

Upper Gastrointestinal Bleeding from non-gestational Primary Gastric Choriocarcinoma

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Abstract

Background: Upper gastrointestinal bleeding from non-gestational primary gastric choriocarcinoma is extremely rare. Non-gestational primary gastric choriocarcinoma is an aggressive β -human chorionic gonadotropin-producing malignancy and it accounts for less than 1% of all gastric cancers. A 37-year-old woman with primary non-gestational gastric choriocarcinoma with hepatic metastasis presented with unintentional weight loss, gastrointestinal bleeding, abdominal pain, early satiety, and a disproportionately elevated serum β -human chorionic gonadotropin (β -hCG) level of 74,906 IU/L. On clinical examination, a palpable epigastric mass was noted. Initial clinical diagnosis of gastric malignancy was made, and upper gastrointestinal endoscopy revealed a malignant-appearing gastric lesion. Contrast enhanced Computed tomography of the abdomen demonstrated a large ulceroinfiltrative, malignant-looking gastric mucosal lesion at the antrum. Histopathological examination of the endoscopic biopsy specimen confirmed choriocarcinoma. Immunohistochemistry has shown diffused positive tissue staining for β -hCG. Due to the aggressive nature and rapid progression of the disease, the patient died within one month after diagnosis. Early recognition, speedy diagnosis and prompt multidisciplinary management are essential.

Keywords: Non-gestational primary gastric choriocarcinoma, β -human chorionic gonadotropin (β -hCG), gastrointestinal bleeding.

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INTRODUCTION

Upper gastrointestinal bleeding owing to non-gestational primary gastric choriocarcinoma (NGPGC) is extremely rare. Non-gestational primary gastric choriocarcinoma is aggressive β -human chorionic gonadotropin-producing malignancy and it accounts for less than 1% of all gastric cancers.^[1] It often presents widespread metastasis to the lungs, liver, and brain because of the rapid invasion of tumors into blood vessels, and approximately 30% of patients have metastatic disease at the time of diagnosis.^[2,3] Like gestational choriocarcinoma, NGPGC secretes exceedingly high levels of the beta-human chorionic gonadotropin hormone (β -hCG) which can lead to diagnostic confusion at presentation. The main objective of the present case report is to share our experience with the rare case of upper-gastrointestinal bleeding owing to non-gestational primary gastric choriocarcinoma.

CASE PRESENTATION

A 37-year-old woman presented with unintentional weight loss, upper gastrointestinal bleeding, abdominal pain, early satiety. On laboratory investigation of β -human chorionic gonadotropin (β -hCG), patient had a disproportionately elevated serum β -hCG level of 74,906 IU/L on presentation with serial values elevated to 269000 IU/L. Initially, the patient presented to the gynaecology clinic with a presumed pregnancy. She was later referred to the general surgery department due to upper gastrointestinal bleeding with an

associated epigastric mass and computer tomography (CT) showed a gastric mass and normal size ovaries and uterus with no signs of pregnancy. On clinical examination, a palpable epigastric mass measuring 10x10cm was noted. An initial clinical diagnosis of gastric malignancy was made. Upper gastrointestinal endoscopy performed and revealed a malignant-appearing gastric lesion (Figure 1). Contrast enhanced CT of the abdomen demonstrated a large ulceroinfiltrative, malignant-looking gastric mucosal lesion at the antrum with gastric wall thickening and evidence of metastatic disease involving both lobes of the liver (Figure 2A, 2B) with normal ovaries and uterus. Initial histopathological examination of endoscopic biopsy was reported as showing features suggestive of a poorly differentiated carcinoma which was later reassessed based on the β -hCG to primary gastric choriocarcinoma. Immunohistochemistry has shown diffused positive tissue staining for β -hCG. A multidisciplinary management approach was therefore adopted for this patient. The patient died within one month after diagnosis of primary gastric choriocarcinoma before surgical intervention

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or chemotherapy could be initiated.



Figure 1: Endoscopic image has shown a large ulceroinfiltrative, malignant-looking gastric mucosal lesion at the antrum.

