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*Case Report*

# Complicated Strangulated Femoral Hernia: A Case Report

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**Abstract**

Femoral hernias are relatively uncommon but carry a high risk of serious complications, particularly intestinal strangulation, which can be life-threatening if not promptly addressed. This report presents the case of an 80-year-old female who developed a strangulated right femoral hernia, manifested by abdominal pain, nausea, vomiting and an irreducible inguinal mass. Computed Tomography (CT) imaging revealed signs of intestinal obstruction. Emergency surgical exploration confirmed the presence of necrotic bowel, necessitating intestinal resection followed by primary anastomosis. The patient had an uneventful postoperative recovery and was discharged in stable condition. This case highlights the critical importance of early recognition and urgent surgical management in preventing severe complications associated with strangulated femoral hernias.

**Keywords:** Femoral Hernia; Strangulation; Intestinal Necrosis; Emergency Surgery; Early Diagnosis

## Introduction

Femoral hernias represent between 2% and 5% of all abdominal hernias and are more common in women, particularly in the elderly population, due to anatomical factors. Although their diagnosis is complex due to often subtle symptoms, their ability to strangulate the intestine and cause necrosis highlights the need for early surgical intervention. Complications include intestinal obstruction, necrosis, peritonitis and sepsis, which increase mortality if not diagnosed and treated promptly and effectively. This article analyzes a clinical case that shows how delay in treating a femoral hernia can lead to serious complications, highlights the importance of early diagnosis and outlines the surgical approach used.

## Ethical Statement

The project did not meet the definition of human subject research under the purview of the IRB according to federal regulations and therefore, was exempt.

## Case Report

*Patient Information*

Age/gender: 80 year old female

Education / occupation: Primary education; worked in agriculture

Past surgical history: None of relevance

Presenting complaints: Generalized abdominal pain, nausea, vomiting (4 episodes) and a painful groin mass for 3 days.

*Laboratory Tests*
Leukocytosis: 15,070/μL
Neutrophilia
Elevated C-reactive protein (CRP)
Amylase: 85.44 U/L
Other parameters within normal limits.

*Imaging Study*
CT scan of the abdomen and pelvis showed dilation of small bowel loops in a "stack of coins" pattern, suggesting obstruction by an incarcerated femoral hernia (Fig. 1-4).

