Lakeland Regional Health
GRADUATE MEDICAL EDUCATION

APPENDIX INCOGNITO: DECODING THE ENIGMA OF DE GARENGEOT HERNIA

Amanda Rigdon, MD, Harrison Gorran, MD, Kayla Hernandez, MD, Ji Fan, MD

Dr. Kiran C. Patel College of Osteopathic Medicine
NOVA SOUTHEASTERN UNIVERSITY
NSU Florida

INTRODUCTION

De Garengeot hernia is an exceedingly rare condition where the appendix is found within a femoral hernia sac, first described by French surgeon René-Jacques Croissant de Garengeot in 1731. This unusual presentation poses significant diagnostic and therapeutic challenges for clinicians across surgical specialties. The incidence is estimated to be 0.5 - 5% of femoral hernias, with appendicitis occurring in fewer than 0.1% of these cases, making it an exceptionally rare clinical entity.

The anatomical complexity of this condition involves the appendix migrating through the femoral ring, a narrow passage bordered by the inguinal ligament, pubic bone, femoral vein, and lacunar ligament. The confined space of this anatomical region contributes to the high risk of appendiceal incarceration and subsequent strangulation. Our aim is to highlight the importance of recognizing this rare entity, discuss its clinical implications, and add to the limited body of literature on this topic to improve future patient outcomes.

HEALTHCARE IMPACT

- Delayed diagnosis and treatment, increasing the risk of morbidity and mortality, particularly in elderly patients with multiple comorbidities
- Extended hospital stays and increased healthcare costs associated with complications
- Diagnostic resource utilization, including advanced imaging that may still fail to identify the condition preoperatively
- Educational opportunities for surgical trainees and emergency physicians regarding rare hernia presentations

CASE DESCRIPTION

A 90-year-old woman presented with a one-day history of right groin pain and swelling. Medical history was significant for endometrial cancer, severe aortic stenosis, and chronic atrial fibrillation. Physical examination revealed a tender, non-reducible 6 cm diameter bulge below the right inguinal ligament. Laboratory findings showed leukocytosis WBC 16 x10^3 uL. With these initial findings, a diagnosis of strangulated femoral hernia was made, and emergency surgery was performed.

Intraoperatively, an incarcerated femoral hernia was identified. Upon opening the hernial sac, a gangrenous appendix was discovered. The surgeon performed an appendectomy and reduced the cecum back into the peritoneal cavity. The hernia was repaired using Mac Vay's herniorrhaphy technique.

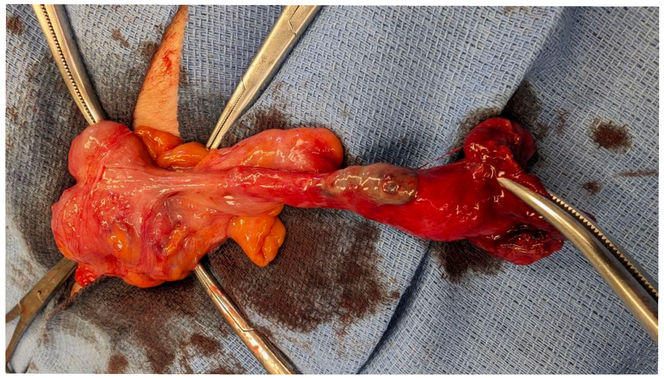


Figure 1: Intraoperative appendix post extraction.

DISCUSSION

There are many challenges associated with diagnosing and managing De Garengeot hernias. The rarity of this condition often leads to its discovery only during surgical exploration, as preoperative diagnosis is extremely difficult. The simultaneous occurrence of acute appendicitis within a femoral hernia complicates the clinical picture and surgical approach.

It is crucial to note that attempting manual reduction in the emergency department can potentially worsen the acute appendicitis. The surgical management remains up for debate. Some surgeons advocate for a combined inguinal and low midline approach, others prefer a single incision technique. In this case, a single inguinal incision proved sufficient for both appendectomy and hernia repair. Surgery carries risks including wound infection, mesh-related complications, appendiceal stump leakage, bowel injury, and femoral vein thrombosis.

Clinically, patients may present with atypical pain patterns or sepsis in severe cases. The confined nature of inflammation can sometimes mask systemic symptoms, further complicating diagnosis.