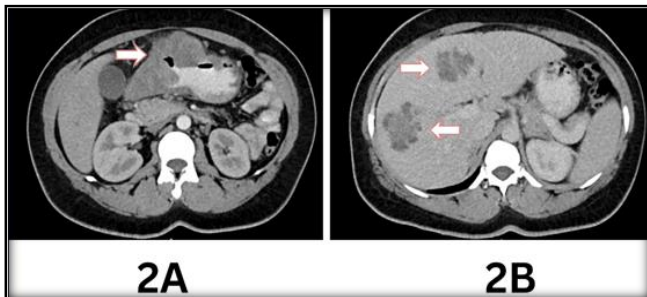


Figure 2A: Contrast enhanced CT abdomen (Axial view): Arterial phase with oral contrast has shown a large exophytic gastric lesion at the antrum with thickening of the gastric wall. **Figure 2B:** Contrast-enhanced CT abdomen image has displayed multiple liver metastases.

DISCUSSION

Non-gestational primary gastric choriocarcinoma is an exceptionally rare and highly aggressive malignancy characterized by trophoblastic differentiation and markedly elevated serum β -hCG levels. The diagnosis is confirmed by elevation of the serum β -hCG, exhibition of choriocarcinomatous components on biopsy and demonstration of β -hCG positive cell on immunohistochemical stain. A gonadal, gestational or other extra primary choriocarcinoma must be excluded before confirming a primary non-gestational gastric origin.^[1-3] Kobayashi et al. reported that the mean age of the onset of primary gastric choriocarcinoma in the female is 54.8 years.^[1] Our patient was 37 years old who presented with clinical features of epigastric mass and upper gastrointestinal bleeding, which was suggestive of gastric malignancy. Histological diagnosis can be challenging, particularly with limited endoscopic biopsy samples due to tumour heterogeneity, hemorrhage, and necrosis. Immunohistochemical positivity for β -hCG supports trophoblastic differentiation. Elevated β -hCG in gastric adenocarcinoma should prompt evaluation for a choriocarcinomatous component, as treatment differs.^[2,3,4]

This case highlights the importance of considering gastric choriocarcinoma in patients presenting with a gastric mass and disproportionately elevated serum β -hCG levels. This patient had a markedly elevated serum β -hCG levels (269000 IU/L) and positive immunohistochemical staining for β -hCG. The patient died before surgical intervention or chemotherapy could be initiated. NGPGC shows very poor prognosis, and the median survival is known to be less than several months.^[2-4]

NGPGC contains both gastric adenocarcinoma and choriocarcinomatous components, supporting the theory that they arise through trophoblastic dedifferentiation of gastric adenocarcinoma.^[2-4] The presenting symptoms of upper gastrointestinal hemorrhage are similar to typical gastric adenocarcinoma due to the coexistence of adenocarcinoma and choriocarcinoma. NGPGC is often misdiagnosed as an adenocarcinoma. In comparison with gastric adenocarcinoma, there is no universally established treatment protocol. Chemotherapy is the mainstay of treatment for gastric choriocarcinoma, with surgery reserved for selected cases.^[2,3,5] For localized and resectable disease, radical gastrectomy with an appropriate lymphadenectomy and an R0 resection offers the best potential for prolonged survival. Surgery may also be required urgently for uncontrolled bleeding, perforation or gastric outlet obstruction. Surgery alone is generally inadequate because of the high risk of early systemic recurrence; postoperative systemic chemotherapy should therefore be considered.^[1,6] For unresectable or metastatic disease, systemic chemotherapy is the primary treatment. In selected patients with a favourable response, subsequent gastrectomy, metastasectomy, or local treatment of residual oligometastatic disease may be considered.^[5] Targeted therapy like Trastuzumab-containing may be considered based on the tumour's molecular profile. However, evidence supporting targeted agents and immune checkpoint inhibitors remains limited, and their use should generally follow established indications for gastric adenocarcinoma.^[7]

Available literature indicates that non-gestational primary gastric choriocarcinoma has a poor prognosis and high mortality, largely because of its risk of haemorrhage and rapid progression, with reported survival often less than two months.^[2,3,4] In contrast, patients with early, resectable primary gastric adenocarcinoma have an overall five-year survival rate of approximately 50%.^[1,5-8] In this case, the patient had already metastatic disease in the liver at the time of diagnosis and died within one month before initiation of any treatment.

CONCLUSION

Non-gestational primary gastric choriocarcinoma remains exceptionally rare. Early recognition, speedy diagnosis and prompt multidisciplinary management are essential to reduce mortality. Further reporting of such rare cases is needed to improve understanding of the disease and guide the development of standardized treatment strategies.

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Conflicts of interest

There are no conflicts of interest.

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