

# Incarcerated Left Inguinal Hernia

Allison Sedivy

## Patient Review

### History

- No pertinent medical or family history
- No trauma

### Symptoms

- Sudden onset of left-sided testicular pain for 6 hours
- Swelling of the scrotal sac (painful bulge)

### Risk Factors

- 43 years of age
- Male

## Diagnostic Procedures

### Lab Findings

- Increased potassium, glucose, and white blood count

### US #1

- Large inguinal hernia containing loops of bowel within the scrotal sac

### CT

- Large left inguinal hernia containing numerous loops of small bowel is present causing a small bowel obstruction
- Small right inguinal hernia containing a mild amount of mesenteric fat
- Axial CT imaging is the best imaging modality for evaluation and differentiation of an inguinal hernia.

### US #2 (12 days after left inguinal hernia repair)

- Small right hydrocele
- Right varicocele
- Right inguinal hernia

US #1 of bowel within the scrotum.



## Pathogenesis

- A protrusion of soft tissue through a weak area or tear in the lower abdomen at the opening of the inguinal canal.
- When pressure in the abdominal cavity increases along with a weak spot in the abdominal wall, abdominal contents such as bowel and fat are forced through the weak spot resulting in a painless or painful bulge on either side of the pubic bone.
- Idiopathic, congenital, or acquired
  - Congenital cases usually occur in infants or young children due to a congenital defect in the processus vaginalis.
  - Acquired cases usually occur in adults due to their increasing age and weakening muscles.
- Some patients have a small-mild inguinal hernia most of their life while some have a sudden onset.

### Two types:

- Direct
  - Hernia protrudes anteromedial and inferior to the course of the inferior epigastric vessels
  - Generally acquired
- Indirect
  - Hernia protrudes posterolateral and superior to the course of the inferior epigastric vessels.

### Complications

- Pressure on surrounding tissues
  - Causes pain and swelling
- Incarceration
  - Trapped loops of bowel causing obstruction
- Strangulation
  - Blood flow within the entrapped bowel is compromised

## Treatments

- Wait and watch approach
- Supportive truss
- Manual pressure applied to the bulging area
- Surgery
  - Open surgery, laparoscopy, mesh repair, or sutured repair

### Patient Treatment

- Surgery #1
  - Open surgical repair of the left inguinal hernia with a keyhole mesh placement
    - Bowel was confirmed to be incarcerated during the repair
- Surgery #2 (12 days after left inguinal hernia repair)
  - Open surgical repair of the right inguinal hernia with a keyhole mesh placement
    - Large amount of omentum was excised as it could not be easily reduced.

## Expected Outcome

- Mild cases
  - manageable through simple treatment such as a truss; non-lethal
- Severe cases
  - Incarceration, strangulation, persistent severe infection, ischemia, and necrosis may occur and lead to life-threatening complications if untreated.

### Patient Outcome

- Patient recovered as normal after both procedures and was discharged. Twelve days after the patient's initial surgical repair of the left inguinal hernia, he presented again to the emergency department with right sided testicular pain and swelling which is consistent with a right inguinal hernia. After the second ultrasound and comparison with his previous CT from his initial visit, a right inguinal hernia was confirmed requiring the second surgical repair of the right inguinal hernia. The patient's left inguinal hernia was complicated with incarcerated bowel while the right inguinal hernia did not have any complications. With rapid medical intervention the patient survived and recovered well to resume normal daily activities.

## References

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CT image showing bowel throughout the scrotum (arrows).



US #2 of a varicocele of the right testicle measuring 0.4 cm. (left). Ultrasound image of the right testicle presenting with a hydrocele (arrow) and bowel lateral to the right testicle (right).