

AMSER Case of the Month

July 2023

HPI: 24 year old female at 16w3d gestation with no fetal cardiac activity



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Patient Presentation

- HPI: 24 year old, G4P1021 female at 16w3d gestation presenting to Ob/Gyn for routine prenatal care. Previous prenatal visits and noninvasive prenatal testing have been unremarkable. Patient has no complaints
- Maternal Medical History: 1 living child, 2 prior abortions
- Family History: Noncontributory
- Social History: Noncontributory

Pertinent Physical Exam and Labs

- Physical Exam:
 - VScan showed no fetal cardiac activity
- hCG: 11,665 mIU/ml

What Imaging Should We Order?

Select the applicable ACR Appropriateness Criteria

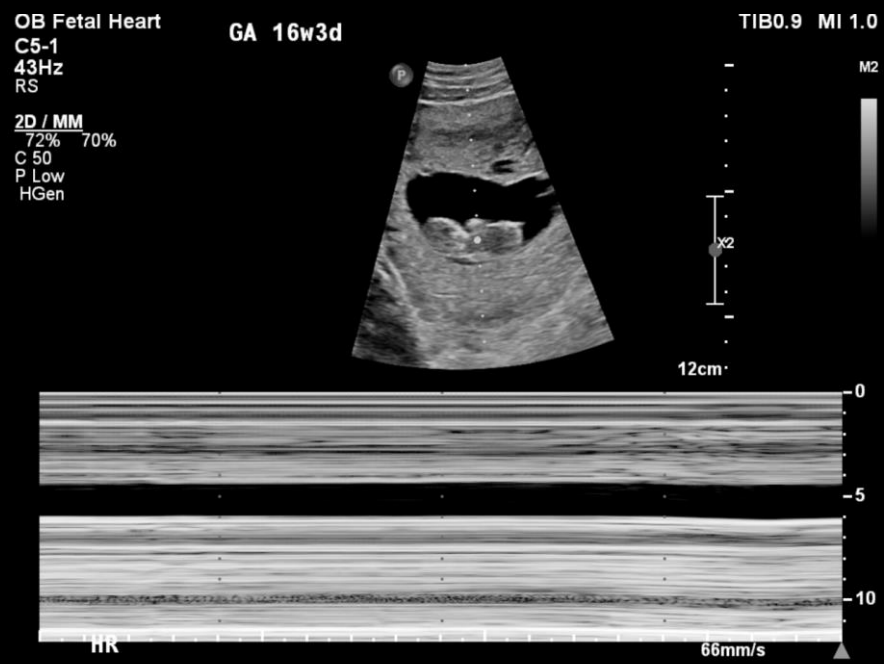
Variant 1: Suspected or initial diagnosis of gestational trophoblastic disease (GTD).

Procedure	Appropriateness Category	Relative Radiation Level
US pelvis transvaginal	Usually Appropriate	○
US duplex Doppler pelvis	Usually Appropriate	○
US pelvis transabdominal	Usually Appropriate	○
Radiography chest	May Be Appropriate	⊕
CT abdomen and pelvis with IV contrast	Usually Not Appropriate	⊕⊕⊕
CT abdomen and pelvis without and with IV contrast	Usually Not Appropriate	⊕⊕⊕⊕
CT abdomen and pelvis without IV contrast	Usually Not Appropriate	⊕⊕⊕
CT chest with IV contrast	Usually Not Appropriate	⊕⊕⊕
CT chest without and with IV contrast	Usually Not Appropriate	⊕⊕⊕
CT chest without IV contrast	Usually Not Appropriate	⊕⊕⊕
CT head with IV contrast	Usually Not Appropriate	⊕⊕⊕
CT head without and with IV contrast	Usually Not Appropriate	⊕⊕⊕
CT head without IV contrast	Usually Not Appropriate	⊕⊕⊕
FDG-PET/CT skull base to mid-thigh	Usually Not Appropriate	⊕⊕⊕⊕
MRI head without and with IV contrast	Usually Not Appropriate	○
MRI head without IV contrast	Usually Not Appropriate	○
MRI pelvis without and with IV contrast	Usually Not Appropriate	○
MRI pelvis without IV contrast	Usually Not Appropriate	○