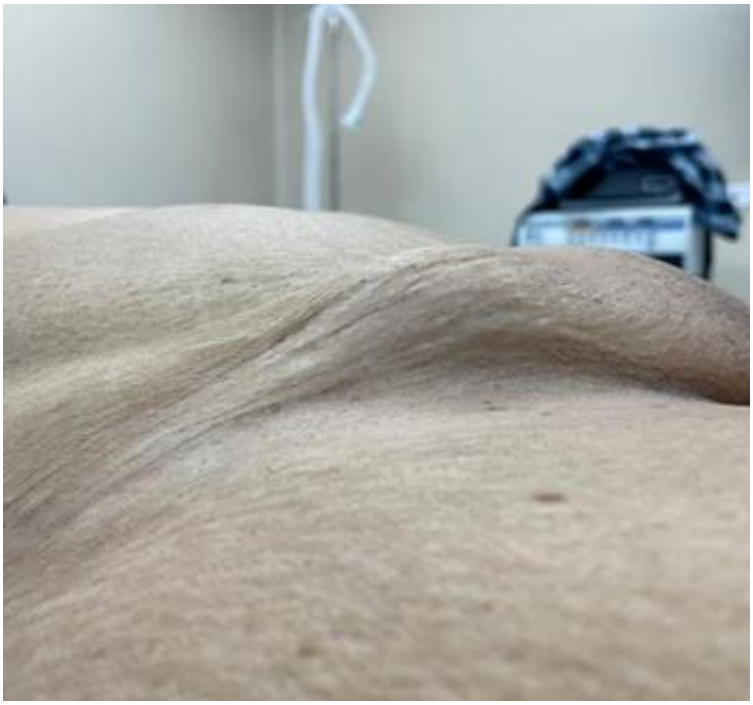

**Figure 1:** Obtained from the authors.

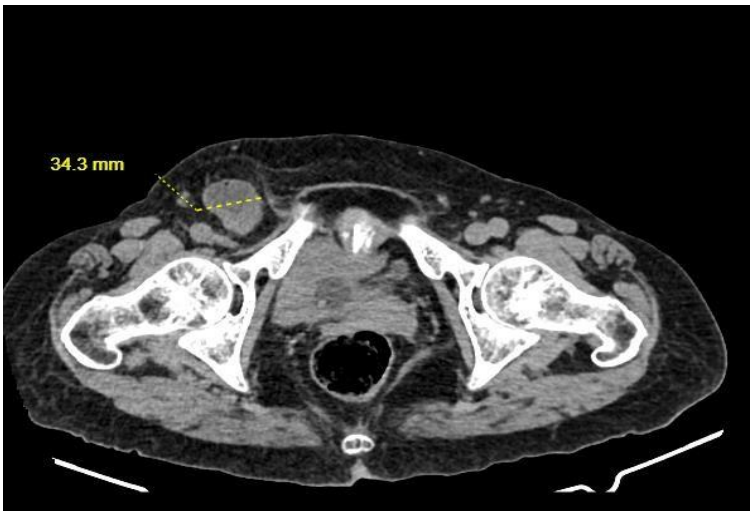


**Figure 2:** Simple abdominal tomography axial reconstruction: hi presence of hernial defect level of the right crural region measuring approximately 34 mm, content is appreciated intestinal associated with striation of the adjacent fat.

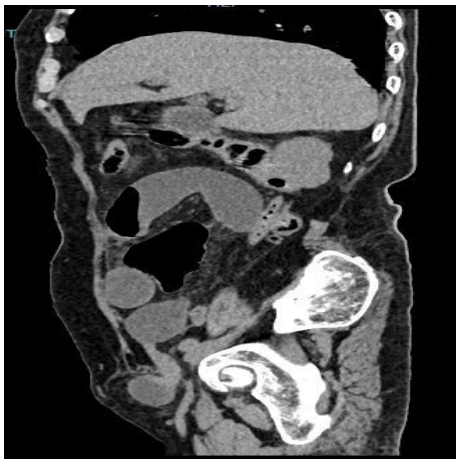

**Figure 3:** Simple abdominal tomography sagittal reconstruction: at the right femoral level it is observed hernial sac, site of transition and alteration in the intensity of the surrounding fat.

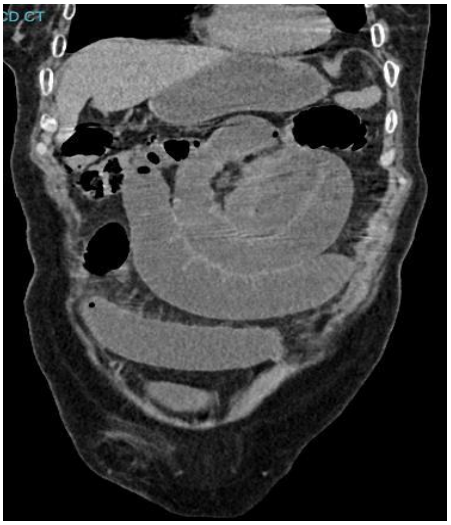

**Figure 4:** Simple abdominal CT scan with coronal reconstruction: dilation of the bowel loops slim.

**Surgical Management**

The patient underwent emergency surgery due to abdominal obstruction. A transverse incision was made in the right femoral region to identify its contents (an ischemic and necrotic segment of small intestine) and subsequently a 4 cm infraumbilical mini-laparotomy was performed. The herniated contents were reduced abdominally, approximately 10 cm of compromised ileum was incised to ensure intestinal viability and a primary side-to-side anastomosis was performed using double-layer 3/0 polypropylene. The parietal peritoneum is closed at the herniated site, a mixed drainage is placed in the cavity and the abdominal wall is closed. The femoral hernia is treated with a Marlex mesh, similar to a Rutkow plug and a Penrose drain is placed in the subcutaneous tissue to prevent surgical site infection. Oral intake is initiated 24 hours later and the patient is discharged 48 hours later. Postoperative follow-up is performed 8 days later, confirming satisfactory progress and even no evidence of surgical site infection.

