A perplexing case of gastrointestinal haemorrhage
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ABSTRACT
Choriocarcinoma is a gestational trophoblastic tumour with a high metastatic potential but presentation with gastrointestinal haemorrhage due to jejunal mucosal metastasis is very rare. A 25-year-old Nepali woman presented with severe anaemia and massive gastrointestinal haemorrhage after normal pregnancy following evacuation of a hydatiform mole. During laparotomy, the patient was found to have extensive jejunal mucosal metastases.

Keywords: choriocarcinoma, gastrointestinal haemorrhage, hydatiform mole, jejunal mucosal metastasis

INTRODUCTION
Choriocarcinoma is a rapidly-invasive, widely metastatic human chorionic gonadotropin (HCG)-producing neoplasm, and is usually intrauterine and gestational. Other sites of origin include ectopic pregnancies and gonads. As a teratoma, it arises from the mediastinum, retroperitoneum, and pineal gland(1). Only rarely has this neoplasm been reported in organs such as the prostate, liver, lung, urinary bladder, nose, and gastrointestinal (GI) tract(2). We describe a young lady who presented with severe anaemia, massive GI haemorrhage due to choriocarcinoma with jejunal mucosal metastases and bleeding duodenal ulcer two years four months after evacuation of a hydatiform mole.

CASE REPORT
A 25-year-old Nepali woman first presented to our hospital in January 2004 at 34 weeks gestation with severe pain on the right chest and back. On physical examination, she was found to have a right pleural effusion. She gave a history of hydatiform mole two years ago, which was evacuated at about 12 weeks of gestation, which was evacuated at about 12 weeks of gestation. She was on regular follow-up at another healthcare facility, and was subsequently considered fit to be pregnant. Chest radiograph showed a massive right haemopneumothorax. Intercostal drainage was done and about two litres of haemorrhagic fluid was drained. Work-up for bleeding and clotting disorders was negative. Emergency Caesarian section was done and a baby boy was born. Investigations, including computed tomography (CT) of the thorax, to find the cause of haemorrhagic pleural effusion at that time could not conclusively confirm its aetiology. CT did not show a mass lesion. The patient did not consent to have a pleural biopsy. Thoracoscopy was not available in our hospital. Subsequently, both mother and child recovered and were discharged.

The patient next presented to our emergency room four months later with complaints of multiple episodes of vaginal bleeding and an episode of epistaxis. On examination, she was markedly pale with haemoglobin at admission of 5 g/dL, with a haematocrit of 21%. There was minimal bleeding per vaginum. Otherwise, systemic examination was essentially normal. Her peripheral smear showed evidence of microcytic hypochromic anaemia. Initial clinical impression was severe anaemia due to chronic genital blood loss.

The patient was diagnosed to have iron deficiency anaemia due to genital blood loss, as her history of minimal vaginal bleeding started after discharge from hospital. The patient was also investigated for bleeding and clotting disorders. Coagulation profile, and liver, renal and thyroid function tests were normal. Ultrasonography (US) of the abdomen was normal while pelvic US showed minimal fluid in the endometrial cavity. Hysteroscopy could not be done as facilities were not available. Bone marrow aspiration showed refractory anaemia. The patient was then started on multiple blood transfusions and oral iron therapy.

On the third day of admission, the patient developed several episodes of haematemesis and melaena. Upper GI endoscopy showed a
jejunal intussusception due to large papillomatous
growth were found. Multiple small (less than 5 mm)
nodular deposits on the liver surface and mesenteric
lymphadenopathy were seen. 80 cm of involved
jejunum was resected, liver nodules and lymph
nodes were sent for histopathology, and the bleeding
was controlled. All intestinal polypoidal masses
(Fig. 1), mesenteric lymph nodes and liver nodules
showed metastatic choriocarcinoma.

Preoperative serum β-HCG level was
>500mIU/mL. On the seventh postoperative day,
the patient developed sudden loss of consciousness,
global rigidity, decortication and respiratory failure
requiring mechanical ventilation. CT of the head
showed multiple haemorrhagic secondaries in
both cerebral hemispheres (Fig. 2). She deteriorated
further and died the next day.

DISCUSSION

Anaemia is the commonest haematological disorder
worldwide. Challenges in managing anaemia include
making an accurate diagnosis and treating the
underlying cause. The first step is doing a peripheral
smear examination. Based on red cell morphology,
aemia is classified as microcytic, normocytic or
macrocytic. Iron deficiency is the commonest cause
of microcytic hypochromic anaemia, with other
causes being thalassaemia, sideroblastic anaemic
and anaemia of chronic disease. Common causes
of iron deficiency include excessive demand during
pregnancy and lactation, and chronic blood loss
from the GI tract and uterus\(^5\).

In females in the reproductive age group,
menorrhagia, increased demand during pregnancy
and lactation are aetiological factors implicated in
iron deficiency. In post-menopausal females and
older males, occult GI haemorrhage due to bleeding
peptic ulcer, and stomach and colonic carcinomas
have been implicated to cause chronic blood loss.
Iron deficiency anaemia is characterised by a
microcytic hypochromic blood picture and low
serum ferritin. The definitive diagnosis is by
demonstrating low iron store in the bone marrow.
Diagnosis of iron deficiency anaemia is easy but
the challenge lies in finding the cause of blood loss.