This imaging modality was ordered by the Ob/Gyn team

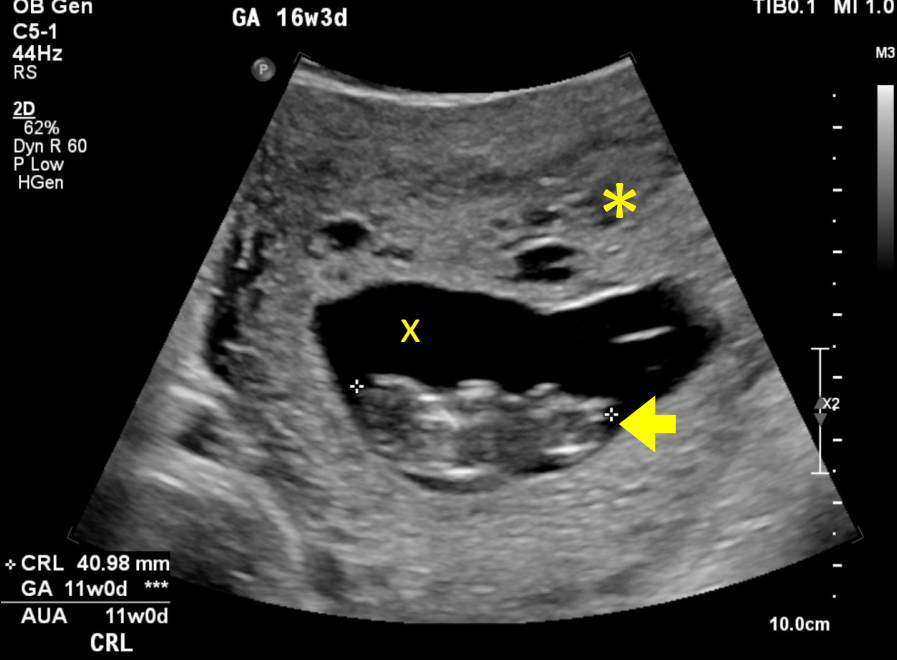
Findings (unlabeled)



Findings (unlabeled)



Findings (labeled)

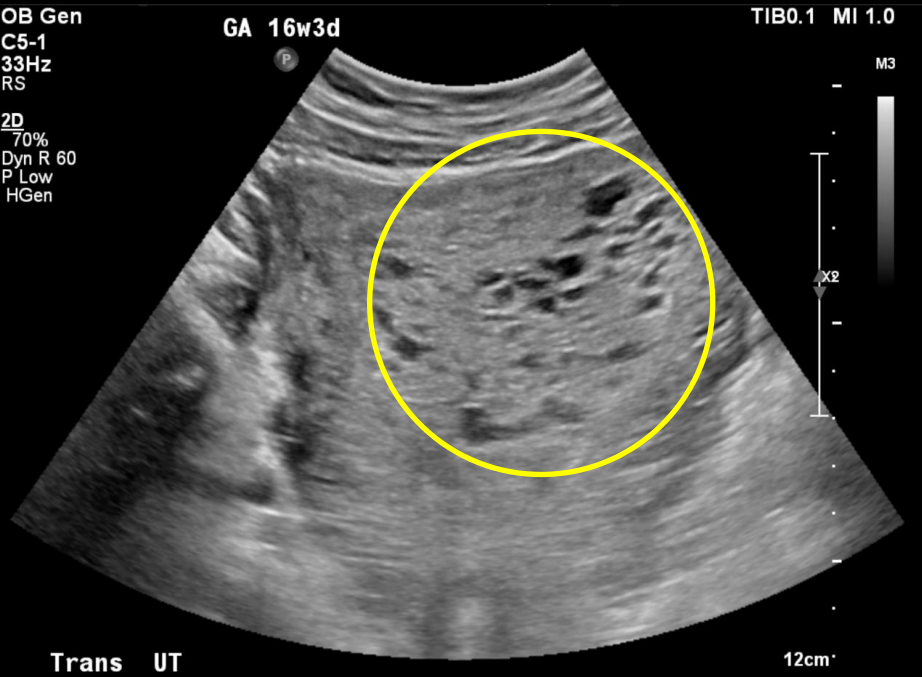
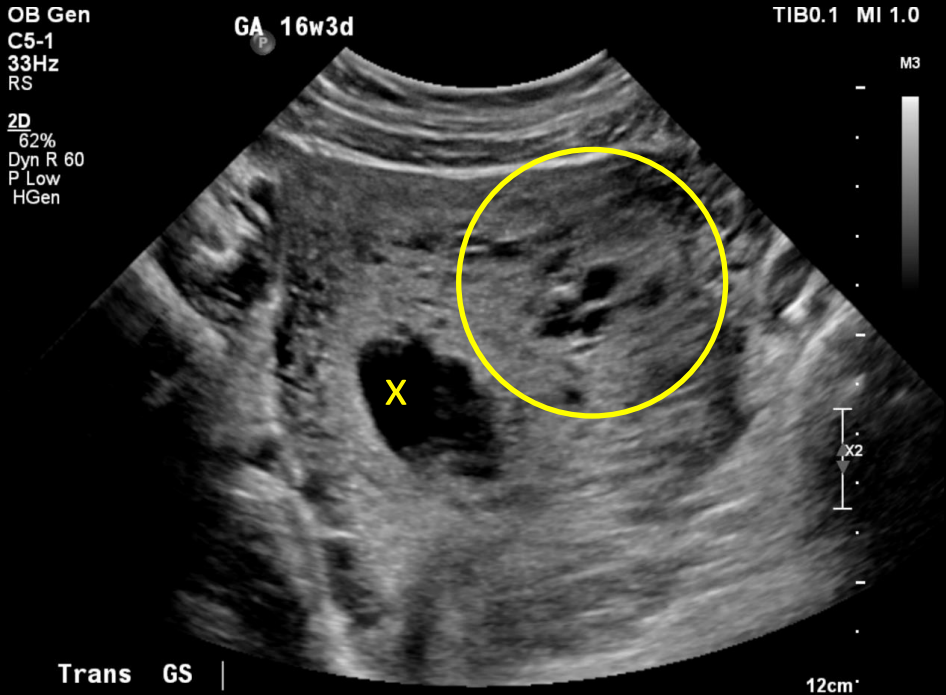