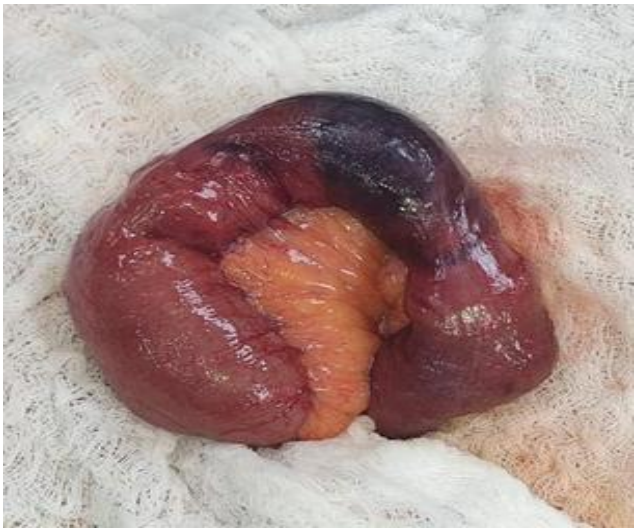

**Figure 5:** Removed part after the surgery.

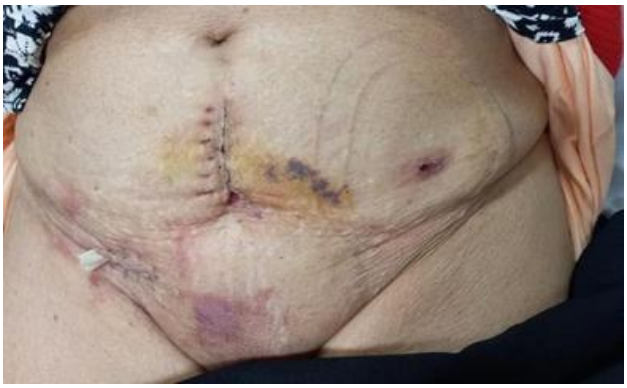

**Figure 6:** Image post-surgery.

*Surgical Findings*

Dilated right crural orifice (3 cm).
Hernial sac approximately 8 cm in diameter containing a segment of incarcerated and necrotic small intestine.
Inflammatory fluid in the abdominal cavity (50 ml).
Moderately dilated proximal small intestine.
Gastric contents aspirated through nasogastric tube (300 ml) lumpy with foul odor.

**Results and Discussion**

This case underscores the necessity of early surgical intervention in strangulated femoral hernias. Once the blood supply to the entrapped intestinal segment is compromised for more than 6-8 hours, irreversible necrosis can ensue, necessitating prompt resection of the nonviable bowel followed by primary anastomosis when feasible. Delay in surgical management increases the risks of perforation, peritonitis, sepsis and death. Because of the tight, rigid anatomy of the femoral canal and the relatively high incidence of vascular disease and comorbidities in older patients-especially women-strangulated femoral hernias often present as surgical emergencies. A high index of suspicion for irreducible inguino femoral masses, rapid diagnostic evaluation and implementation of urgent operative protocols are essential to improving outcomes and minimizing morbidity in this vulnerable population.

Early diagnosis of femoral hernias is crucial to prevent serious complications such as intestinal necrosis. The clinical presentation in older patients is often more subtle, which can lead to delayed treatment and, consequently, increased associated morbidity and mortality.

## Conclusion

Timely surgical management of incarcerated femoral hernias is critical to preventing serious complications, including intestinal ischemia, necrosis and sepsis. Early intervention particularly when it involves prompt resection of necrotic bowel and primary anastomosis significantly improves patient outcomes and reduces postoperative morbidity. This case underscores the importance of maintaining a high index of clinical suspicion for irreducible inguino-femoral masses, particularly in elderly women, who are at increased risk due to anatomical and vascular factors. The implementation of urgent and standardized surgical care protocols is essential to ensure rapid diagnosis and effective treatment, thereby minimizing associated risks and improving survival.

## Conflict of Interest

The authors declare no conflicts of interest that may have influenced the research, authorship or publication of the article.

## Informed Consent Statement

Informed consent was taken from the patient.

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## Acknowledgment

None

## Authors' Contributions

All authors have contributed equally to this work and have reviewed and approved the final manuscript for publication.

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