

AMSER Case of the Month

Right Lower Quadrant Pain

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Patient Presentation

- 25-year-old female, G1P1001
- Initially presents to the emergency department due to pain in the right lower quadrant
 - Patient states that the pain has been slowly worsening over the past 2 weeks
 - The pain is non-radiating, stabbing and cramping in nature and is localized to the RLQ
 - No fevers, chills, vomiting but has been nauseated

Patient Presentation

- PMHx: Anxiety, Asthma, Depression, Hypothyroidism, Epilepsy, Stomach Ulcer
- PSHx: Caesarean Section, Tonsillectomy
- Family Hx: Colon Cancer, Depression, Bipolar Disorder
- Medication: Albuterol
- Gynecological Hx: G1P1001, C-section two years ago, no STI hx
- Tests and Labs ordered: CBC, CMP, HCG, Urinalysis, CT abdomen and pelvis with IV contrast

Physical Exam

- Blood Pressure: 140/80
- Heart Rate: 60
- Respirations: 14
- Temp: 37.1°C
- General: Alert and oriented, negative for chills, fatigue, weight loss
- GI: Bowel sounds present, abdomen soft and non-distended, tenderness to palpation in RLQ
- CV: Regular rate and rhythm, no murmurs rubs or gallops
- Resp: CTA bilaterally
- GU: No dysuria or urinary frequency

Relevant Labs

Result	Value	Reference Range
WBC	7.8	4.0-12.0 k/ul
HCG	<1	0-2 miU/ML
Blood (UA)	Negative	Negative
WBC (UA)	4	<5

ACR Appropriateness Criteria

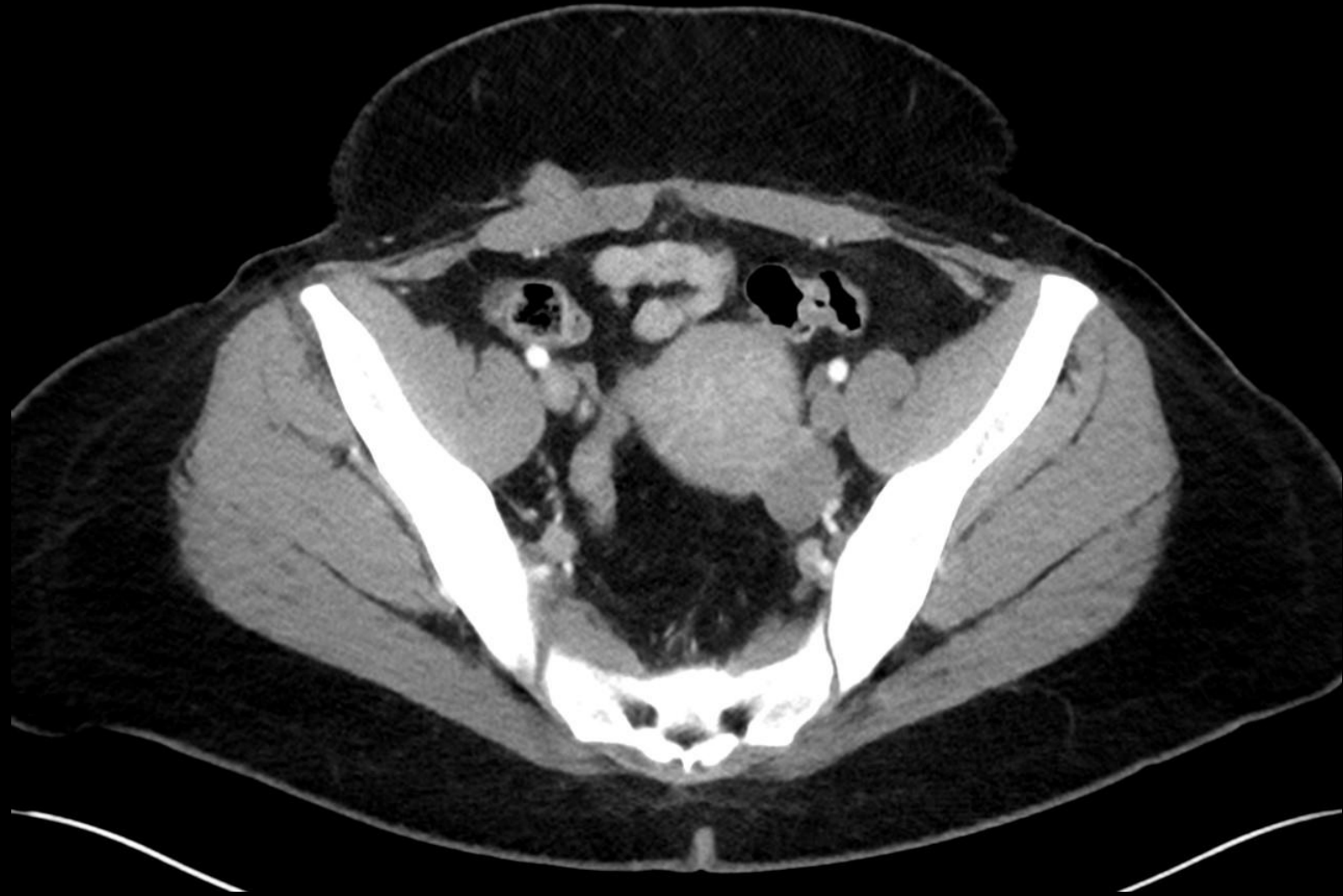
American College of Radiology
ACR Appropriateness Criteria®
Right Lower Quadrant Pain

