

AMSER Case of the Month

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41-year-old female presents with suspected right-sided inguinal hernia

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Patient Presentation

HPI: 41-year-old female presents with suspected right-sided inguinal hernia, occasionally tender to palpation. Hernia has not been evaluated before.

PMHx: None

Medications: None













Allergies: None

PSHx: No drug or alcohol use





Physical Exam: Non-reducible right-sided hernia that is tender to palpation

Pertinent Labs

CBC

| | |
|--|---------------------------|
|  WBC | 6.24 |
|  RBC | 4.07 ▼ |
|  HEMOGLOBIN | 12.0 |
|  HEMATOCRIT | 35.4 ▼ |
|  MCV | 87.0 |
|  MCH | 29.5 |
|  MCHC | 33.9 |
|  RDW | 13.3 |
|  PLATELET COUNT | 266 |
|  MPV | 11.1 ▲ |
|  NRBC | 0.0 |
|  DIFFERENTIAL TYPE | AUTOMATED DIFFERENTIAL |

BMP

| | |
|---|-------|
|  GLUCOSE | 108 |
|  BUN | 17 |
|  CREATININE | 0.61 |
|  SODIUM | 139 |
|  POTASSIUM | 4.3 |
|  CHLORIDE | 110 ▲ |
|  CO2 | 18 ▼ |
|  CALCIUM | 8.5 |
|  ANION GAP | 11 |
|  eGFRu | 117 |

What Imaging Should We Order?

ACR Appropriateness Criteria

| Variant 2: Suspected groin hernia such as inguinal or femoral. Initial imaging. | | |
|--|---------------------------------|---------------------------------|
| Procedure | Appropriateness Category | Relative Radiation Level |
| US pelvis | Usually Appropriate | ○ |
| MRI pelvis without and with IV contrast | Usually Appropriate | ○ |
| CT abdomen and pelvis with IV contrast | Usually Appropriate | ☢☢☢☢ |
| CT abdomen and pelvis without IV contrast | Usually Appropriate | ☢☢☢☢ |
| CT pelvis with IV contrast | Usually Appropriate | ☢☢☢☢ |
| CT pelvis without IV contrast | Usually Appropriate | ☢☢☢☢ |
| MRI pelvis without IV contrast | May Be Appropriate | ○ |
| Radiography abdomen and pelvis | Usually Not Appropriate | ☢☢ |
| Fluoroscopy small bowel follow-through | Usually Not Appropriate | ☢☢☢☢ |
| CT abdomen and pelvis without and with IV contrast | Usually Not Appropriate | ☢☢☢☢☢☢ |
| CT pelvis without and with IV contrast | Usually Not Appropriate | ☢☢☢☢☢☢ |

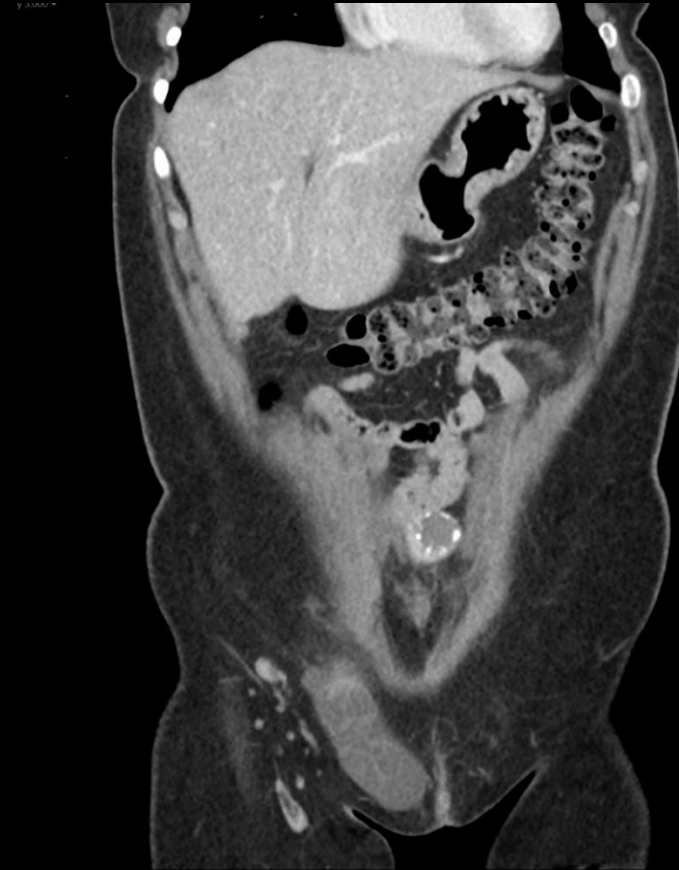


This imaging modality was ordered by the physician

Findings (unlabeled)

