AMSER Case of the Month August 2023

24 y.o. F G1P1 s/p egg retrieval 3 days ago presents with abdominal distention and abdominal pain

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Patient Presentation

- HPI: 24 yo G1P1 s/p egg retrieval 3 days ago presents with abdominal distention and abdominal pain. 63 eggs were retrieved during the procedure. Patient states that she had severe pain after the procedure. Patient describes her pain currently as a severe sharp/stabbing sensation in the bilateral lower quadrants of the abdomen with no radiation. She rates her pain currently as a >10/10. She states that she has been intermittently nauseated and has felt constipated. She has some mild dysuria. Patient denies any findings of fevers, chills, diarrhea, obstipation hematuria, vaginal bleeding, vaginal discharge/odor/itching.
- Vitals: Temp 36.6 C, BP 136/73, Pulse 120, RR 16, O2 100%

Pertinent Labs

- WBC: 9.6
- H/H: 13.8/40.2
- PLT: 221
- Na: 137
- Cl: 106
- K: 3.9
- CO2: 25
- BUN: 11
- Cr: 0.84

What Imaging Should We Order?

Select the applicable ACR Appropriateness Criteria

Variant 4: **Acute nonlocalized abdominal pain. Not otherwise specified. Initial imaging.**

Procedure	Appropriateness Category	Relative Radiation Level
CT abdomen and pelvis with IV contrast	Usually Appropriate	☢☢☢
CT abdomen and pelvis without IV contrast	Usually Appropriate	☢☢☢
MRI abdomen and pelvis without and with IV contrast	Usually Appropriate	O
US abdomen	May Be Appropriate	O
MRI abdomen and pelvis without IV contrast	May Be Appropriate	O
CT abdomen and pelvis without and with IV contrast	May Be Appropriate	☢☢☢☢
Radiography abdomen	May Be Appropriate	☢☢
FDG-PET/CT skull base to mid-thigh	Usually Not Appropriate	☢☢☢☢
WBC scan abdomen and pelvis	Usually Not Appropriate	☢☢☢☢
Nuclear medicine scan gallbladder	Usually Not Appropriate	☢☢
Fluoroscopy upper GI series with small bowel follow-through	Usually Not Appropriate	☢☢☢
Fluoroscopy contrast enema	Usually Not Appropriate	☢☢☢

