Amyand Appendicitis Anomaly: A Case Report

Rania Mansour, M.B.B.S, M.P.H.[1], Valerie Armstrong, M.D.[1], Jacob Jacobs, M.D.[3]

[1] Mayo clinic Arizona, Department of General Surgery, [2] St. Joseph's Hospital Medical Center, Department of Surgery and Trauma

ABSTRACT

BACKGROUND

Inguinal hernias are one of the most common surgical diagnoses for men in the United States. Most cases present as reducible hernias that can be managed on an elective basis, some present as strangulated or incarcerated bowel-containing hernias requiring urgent or emergent surgery. Here we present a rare case of acute appendicitis within an inguinal hernia.

CASE PRESENTATION

A male in his 6th decade of life presented with symptoms of right lower quadrant abdominal pain and was found to have a hernia containing an acutely inflamed appendix consistent with acute appendicitis. He was given antibiotics and taken to the OR for reduction of his hernia and appendectomy. He was taken at a later date for definitive hernia repair with mesh.

DISCUSSION

Management of this patient's Amyand hernia with concurrent appendicitis required a careful balance between addressing the acute appendicitis and mitigating the risks associated with hernia repair in a potentially contaminated surgical field. The decision to perform a laparoscopic appendectomy followed by a pexy of the hernia sac without mesh, followed by elective laparoscopic hernia repair with mesh placement at a later date underscores the importance of individualized treatment plans in complex cases.

CONCLUSION

This case highlights a rare case of management of appendicitis within an inguinal hernia.

CASE PRESENTATION

PATIENT PRSENTATION

65-year-old male

CC: sudden abdomen/groin pain after feeling 'pop' in right groin following coughing fit

Exam:

- VSS
- RLQ tenderness, Positive McBurney's
- Irreducible, warm right groin bulge

Labs: WBC 16

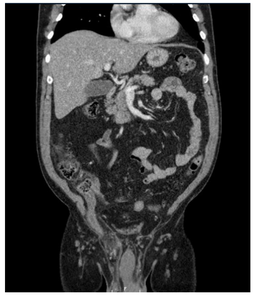
PMHx: HTN (on atenolol), Celecoxib

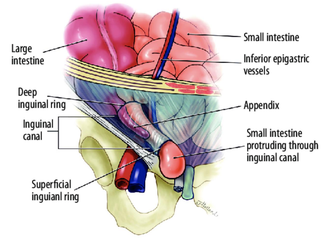
SHx: + Tobacco, + Methamphetamine

CT FINDINGS

"Inflamed appendix within an inguinal hernia"





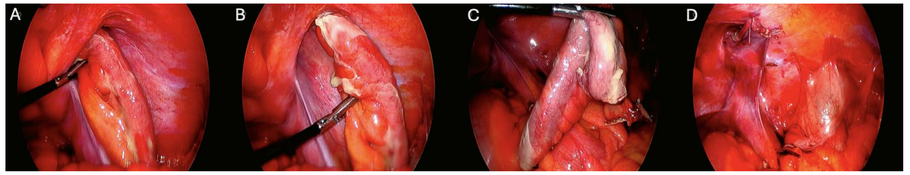


An Amyand's hernia:
The appendix is shown within an indirect inguinal hernia, passing through both the deep and superficial inguinal rings and passing lateral to the inferior epigastric vessels.

STEP 1: LAPAROSCOPIC APPENDECTOMY

A clearly inflamed, injected and edematous appendix was identified, with the tip found to be within a right inguinal hernia. **Appendix was reduced**, and **appendectomy was performed** using a stapling device.

The hernia sac was pulled out of the inguinal canal/hernia space and into the abdominal cavity. Using a 2-0 Vicryl suture, the **hernia sac was pexy'd to the pelvic sidewall.**



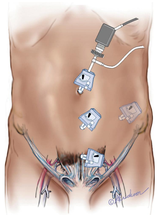
Amyand Appendicitis | Appendix removed from right inguinal hernia | Appendectomy | Hernia pexy

STEP 2: LAPAROSCOPIC TOTAL EXTRAPERITONEAL RIGHT HERNIA REPAIR W/ MESH

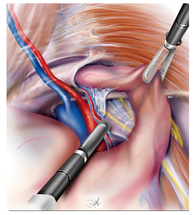
1 month later

Recurrent hernia sac was identified in the indirect inguinal space. Sac was dissected off cord structures and retracted cephalad. A **3x6 in propylene mesh** was tacked along Cooper's ligament medially and inferiorly, and covered the indirect, direct, and femoral spaces.

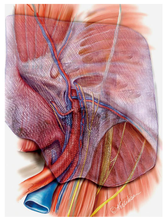
The previous pexy'd sac remained in place.



Trocar placement



Reduction of indirect sac



Mesh placement

DISCUSSION

The management of Amyand hernia with acute appendicitis presents unique surgical challenges, requiring a balance between immediate infection control and long-term hernia repair outcomes. While standard inguinal hernia repair often involves mesh placement, the presence of an inflamed appendix within the hernia sac complicates decision-making due to the risk of mesh contamination and infection.

In this case, a staged approach was used:

- Laparoscopic Appendectomy: The inflamed appendix was removed first to prevent perforation and peritoneal contamination.
- Hernia Sac Pexy: The hernia sac was temporarily tacked to the peritoneum without mesh to reduce the risk of infection.
- Delayed Hernia Repair with Mesh: Once the risk of infection subsided, laparoscopic totally extraperitoneal hernia repair with mesh was performed electively.

This strategy is supported by literature indicating that **immediate mesh placement in contaminated fields increases the risk of infection and recurrence**. Studies have shown that delaying mesh repair minimizes these risks while ensuring long-term hernia stability.

Ultimately, this **individualized treatment approach** optimized infection control, reduced recurrence risk, and ensured a favorable patient outcome, highlighting the importance of tailoring surgical strategies to complex cases.

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