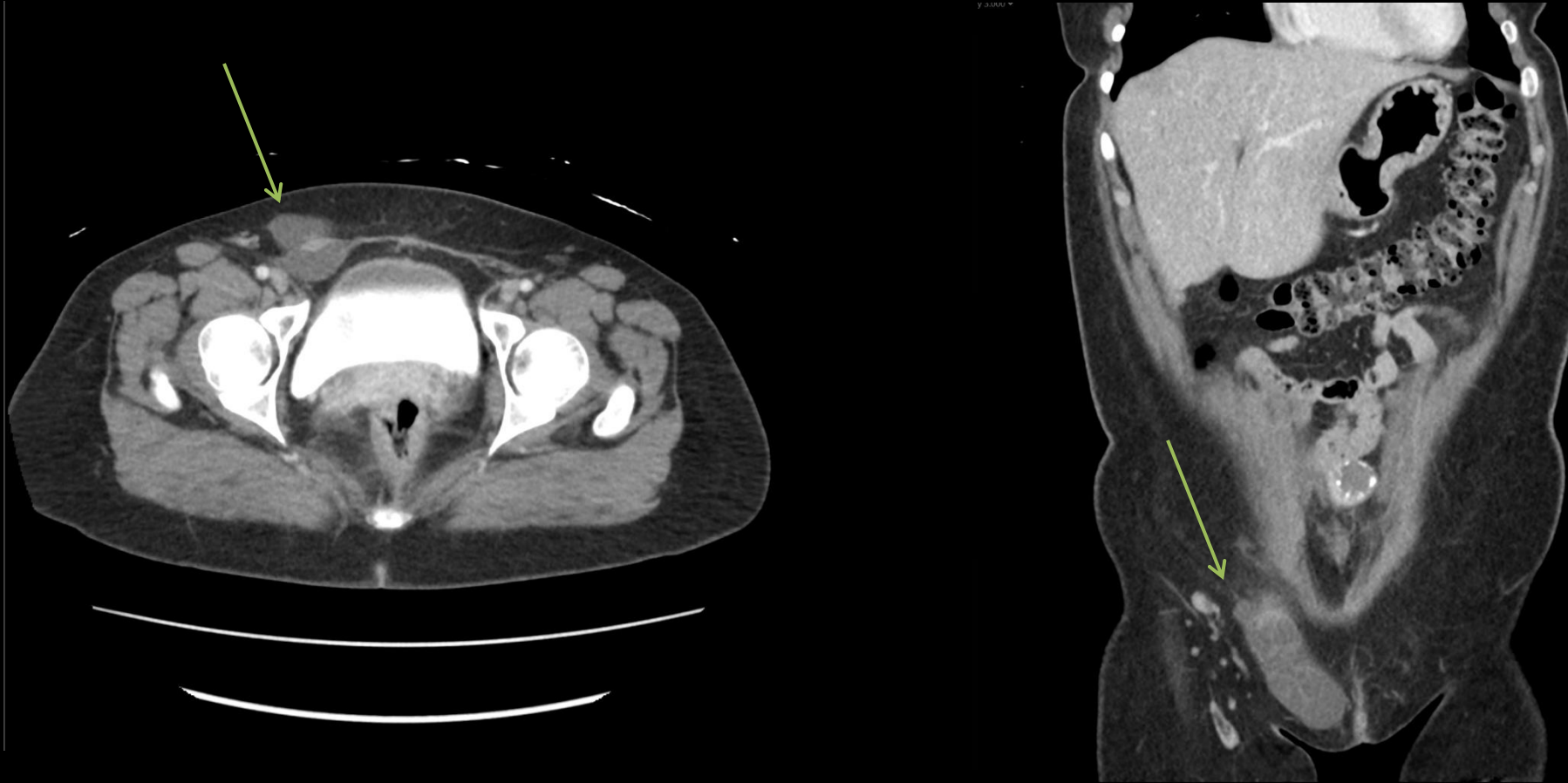


Axial IV contrast enhanced CT image of the Pelvis



Coronal IV contrast enhanced CT image of the Abdomen and Pelvis

Findings: (labeled)



Homogenous cyst-like structure measuring 4.0 x 2.1 x 8.5 cm is seen extending through the inguinal ring, anterior to the right round ligament of the uterus, and into the inguinal canal towards the right labia majora

Final Dx:

Hydrocele in the Canal of Nuck

Case Discussion

Background

- Female hydroceles are rare congenital anomalies indicated by the presence of a fluid collection in the Canal of Nuck.
- During female fetal development, the Canal of Nuck functions as a pathway for the round ligament to pass through inguinal ligament and attach to the labia majora.
- Analogous to processus vaginalis in males, the Canal of Nuck typically regresses on its own during female fetal development.
- Failure to close the processus vaginalis allows for formation of hydroceles or inguinal hernias.

Incidence

- Female hydroceles are exceedingly rare, with only 400 cases reported in the literature worldwide.
- While typically discovered in children, more cases are being reported they are commonly mistaken for inguinal hernias.

Case Discussion

Clinical Features

- Patients may present with a unilateral, palpable mass in the groin region.
- Female hydroceles are not typically associated with erythema, tenderness, or pain
- CT imaging shows a fluid filled cyst along the path of the inguinal canal to the labia majora.
- If calcifications are seen, that should steer radiologists away from the diagnosis.

Treatment

- Treatment is typically managed conservatively, either by observation or surgical aspiration.
- Aspiration of fluid can provide immediate relief of symptoms.

References:

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