

GESTATIONAL TROPHOBLASTIC DISEASE

Gestational Trophoblastic Disease (GTD), includes:

- Hydatidiform moles (molar pregnancy)
 - "Complete" (mostly euploid, no fetus, complications more common)
 - "Partial" (mostly triploid, fetus often present, very rare complications)
- Invasive moles (invade into myometrium)
- Gestational choriocarcinomas (+/- metastases)
- Placental site trophoblastic tumors (very rare, lesser HCG elevation, poorer prognosis)

Molar Pregnancy

INCIDENCE:

1/1500 pregnancies in United States (Asians > Caucasians)

SYMPTOMS:

- Irregular/heavy bleeding in 1st (>2nd) trimester (most common)
- Nausea, may have diagnosis of hyperemesis gravidarum
- Symptoms of preeclampsia or hyperthyroidism (tachycardia, tachypnea, etc.)

SIGNS:

- Bleeding (most common)
- Enlarged (size > dates) uterus, no fetal heart tones
- Grape-like vesicles in vagina or expelled from vagina

DIAGNOSIS:

- Beta HCG titers higher than expected for early pregnancy
- Ultrasonography (definitive): diffuse, mixed echogenic "snowstorm" pattern

DIFFERENTIAL DIAGNOSIS:

- Placenta previa
- Missed abortion (esp. for partial moles)

LABS NEEDED - prior to evacuation:

- CBC, platelets, PT/PTT, fibrinogen, comprehensive electrolytes (renal & hepatic function)
- Blood type and antibody screen ("precautionary tube") (for possible transfusion)
- Quantitative Beta HCG
- Chest x-ray to look for choriocarcinoma (metastases)
- *Consider:* Thyroid function tests (if symptoms); EKG (if tachycardia or age > 40)

TREATMENT = evacuation of mole (regardless of classification) done by HCMC OB/GYN

- Stabilize any medical complications, then:
- Suction evacuation followed by sharp curettage (suction D&C) (alternative = hysterectomy)
- IV Pitocin - start once procedure underway and continue for several hours post procedure
- If Rh-negative, give Rhogam after procedure

COMPLICATIONS: (more common in complete > partial moles, and if fundal height > 14-16 wks' size)

- Bleeding/anemia
- Abnormal clotting (treat with fresh frozen plasma (FFP), platelets)
- Acute respiratory distress - from embolization or fluid overload
- Postmolar gestational trophoblastic disease, including choriocarcinoma
- Hypertension in pregnancy
- Hyperthyroidism
- Ovarian theca lutein cysts
- Overall, 1-2% risk of future molar pregnancy (~ 10-fold increased risk)

FOLLOW-UP: (to identify patients who develop malignant GTD)

- Serial quant. Beta HCG level: pre-evacuation, then at 48 hours after, then weekly until normal x 2, then monthly for an additional 6 months (<5 milliunits/mL)
- If Beta HCG plateaus or rises, or remains detectable > 6 months after evacuation evaluate immediately for possible malignant GTD (~ 20% of patients will develop postmolar malignancy after evacuation (and need chemotherapy)
- Reliable (e.g. hormonal) contraception while Beta HCG levels are being monitored
- Frequent pelvic exams while Beta HCG levels are elevated (monitor for involution of enlarged organs, identify vaginal metastases)
- Perform early ultrasound exam in all future pregnancies

Gestational Choriocarcinoma

INCIDENCE IN US:

1/20,000-40,000 pregnancies (Less common than nonmetastatic molar proliferation or invasive moles)

- ~ 50% occur after term pregnancies
- ~ 25% after molar pregnancies
- ~ 25% after other, histologically normal gestations

SIGNS and SYMPTOMS:

- May be subtle (esp. following nonmolar pregnancy)
- Suspect diagnosis if abnormal bleeding for more than 6 weeks following any pregnancy
- May present with symptoms of distant metastases

DIAGNOSIS:

- Beta HCG levels plateau or increase after delivery or molar evacuation (nonspecific, but raises possibility of all malignant GTD)
- Histology from molar evacuation *may* determine the precise diagnosis
- Evaluate for metastases (most commonly in vagina, lung, liver, brain) with chest x-ray or chest CT, +/- pelvic/abdomen and brain adjunct imaging studies
- Classification via risk factors

TREATMENT:

- Low-risk / good-prognosis: initial single agent chemotherapy
 - Methotrexate or Dactinomycin. Give until Beta HCG normalizes, plus an additional 1-2 cycles
 - Alternative single or multiple agent regimen if Beta HCG fails to decrease
 - Consider hysterectomy if disease refractory to chemo and confined to uterus
 - If metastatic, need to refer to specialist in treating gestational trophoblastic disease
 - Recurrence rates < 5% if remission induced (even if metastatic disease!)
- High-risk / poor-prognosis: Likely to fail single-agent chemotherapy
 - Require initial multiagent chemotherapy +/- surgery or radiation
 - Early hysterectomy does not improve outcome
 - Consolidation followed by maintenance chemotherapy
 - Continue beta HCG monitoring
 - Up to 13% will develop recurrence after initial remission

COMPLICATIONS:

- Metastases may hemorrhage, e.g. after biopsy or aggressive chemo
- Cerebral metastases - Treat with high-dose systemic chemo plus intrathecal chemo or irradiation

FOLLOW-UP: After disease remission is achieved:

- Reliable hormonal contraception for 1 year (patient should not get pregnant)
- Serial quant Beta HCG levels Q1-2 wks until normal for 3 months, then monthly until normal values for 12 months (documentation of remission)
- Early ultrasound exam in all future pregnancies

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