

CASE REPORT

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AMYAND'S HERNIA WITH ACUTE APPENDICITIS IN AN ELDERLY DIABETIC: A RARE CASE REPORT**Suleman Shah¹, Ameer Afzal Khan², Rahman Syed³, Anfal Khan⁴, Fazal Syed⁵**¹ Fatima College of Health Sciences, Al Ain, UAE^{2,4} Saidu Medical College, Swat, Pakistan.³ Swat Medical College, Swat, Pakistan.⁵ Northwest School of Medicine, Peshawar, Pakistan.**ABSTRACT**

Amyand's hernia, defined as the presence of the appendix within an inguinal hernia sac, is a rare entity, particularly when complicated by acute appendicitis. We report the case of a 68-year-old diabetic male presenting with a painful, irreducible right inguinal swelling accompanied by fever and chills. Preoperative ultrasound suggested an incarcerated hernia, and intraoperative findings confirmed an inflamed vermiform appendix within the hernia sac. An appendectomy followed by Bassini's tissue repair was performed, avoiding mesh to minimize infection risk in the context of diabetes. The patient recovered uneventfully following perioperative glycemic optimization and broad-spectrum antibiotic therapy. This case underscores the importance of considering Amyand's hernia in elderly patients with complicated inguinal hernias and highlights tailored surgical management based on patient comorbidities and intraoperative findings.

Keywords: Amyand's Hernia, Acute Appendicitis, Diabetic

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INTRODUCTION

Hernias are among the most common surgical conditions encountered worldwide, yet certain variations, such as Amyand's hernia, remain exceptionally rare and present a challenge diagnostically. Amyand's hernia, defined as the presence of the appendix within an inguinal hernia sac, is one such anomaly, accounting for less than 1% of all inguinal hernias⁽¹⁾. First described by Claudius Amyand in 1735, this unusual anomaly is often diagnosed intra-operatively, as its clinical presentation typically mimics that of a routinely seen incarcerated or strangulated hernia⁽²⁻⁵⁾.

The rarity of Amyand's hernia, coupled with its variable presentations (four types) ranging from an

asymptomatic appendix to acute appendicitis or even perforation within the sac, makes timely recognition crucial for appropriate surgical management⁽⁶⁾. Despite advancements in imaging and hernia repair techniques, reports from resource-limited settings remain scarce, particularly from regions such as District Swat in Northern Pakistan. Documenting such cases not only adds to the global understanding of Amyand's hernia but also highlights diagnostic and therapeutic challenges faced in rural surgical practices.

Here, we present a rare case of Amyand's hernia managed at a tertiary care hospital, SGTH Swat, Pakistan. Through this report, we aim to emphasize the

importance of clinical vigilance, discuss the surgical approach, and review the current literature on this uncommon condition.

Case Presentation

A 68-year-old man from Barikot, District Swat, came to the Saidu Group of Teaching Hospital's (SGTH) urology department complaining of a painful swelling in his right groin that had been there for a week. He reported having a fever and chills, and the pain had gotten worse over time, necessitating immediate medical attention.

Examining the patient revealed a tender, irreducible swelling that extended into the right scrotum and was clinically diagnosed as a Right inguinal hernia through ultrasound (an inguinal hernia with incarceration). Initial blood tests revealed random blood glucose levels that were noticeably higher (359 mg/dl). The platelet count ($136 \times 10^9/L$), total leukocyte count ($8.46 \times 10^9/L$), and hemoglobin Hb (14.3 g/dl) were all within normal ranges. HIV, hepatitis B, and hepatitis C viral serology results were negative. After being admitted on May 9, 2025, the patient began receiving insulin therapy, and his glycemic level was stabilized before surgery.

Table 1: Medication given in the hospital

Medication	Dose	Route	Frequency
Inj Q-Bact	2 g	IV	BD (twice daily)
Inf Flagyl	100 ml	IV	TDS (three times daily)
Inf Provas	100 ml	IV	BD (twice daily)
Inj Indoazole	40 mg	IV	OD (once daily)

Table 2: The blood test results of the patient at the time of operation

Tests	Level
Hb	14.3 mg/dl
RBS	257mg/dl
TLC	8.46 mg/dl
PLT	$136 (10^3)mg/dl$
HIV	(-)ive
Hbs	(-)ive
HCV	(-)ive

The following day, a right inguinal incision was made while under spinal anesthesia as per standard method. During surgery, we found a loop of bowel (gut loop) within a 3 cm right inguinal hernia sac that extended into the scrotum, along with an inflamed vermiform appendix. These findings were consistent with an Amyand's hernia. The diagnosis of Amyand's hernia was made intraoperatively. Hernioplasty was done after a routine appendectomy. Use of Mesh was not preferred by surgeons to decrease the risk of infection postoperatively; instead, Bassini suture hernia repair was done. The patient was given intravenous fluids, broad-spectrum antibiotics (metronidazole and ceftriaxone), and supportive drugs after the surgical wound was closed in layers. The patient had a successful and trouble-free recovery after surgery. Insulin therapy successfully controlled his blood glucose levels.