Clues for planning of investigations in microcytic
hypochromic anaemia are based on the history and
clinical presentation. In females of reproductive
age with a history of menstrual or genital bleeding,
pelvic investigations (pelvic US and hysteroscopy)
are planned initially. In males, in post-menopausal
females with no definite history of GI haemorrhage,
and in both sexes with a history suggestive of
GI haemorrhage, investigations like stool occult
blood, upper GI endoscopy, colonoscopy and barium enema, should be conducted to find out the cause of blood loss.

Common causes of upper GI haemorrhage are peptic ulcer, oesophageal varices, Mallory-Weiss tear, gastritis, and gastric carcinoma, whereas causes of small intestinal haemorrhage include angiodysplasia, haemangioma, telangiectasia, Crohn’s disease, Meckel’s diverticulum, lymphoma and small bowel carcinoma. Treatment of anaemia due to acute GI haemorrhage is by repeated blood transfusion, high dose proton pump inhibitors for ulcer, sclerotherapy for bleeding varices, and endoscopic haemostatic techniques for bleeding ulcers. Bipolar probe coagulation, argon plasma coagulation or laser therapy may be used to ablate angiodysplasia. If bleeding continues in spite of the above measures, laparotomy is indicated.

Our patient had chronic vaginal blood loss and presented to us with severe anaemia. While investigating for anaemia, the patient started having severe GI haemorrhage manifested by haematemesis and malaena. Upper GI endoscopy showed a bleeding duodenal ulcer which added to the confusion. The patient was treated with standard medical therapy (i.e. high dose proton pump inhibitors, antacids, sucralfate, multiple blood transfusions). In spite of these measures, the GI haemorrhage continued, necessitating laparotomy. Laparotomy showed extensive jejunal mucosal metastases due to choriocarcinoma.

Choriocarcinoma is a malignant tumour derived from trophoblasts that have a high metastatic potential. Choriocarcinoma and placental site trophoblastic tumours are considered as gestational trophoblastic tumours (GTT). GTT are unique in cancer biology in that they follow either a normal or abnormal pregnancy. The most common antecedent pregnancy to GTT is a complete or partial hydatidiform mole. After its evacuation, her serial β-HCG levels were normal, so she was cleared for planned pregnancy again. The patient presented with haemothorax at 34 weeks pregnancy and at this stage, her serum β-HCG was negative for choriocarcinoma. After a few months, the patient presented with severe anaemia and minor bleeding manifestations initially, then massive GI haemorrhage.

This case is unusual as even at the stage of metastases, the patient had only a modest rise in serum β-HCG (500mIU/ml). Endoscopy done during massive GI haemorrhage showed superficial bleeding duodenal ulcer, adding to the confusion in diagnosis. Laparotomy done showed multiple jejunal polypoidal growths with deposits of choriocarcinoma in the liver which, to our knowledge, has not been reported in literature.

Choriocarcinoma, though rare in developed countries, is still a major problem in developing countries, especially Southeast Asia. Since it has not uncommonly, cerebral metastases. 50% of metastatic choriocarcinoma cases follow evacuation of a hydatidiform mole, 25% after abortion, and 20% following full-term delivery while 5% follow ectopic gestation. Presentation may occur several years after pregnancy, usually with persistent or irregular uterine bleeding. The disease may also present with signs and symptoms of metastasis, usually affecting the lungs. Deposits are frequently found in kidneys, brain and liver. Lung metastasis presenting as pneumothorax and haemothorax have been reported in the literature. GI involvement is rare, being present in less than 5% of cases. Locating and therapy of these lesions can be achieved by endoscopy, angiography or surgery. Despite being a highly curable malignant disease, the occurrence of GI bleeding worsens the prognosis.

Choriocarcinoma is a tumour composed both of cytotrophoblastic and syncytiotrophoblastic cells. It is an unusual tumour in that it stimulates virtually no stromal reaction and is therefore essentially a mixture of haemorrhage and necrosis with tumour cells scattered within the mass. Tumour cells can be scanty and present problems of pathological interpretation. The pathology of choriocarcinoma is reflected in its clinical behaviour, with widespread intravascular dissemination to lungs, brain and other sites. It has a characteristic haemorrhagic tendency due to its trophoblastic origin.

There are very few case reports of choriocarcinoma presenting as GI bleeding, either as primary GI malignancy, bleeding duodenal ulcer or metastatic deposits. Our patient had a hydatidiform mole. After its evacuation, her serial β-HCG levels were normal, so she was cleared for planned pregnancy again. The patient presented with haemothorax at 34 weeks pregnancy and at this stage, her serum β-HCG was negative for choriocarcinoma. After a few months, the patient presented with severe anaemia and minor bleeding manifestations initially, then massive GI haemorrhage.

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varied presentations with metastases at various sites including unusual sites, it has to be considered in the differential diagnosis of unexplained anaemia with bleeding manifestations in females, especially those with a past history of hydatiform mole even many years earlier. The unusual presentation of this entity is highlighted in this reported case.

REFERENCES

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