Variant 1: Right lower quadrant pain. Initial imaging.

Procedure	Appropriateness Category	Relative Radiation Level
CT abdomen and pelvis with IV contrast	Usually Appropriate	⊕⊕⊕
US abdomen	May Be Appropriate	○
US pelvis	May Be Appropriate	○
MRI abdomen and pelvis without and with IV contrast	May Be Appropriate	○
MRI abdomen and pelvis without IV contrast	May Be Appropriate	○
CT abdomen and pelvis without IV contrast	May Be Appropriate	⊕⊕⊕
Radiography abdomen	Usually Not Appropriate	⊕⊕
Fluoroscopy contrast enema	Usually Not Appropriate	⊕⊕⊕
CT abdomen and pelvis without and with IV contrast	Usually Not Appropriate	⊕⊕⊕⊕
WBC scan abdomen and pelvis	Usually Not Appropriate	⊕⊕⊕⊕

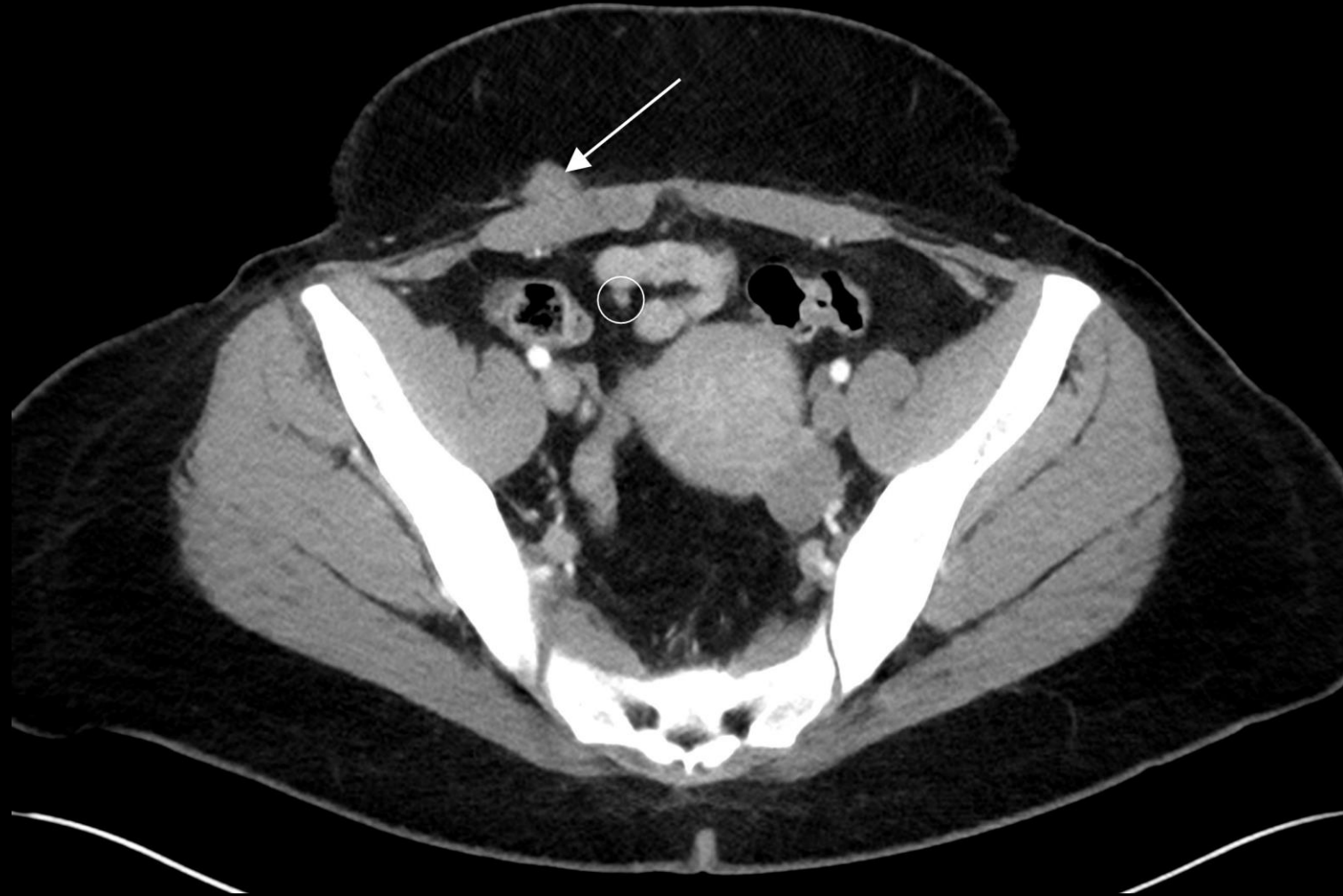
CT Abdomen and Pelvis with IV Contrast

- Unlabeled



CT Abdomen and Pelvis with IV Contrast

- Non-inflamed appendix (white circle)
- Abnormal anterior abdominal wall soft tissue lesion (white arrow)

