ORIGINAL RESEARCH PAPER
Volume - 10 | Issue - 01 | January - 2021 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

# GESTATIONAL TROPHOBLASTIC NEOPLASIA PRESENTING AS INTRAPERITONEAL BLEEDING

Obstetrics & Gynaecology

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## ABSTRACT

While complete molar pregnancies are rare; they are wrought with a host of potential complications to include invasive gestational trophoblastic neoplasia. Persistent gestational trophoblastic disease following molar pregnancy is a potentially fatal complication and following partial mole is even rarer. This must be recognized early and treated aggressively for both immediate and long-term recovery. We present the case of a 23-year-old woman with abdominal pain and pre syncope 1 month after a molar pregnancy with a subsequent uterine rent due to invasive gestational trophoblastic neoplasm. We will discuss the complications of molar pregnancies including the risks and management of invasive, metastatic gestational trophoblastic neoplasia.

## KEYWORDS

Gestational Trophoblastic Neoplasia, Hemoperitoneum, Molar Pregnancy

## INTRODUCTION

Gestational trophoblastic disease (GTD) forms a group of disorders spanning from the conditions of complete and partial molar pregnancies to malignant conditions of invasive mole, choriocarcinoma and the very rare placental site trophoblastic tumour (PSTT). There are reports of neoplastic transformation of atypical placental site nodules to placental site trophoblastic tumour. If there is any evidence of persistence of GTD, most commonly defined as a persistent elevation of beta human chorionic gonadotrophin (βhCG), the condition is referred to as gestational trophoblastic neoplasia (GTN).Invasive, metastatic gestational trophoblastic disease (GTD) is very rarely seen in the emergency department, but it must be recognized and treated appropriately and immediately to prevent serious complications.It can present with a wide variety of symptoms depending on the site of metastasis or the extent of invasive growth, but this disease process is very rarely documented in the emergency medicine literature. We present a case of a young woman who presented 44 days after evacuation of a molar pregnancy with invasive and metastatic GTN complicated by a uterine rent and hemoperitoneum.

## CASE REPORT

23 yr old, $P_0MOLAR_1$ patient came to casualty on D44 post suction evacuation on 21-09-2018,
C/OPain in abdomen -1 week
Breathlessness & giddiness- 1day
Patient was apparently asymptomatic since afternoon when she developed breathlessness grade 4, sudden onset
No H/O fever with chills, chest pain, palpitations
No H/o of any major medical illness
H/o suction and evacuation done in view of molar pregnancy on 8/08/18 at Ahmedabad
Pre procedure BHCG: 10,000 (30/7/18)
Post procedure BHCG: 2359 (4/09/18)
**Histopathology report**-partial mole
**USG (A+P)**: Uterus Normal size with b/l ovaries normal (4/09/18)
**UPT POSITIVE**
Pallor ++,no icterus/spikes/edema
P-99/min, feeble, BP-90/60 mmHg
CVS/RS-NAD
P/A-tenderness+
No guarding/rigidity
P/V-uterus slightly bulky
Anteverted, Os closed
No cervical motion tenderness
No bleeding/discharge
(HB:7.7/12100/242000)

**IMPRESSION: DAY 44 POST MOLAR PREGNANCY WITH ANEMIA UNDER EVALUATION**
**Beta HCG**:4499
**USG (A+P)**:
Uterus bulky with ET:11.2 mm
B/l adnexa free with free fluid in POD
MODERATE ASCITIS

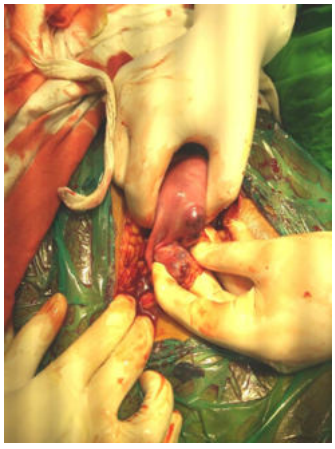
**DIAGNOSTIC TAPPING:**Hemoperitoneum
**SURGERY REFERNCE:**
CT Abdomen + Pelvis
Maintain UO 0.5ml/kg/hr
Keep adequate blood
Inform back sos