This imaging modality was ordered by the ER physician

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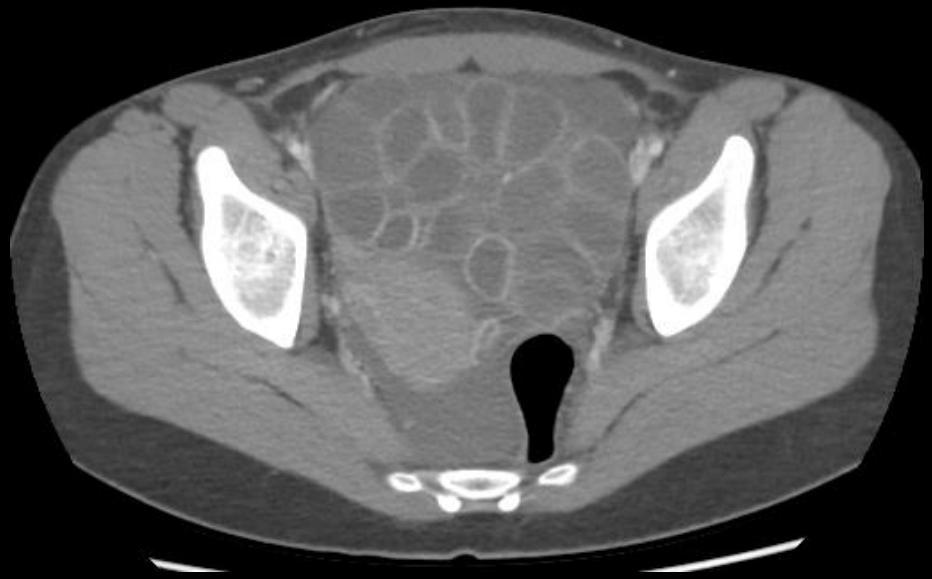
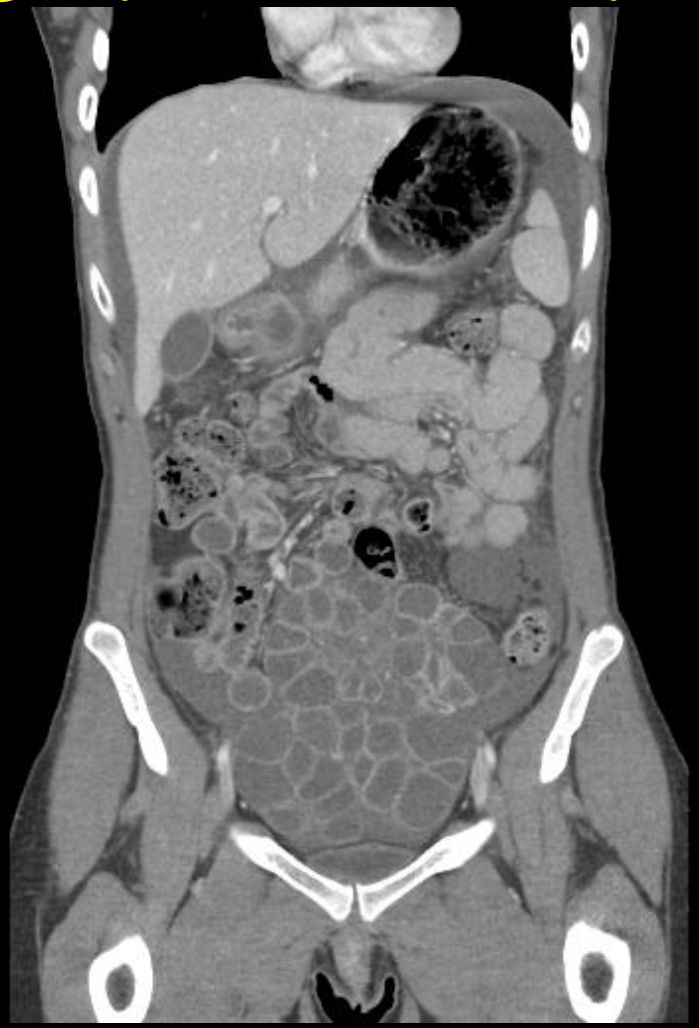
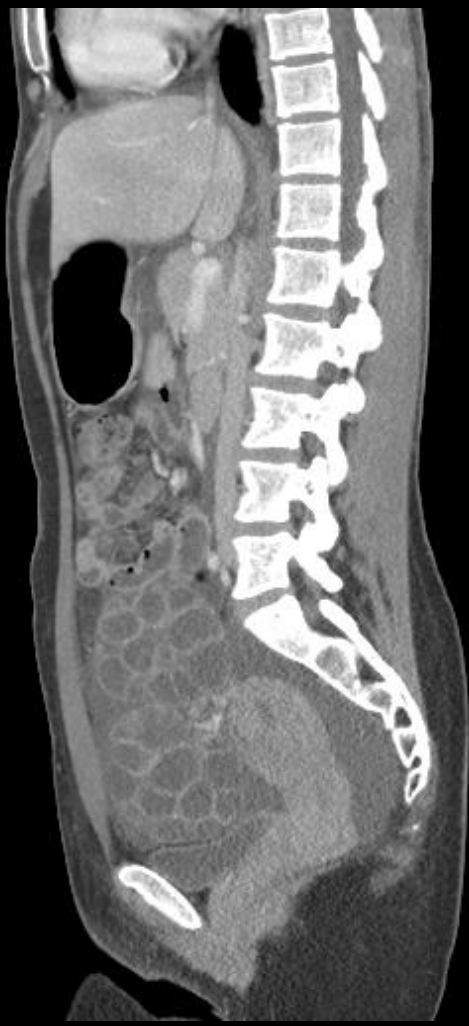
Findings (unlabeled)