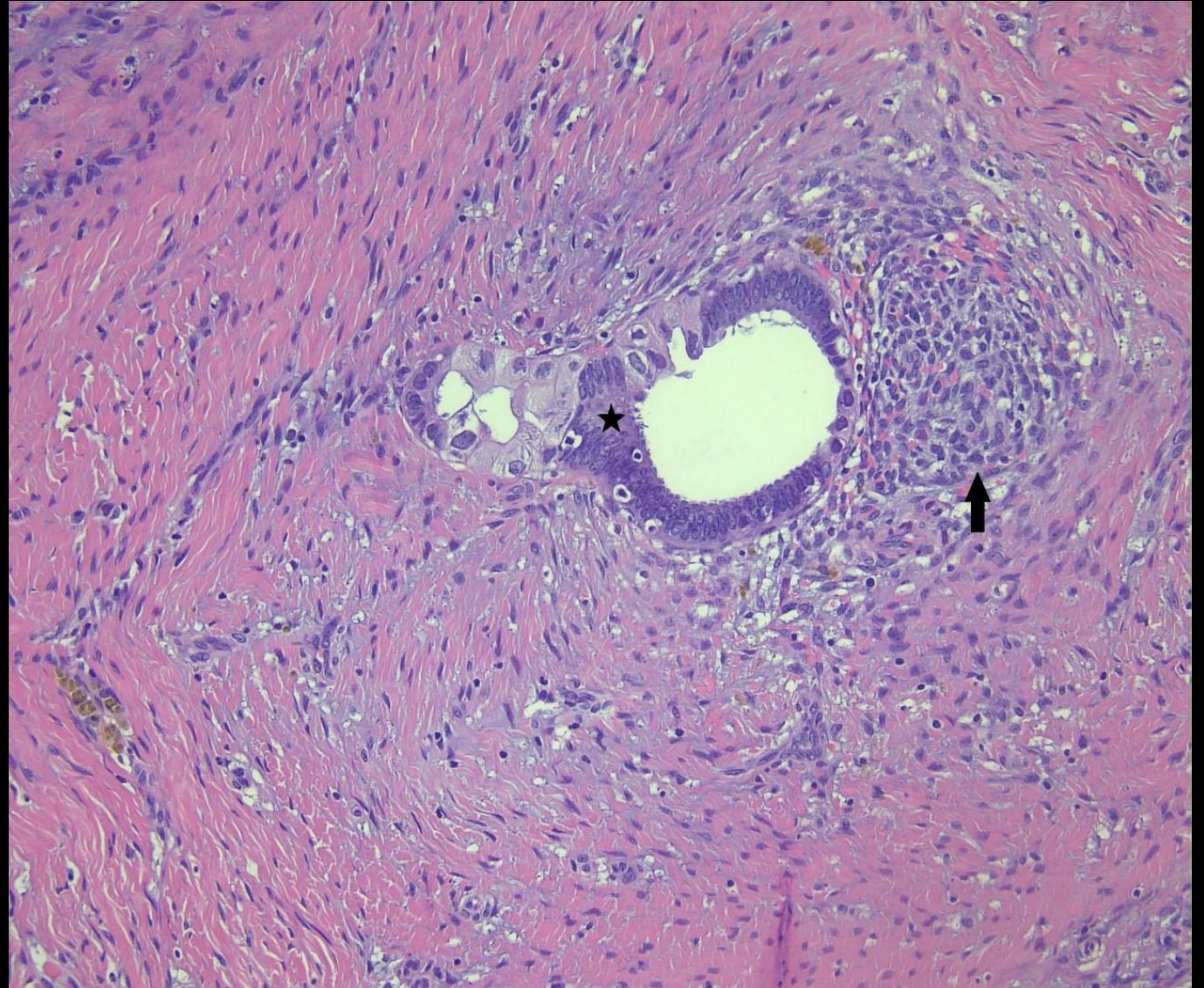


Differential Diagnosis Based on Imaging

- Sarcoma
- Desmoid Tumor
- Metastasis
- Endometrioma
- Post-Operative Changes

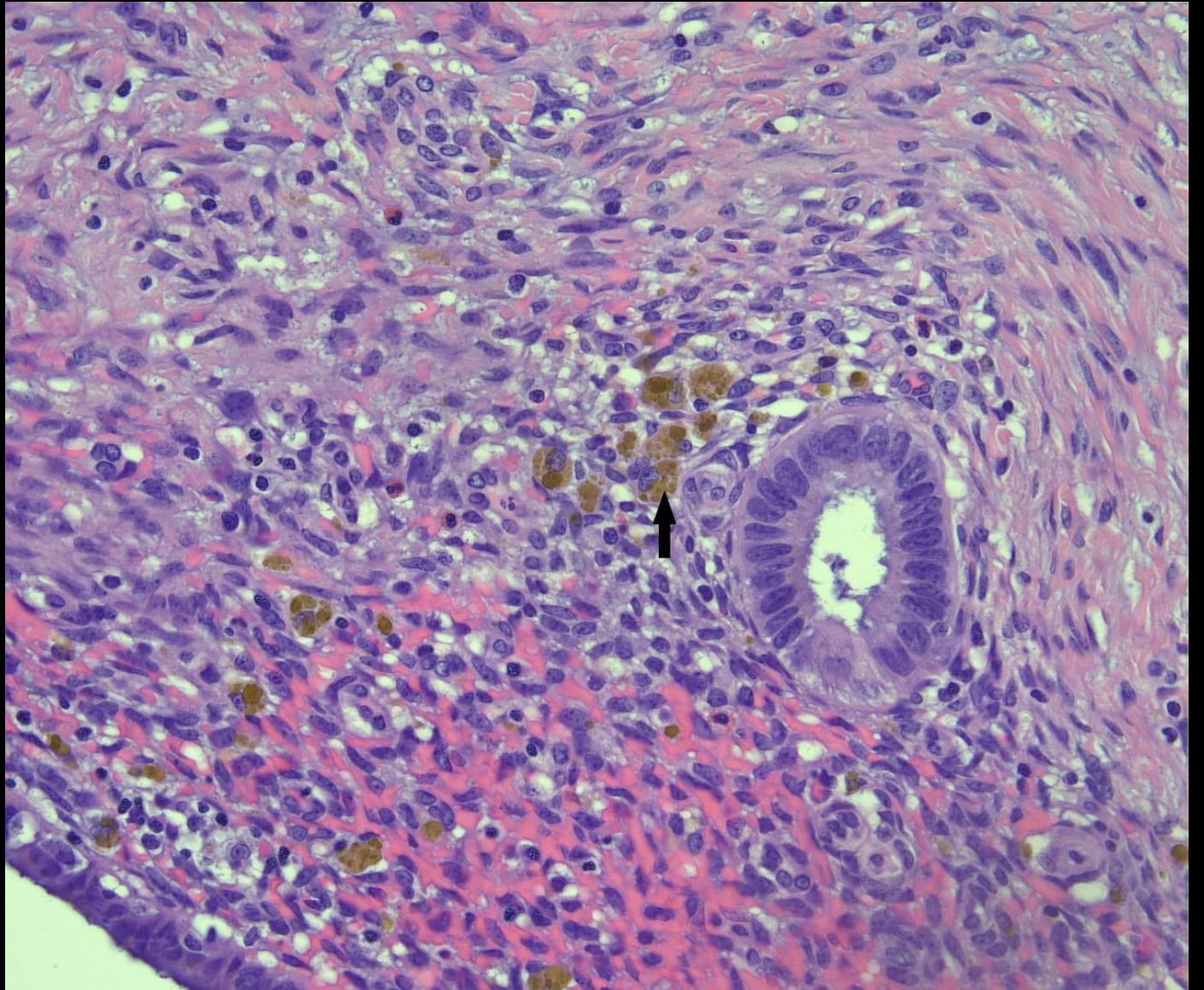
Pathology

- Biopsy was taken of the anterior abdominal wall mass
- 20x photo showing endometrial-type glands (star) and stroma (arrow)



Pathology

- 40x photo showing hemosiderin laden macrophages (arrow); an indicator of prior hemorrhage in endometriosis and endometriotic cysts.



Final Diagnosis

C-Section Scar Endometrioma

Treatment

- Definitive treatment
 - Wide excision with 1cm margins
 - This helps prevent recurrence and possible malignant transformation
- Recurrence reduction
 - Oral contraceptive medication
 - GnRH antagonists/agonists
 - Aromatase inhibitors
 - IUDs

Discussion: Endometriosis/Scar Endometriomas

- Endometriosis