**CT (A+P):**
Active arterial blush noted from one of the branches of left internal iliac artery s/o acquired arteriovenous fistula with active bleeding

Moderate hemoperitoneum,9*6*4cm hematoma in POD

With these findings the patient was taken up for Exploratory laparotomy on day 44 post suction evacuation post molar pregnancy in view of ? Ruptured ectopic , ? Gestational trophoblastic neoplasia ,? choriocarcinoma.

**In situ findings-**
500ml hemoperitoneum with 550cc blood clots.
2*2 cm purple mass seen protruding from behind the left cornu on posterior aspect of the uterus.
0.5*1 mm similar mass seen on top of left ovary
Right ovary normal
B/L tubes-normal
Sample from the mass and omentum was taken and sent for histopathology.
Intraoperatively 3 Pint PRC'S and 6 FFP'S were given.Hemostatic sutures were taken over the bleeding points of the mass.
Intraperitoneally wash given and drain inserted and fixed
Hemostasis checked& achieved at SBP 110 mmHg and abdomen closed in layers



Patient was intubated & shifted to SOTRR

**BHCG VALUES**
22/09/18: 3747
24/09/18: 1671
26/09/18: 1101
01/10/18: 848

**Post op USG (P):**
Bulky uterus with heterogeneous myometrial echo texture but no e/o AV malformation.
Intraoperative detected lesion is more likely air foci
Minimal residual hemoperitoneum

**Post op MRI (P):**
Postpartum bulky uterus, Minimal hemoperitoneum in pouch of douglas with postoperative changes
No evidence of AV malformations

**Histopathology Report:**
? Choriocarcinoma in omental biopsy
No e/o any tumour tissue in specimen labelled as hemoperitoneum and ovarian tissue.

After routine basic investigations like complete blood count, liver and renal function test, Patient was given one cycle of Inj Methotrexate 75mg & Inj Leucovorin7.5 mg (4 doses). An opinion for further management from TATA Memorial Hospital was taken where she was diagnosed with low intensity GTN and advised 3 more cycles of Inj. Methotrexate alternating with Leucovorin. She was advised contraception for a year and to plan her next pregnancy at a tertiary centre.

## DISCUSSION

Gestational trophoblastic neoplasia (GTN) comprises a group of aggressive fertilization disorders characterized by invasion of the uterine endometrial and myometrial layers by malignant trophoblastic cells. GTN includes 4 distinct pathologic diseases: choriocarcinoma, persistent/invasive hydatidiform mole, placental site trophoblastic tumor, and epithelioid trophoblastic tumor.GTN most commonly develops following a complete hydatidiform molar pregnancy, but can potentially occur after any form of pregnancy (live birth, miscarriage, or termination) and very rarely without a documented preceding gestation.

The majority of cases of malignant GTN occur following a complete molar pregnancy. Persistent/malignant GTN following a complete hydatidiform mole occurs in 10–28% of cases even after surgical evacuation.The risk for malignant sequelae after a partial molar pregnancy is significantly less at 3–5%. Invasive GTN invades the myometrium or adjacent structures and can penetrate the uterine mantle causing uterine rent, rupture and hemoperitoneum, as it did in our patient. Metastatic GTN, however, is rare after the complete evacuation of a molar pregnancy (4%), and while it only occurs in approximately 1 in 30,000 non-molar pregnancies, it is overall seen more frequently after a non-molar pregnancy.

Risk factors for post-molar GTN include an HCG level greater than 100,000 mIU/mL, large theca lutein cysts (>6cm), age over 40, a history of previous GTD, and excessive uterine enlargement for presumed dates.Many patients with these risk factors for GTN are recommended for post-evacuation chemoprophylaxis, although it is not recommended for all patients unless they are known to be at high risk.