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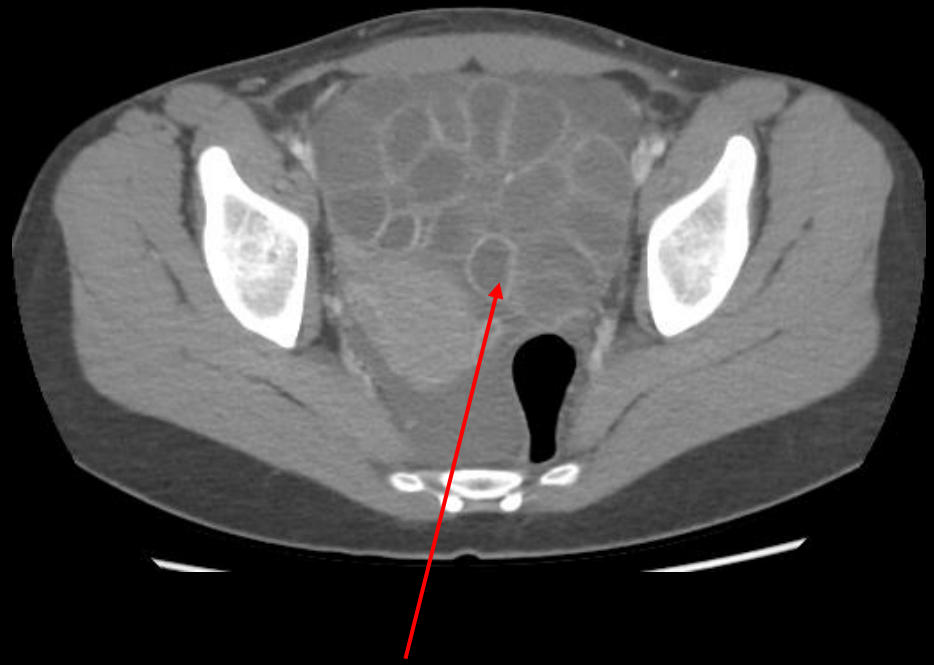