- * — Dystrophic tissue
- X — Gestational Sac
- Arrow — Fetal pole

Fetal pole with crown-rump length measuring 4.01 cm consistent with 11 weeks gestation and lack of cardiac activity diagnostic of fetal demise



Findings (labeled)



X - gestational sac
Circle - cystic changes

- Cystic changes around the gestational sac may relate to hydropic degeneration in setting of fetal demise vs gestational trophoblastic disease

Final Dx:

Partial Molar Pregnancy

Hydatidiform Mole

Epidemiology

- 60-120/100,000 pregnancies form hydatidiform moles; although varies widely by region
- Risk Factors: prior molar pregnancy, maternal age ≤ 15 or > 35 , hx infertility or spontaneous abortion

Etiology

- Type of gestational trophoblastic disease due to over-proliferative chorionic villi
- Two forms:
 - Partial - Haploid ovum fertilized by two sperm
 - 69, XXX; XXY; XYY
 - Complete - Enucleated egg fertilized by two sperm or haploid sperm duplicates
 - 46, XX; XY
- Histopathology: Hydropic chorionic villi with peripheral proliferation of trophoblasts; partial moles may contain fetal tissue

Hydatidiform Mole

Clinical Presentation

- Patients may present with vaginal bleeding, hyperemesis, hyperthyroidism, vaginal passage of “grape-like” tissue clusters
- Partial mole may present as threatened or spontaneous abortion

Diagnosis

- US Pelvis Transvaginal
 - Complete Mole: heterogenous mass with multiple anechoic spaces in uterine cavity - “snow storm” appearance
 - Partial Mole: possible fetus, enlarged cystic spaces “Swiss cheese pattern”, increased echogenicity of chorionic villi
- hCG may be elevated >100,000 in complete molar pregnancy
- Diagnosis confirmed by histopathology and karyotyping of uterine specimen

Hydatidiform Mole

Treatment

- Dilation and Curettage is often necessary to remove molar pregnancy
- hCG levels should be monitored following surgical intervention
 - If hCG levels remain high, follow up is required to evaluate persistent or invasive disease and possible chemotherapy
 - Risk of invasive disease is 15-20% in complete molar pregnancy, and 1-5% in partial molar pregnancy

Patient Outcome

- Patient underwent D&C to remove fetal and dystrophic tissue
- Pathology of uterine specimen revealed immature chorionic villi with morphologic features compatible with partial hydatidiform mole. Chromosome analysis revealed karyotype of 69, XXY
- hCG levels were monitored weekly to ensure decreasing values

References:

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