 - chronic, estrogen-dependent inflammatory condition characterized by the presence of endometrial-like tissue outside of the uterus (most likely due to retrograde flow of shed endometrial glands and stroma).
- Scar Endometrioma
 - Endometrial tissue forming a cyst inside scar tissue from previous abdominal surgery (such as c-section)

Discussion: Endometriosis/Scar Endometriomas

- Epidemiology and Risk Factors
 - Endometriosis affects approximately 10% of women of reproductive age and is most commonly diagnosed in women in their 20s and 30s.
- Increased risk in women with:
 - Family history of endometriosis
 - Early onset menarche (<11yrs)
 - Nulliparity
 - History of infertility or miscarriages
 - Autoimmune disorders

Discussion: Endometriosis/Scar Endometriomas

- Endometriosis Signs and Symptoms:
 - Dyspareunia
 - Dysmenorrhea
 - Chronic persistent or cyclical pelvic pain
 - Infertility
- Scar Endometrioma Signs and Symptoms
 - Pain, persistent or cyclical, around surgical scar
 - Lump or mass near surgical scar
 - Skin changes such as erythema or discoloration around scar

Discussion: Endometriosis/Scar Endometriomas

- Diagnosis:
 - Biopsy
 - Excisional if scar endometrioma
 - Laparoscopy with excision of lesions for pelvic/abdominal endometriosis
 - Pathology showing endometrial glands and stroma with hemosiderin laden macrophages

Discussion: Endometriosis/Scar Endometriomas

- Treatment:
 - Medical management:
 - NSAIDs – ibuprofen, naproxen
 - Hormonal therapy – Oral contraceptives, progestins, danazol, GnRH agonists
 - Surgical Management (if medical management fails)
 - Laparoscopic excision of endometrial lesions, cystectomy if endometrioma present
 - If fertility is no longer desired – hysterectomy and possible oophorectomy
 - Fertility Preservation
 - Endometriosis can cause infertility
 - Fertility preservation options include intrauterine insemination or in vitro fertilization

References

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