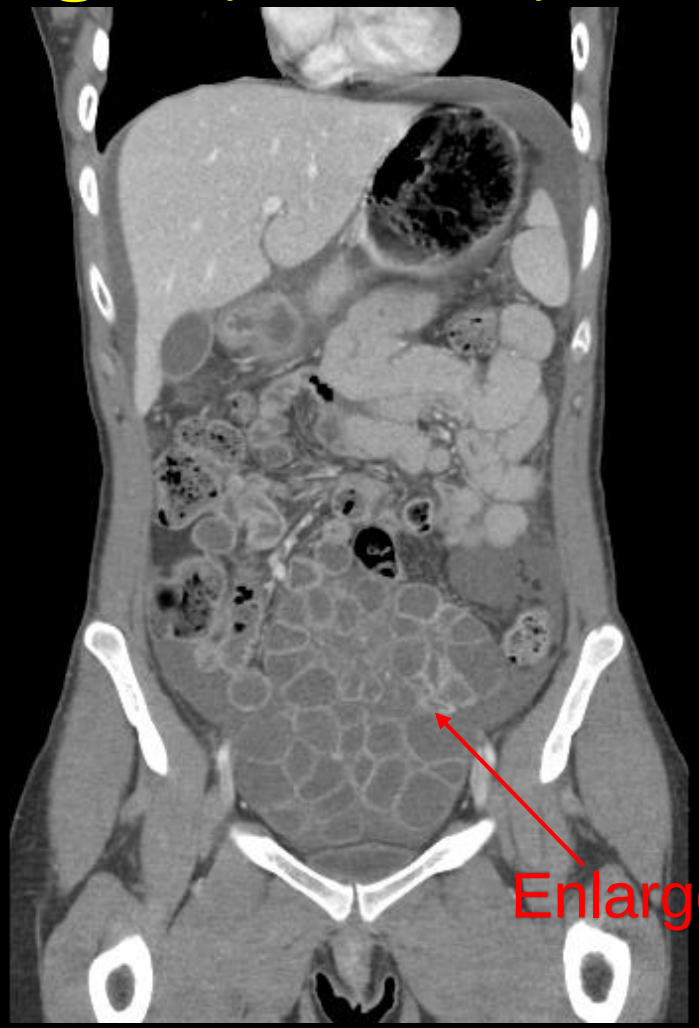

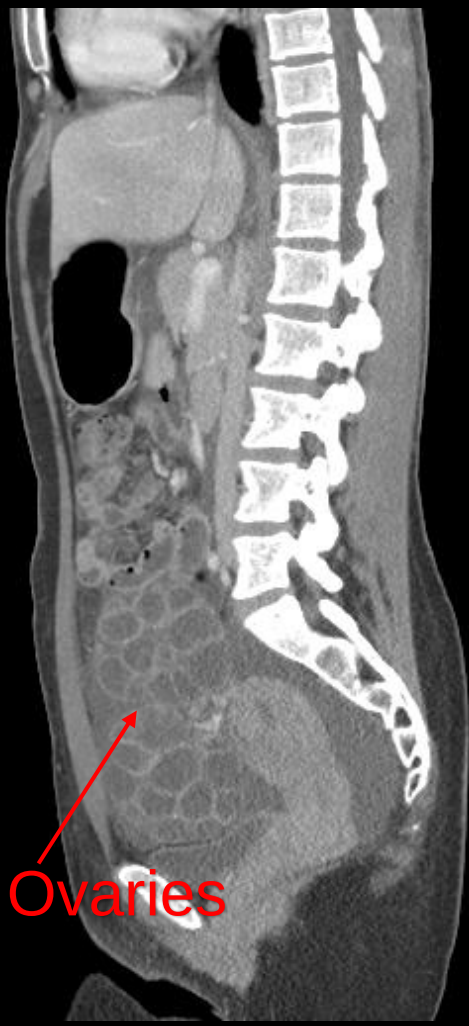

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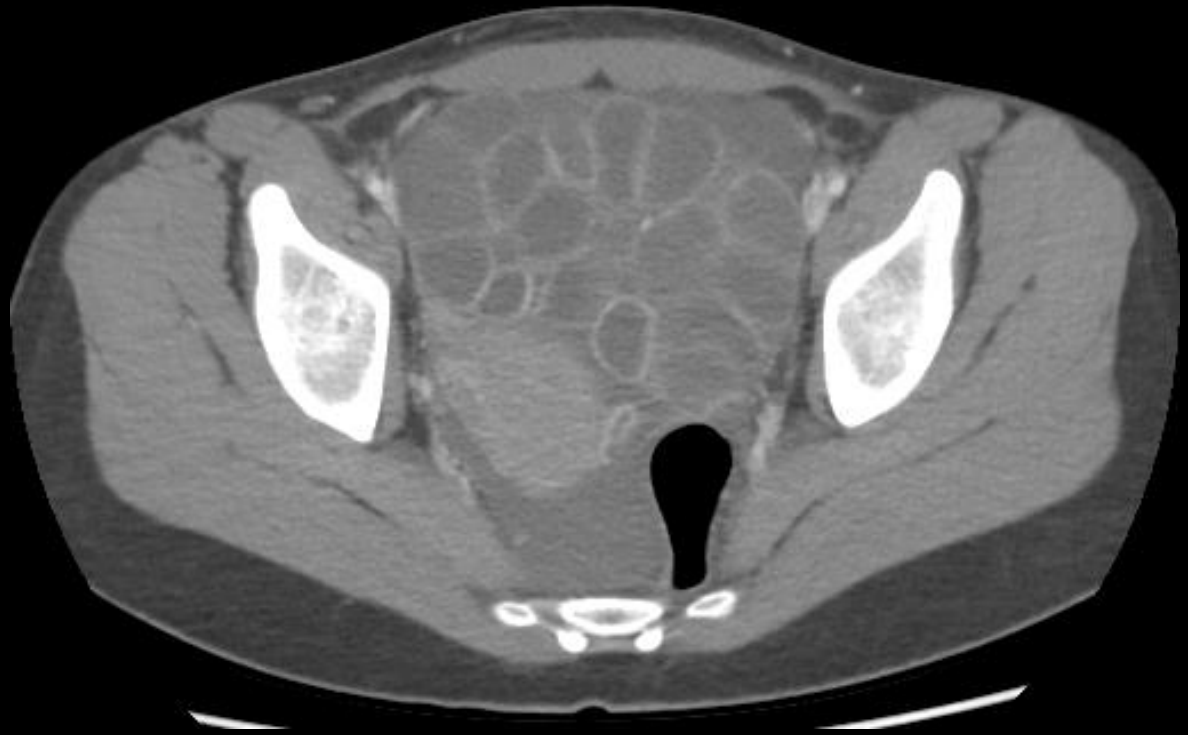