Table 3: The Therapy prescribed at home

Medication	Dose / Duration	Route / Form	Frequency
Tab Cycin	500 mg × 10 days	Oral tablet	BID (twice daily)
Tab Tonaflax P	5 days	Oral tablet	BID (twice daily)
Tab Polymalt	1 month	Oral tablet	OD (once daily)
Syrup Citralka	2 + 2 + 2 tsp	Oral syrup	TDS (three times daily)
Cap Indazole	40 mg	Oral capsule	OD (once daily)



Figure 1: Image showing the Patient being operated on

DISCUSSION AND LITERATURE REVIEW

Amyand's hernia is a rare clinical entity in which the vermiform appendix is found within an inguinal hernia sac, accounting for approximately 0.4–1% of all inguinal hernias and only 0.1% when complicated by acute appendicitis ⁽¹⁾. Diagnosing Amyand's hernia preoperatively is challenging because its clinical features often mimic those of a standard incarcerated or strangulated inguinal hernia. Patients typically present with localized pain, swelling, and sometimes fever, making it indistinguishable from other complicated hernias. Imaging modalities, such as ultrasonography and computed tomography, can occasionally detect the appendix within the hernia sac; however, most cases are still recognized intraoperatively ^(3,4). In our patient, preoperative ultrasound helped raise suspicion, allowing better surgical planning, a step that is rarely documented in similar reports.

The management of Amyand's hernia depends on the intraoperative findings. Losanoff and Basson proposed a classification system to guide treatment decisions: Type 1 involves a normal appendix (hernia repair alone), Type 2 involves acute appendicitis without abdominal sepsis (appendectomy with hernia repair without mesh), Type 3 involves appendicitis with peritoneal or abdominal wall sepsis (appendectomy with laparotomy and non-mesh repair), and Type 4 involves appendicitis associated with other intra-abdominal pathology ⁽⁵⁾. Our patient fit Type 2, and we performed an appendectomy followed by tissue-based hernioplasty, avoiding the use of mesh due to potential contamination.

The role of mesh repair in Amyand's hernia remains debated. Some studies report safe use of mesh even in cases with mild inflammation when perioperative antibiotics are administered ^(6,3). However, in elderly patients with comorbidities such as diabetes, the risk of wound infection is higher, and a non-mesh repair is often

preferred ⁽⁷⁾. Our approach was consistent with these recommendations and resulted in a smooth, complication-free recovery. However, some studies also suggest that mesh can be used safely if perioperative antibiotics are administered, and inflammation is minimal ⁽⁸⁾. But elderly and diabetic patients, as our patient has an increased risk of infection, a sutured repair was preferred.

Case series and reviews from different parts of the world highlight similar findings. Sharma et al. ⁽³⁾ reported on 18 consecutive cases, noting that most were diagnosed intraoperatively and treated with appendectomy and hernia repair with favorable outcomes, especially those with an inflamed appendix. A retrospective analysis of 6 cases in a study revealed that two patients received mesh repair and two did not, and one of them got a wound infection, which emphasizes the importance of individualized treatment planning ⁽⁹⁾.

In elderly patients, especially those with poorly controlled diabetes, perioperative optimization is crucial. Hyperglycemia increases the risk of postoperative infections and impaired healing ⁽¹⁰⁾. In our case, stabilizing the patient's glucose levels before surgery likely contributed to his uneventful recovery.

This report adds to the limited literature on Amyand's hernia from resource-limited regions such as northern Pakistan. It underscores the need for clinical vigilance, the value of preoperative imaging when available, and the importance of tailoring surgical management to intraoperative findings and patient comorbidities. Continued reporting of such cases will enhance collective understanding and help refine guidelines for this rare but clinically significant condition.

CONCLUSION

Amyand's hernia is a rare surgical finding that often mimics incarcerated inguinal hernia and is usually diagnosed intraoperatively. Prompt recognition, careful intraoperative assessment, and tailoring the surgical approach to the patient's comorbidities—such as

avoiding mesh repair in high-risk cases like diabetes—can lead to favorable outcomes. This case highlights the value of clinical vigilance, preoperative optimization, and individualized management in ensuring complication-free recovery in resource-limited settings.

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