - 1983, 15 patients under 40 years with carcinoma of the stomach were diagnosed at Tygerberg Hospital; 7 coloured men, 7 coloured women and 1 white man.³

Gastric carcinoma associated with pregnancy is an extremely rare condition.⁴ In the 44 cases reported in Japan the most common symptoms were nausea and vomiting (62%), epigastric pain (43%) and belching and heartburn (24%).⁵

The use of ultrasonography in the diagnosis of gastrointestinal disease is increasing; a specific advantage being the ability to visualise the bowel wall.⁶ The fluid-filled stomach, often used as a 'sonic window' when imaging the pancreas or the left upper abdomen, also allows an assessment of its own wall thickness to be made. Clinically unsuspected gastric tumours may first be detected by this method.⁶ Knowledge of

the possible ultrasonographic appearances of these lesions is important if they are to be recognised and the patient given appropriate further management.

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