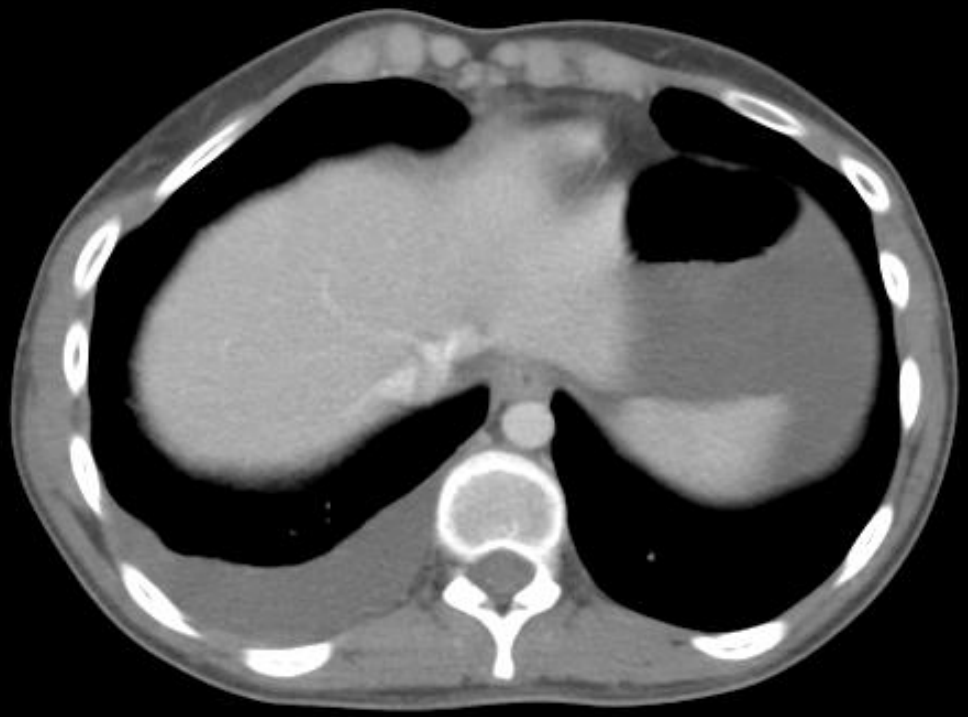

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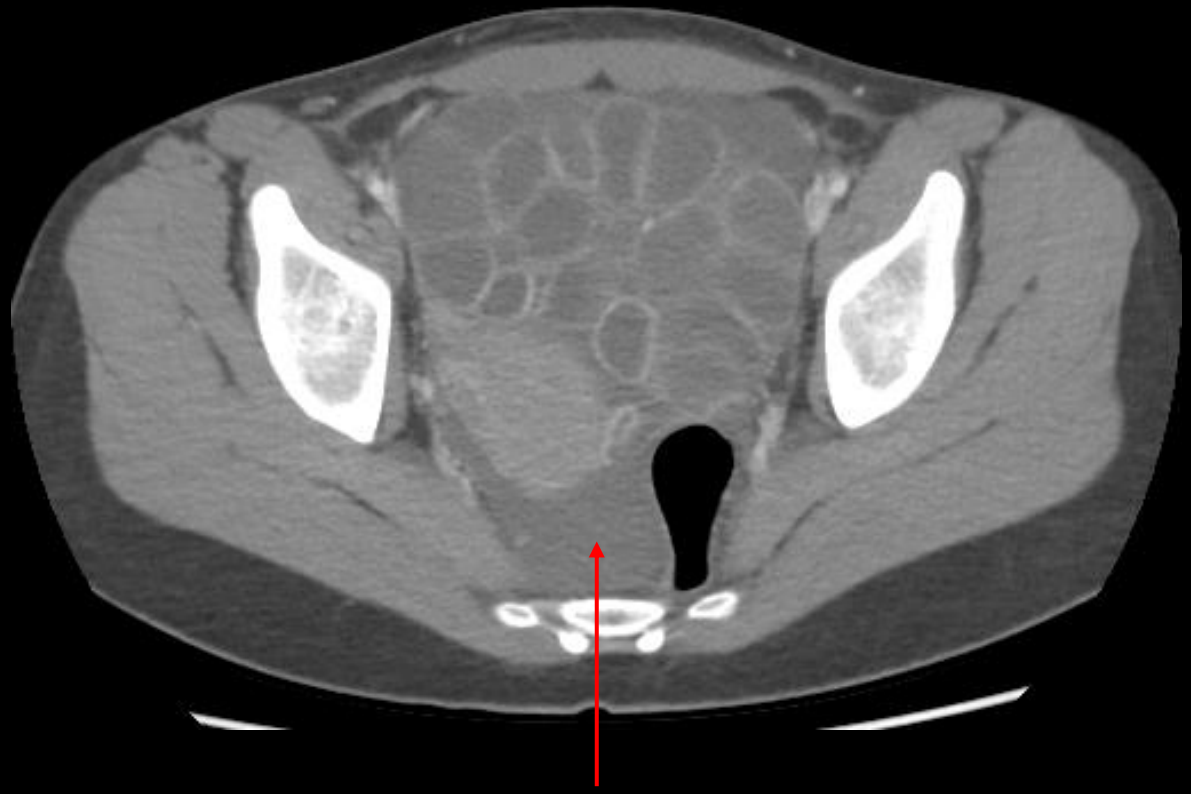
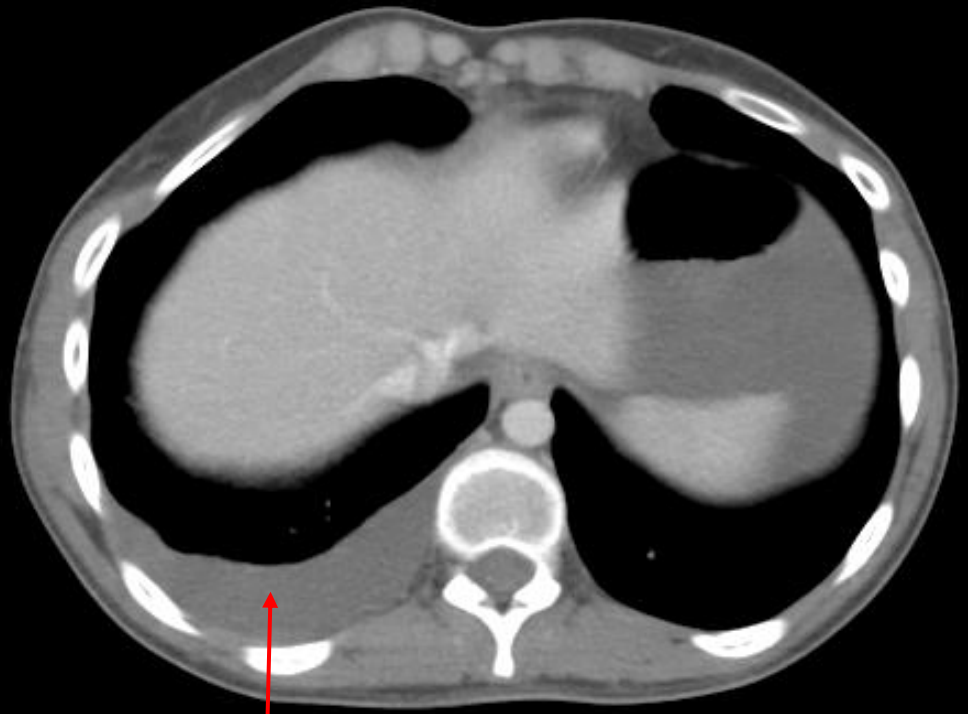