In order to monitor persistent GTN following evacuation in low risk patients, levels should be followed weekly until 3 consecutive normal values are obtained. HCG levels return to normal for approximately half of molar pregnancy patients within 6–14 weeks.It is currently recommended that monthly HCG levels are checked for 6 months after the level has returned to zero because of the risk of persistent disease. GTN should be suspected and further investigated in the setting of a preceding molar pregnancy when post-evacuation HCG levels plateau or rise. The vast majority of these cases of GTN are invasive moles with choriocarcinomas comprising less than 10% of cases.

Our patient presented with post-partum pain in abdomen and presyncope due to hemoperitoneum. When cases like these occur, they tend to happen when a patient does not adhere to the strict follow-up regimen.Because most patients with a known molar pregnancy have regular HCG testing, those with malignant GTN are often diagnosed before symptoms occur or when repeat HCG levels are abnormal. In women of reproductive age with abnormal vaginal bleeding more than 6 weeks post-partum, persistent GTN should be considered.Uterine and adnexal enlargement on pelvic examination may also be present, and peritoneal signs are possible with the presence of intra-abdominal bleeding.

If there are metastases at the time of presentation, the symptoms will vary depending on the location of the metastatic disease. Metastatic GTN is almost always due to choriocarcinoma. Lung metastases are the most common site, occurring in up to 80% of metastatic choriocarcinoma cases. Other less common sites include the vagina, pelvis, liver, and brain, but concurrent lung metastases frequently are present as well.Metastatic GTN is often asymptomatic,but because this disease may metastasize quickly, some patients may present with cough, dyspnea, or hemoptysis as a result of lung metastases or from embolization of molar/trophoblastic tissue during or after evacuation which leads to extensive infiltrates and respiratory distress.Diagnostic imaging may begin with an initial ultrasound of the pelvis, but CT of the abdomen and pelvis is recommended to evaluate for the extent of the disease. Typically, a screening chest radiograph is sufficient to determine the presence of metastases initially in the ED, but chest CT will find metastases that are not seen on plain radiograph. Magnetic resonance imaging is also of particular importance in assessing for cerebral metastases and for help with staging lesions in the abdomen and pelvis.

Management of this disease in the Emergency department is largely supportive and requires immediate gynaecologic consultation so that treatment can begin immediately. Our patient who reported in casualty with a uterine rent had significant malignant invasion to cause severe uterine bleeding or rupture. If haemostasis was not achieved, hysterectomy may be emergently required to control potentially life-threatening haemorrhage. Long-term treatment involves chemotherapy and possible surgical resection of the other metastatic lesions as indicated.

The prognosis for malignant GTN is dependent upon the type of GTN and the stage of invasion and degree of metastasis. Overall, the prognosis for properly treated metastatic choriocarcinoma is worse (80–90% survival) than other types of GTN (almost 100% survival). Early recognition and treatment in the asymptomatic post-molar patient is the key to the high cure rate

## CONCLUSION

Metastatic GTN in the form of choriocarcinoma is a rare diagnosis to make especially in the emergency department because the patients at risk for this disease are often diagnosed during routine screening. Persistently elevated HCG levels are the hallmark laboratory finding of this disease. Emergency physicians should be aware of the risk of metastatic GTN following molar pregnancies and non-molar pregnancies when there is significant post-partum vaginal bleeding or unexplained uterine or adnexal enlargement. Recognition of metastatic GTN and screening for other locations of metastases should be performed in the emergency department as well as supportive and resuscitative care if life threatening complications occur, such as our patient's cause of anemia was intraperitoneal bleeding because of a rent in the uterus. Definitive care for GTN is the purview of the gynecologist, although physicians should be made aware of the risks and be able to recognize the patient with this potentially lethal disease.

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