Ascites



Pleural effusion

Final Dx:

Ovarian Hyperstimulation Syndrome

Case Discussion

Patient management:

- Conservative management; Pain control
- Pulmonary consultation for pleural effusion
- Cardiology consultation for abnormal rhythm.

Case Discussion

- OHSS is a rare and potentially life-threatening systemic complication in about 1% of patients undergoing assisted reproductive technology treatment
- Most often induced by exogenous hormonal therapy with human chorionic gonadotropin (hCG)
- Usually has a self-limiting course and usually resolves spontaneously within several days
- Risk factors:
  - Young age, low body weight, PCOS, higher doses of exogenous gonadotropins, previous OHSS
- Clinical presentation:
  - Manifestations of OHSS can be mild including:
    - lower abdominal discomfort, nausea/vomiting, diarrhea, abdominal distension
  - Progression of illness can cause worsening of symptoms including ascites, increasing pain, rapid weight gain, hemodynamic instability, respiratory difficulty, oliguria

Case Discussion

- Imaging:
  - Findings tend to be similar on CT, MRI, and ultrasound
  - Bilateral symmetric enlargement of ovaries
  - Multiple ovarian cysts of variable size
  - Associated ascites and pleural/pericardial effusion may be present
  - Hemoperitoneum can occur in the setting of cyst rupture
- Outpatient management:
  - Mild manifestations of OHSS
  - Supportive treatment, oral analgesics
  - Counseling about signs and symptoms of progressing illness
- Inpatient management:
  - Hospitalization may be required based on the severity of symptoms and analgesic requirements
  - Careful, frequent monitoring and re-evaluation of the patient to monitor progression of illness
  - Imaging surveillance for ovarian rupture which can lead to acute intra-abdominal hemorrhage
  - Ultrasound guided paracentesis may be indicated for patients with ascites
  - Prophylactic measures for thromboembolism

References:

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