CASE REPORT

The Hidden Appendicitis: De Garengeot Hernia Case Insight

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Abstract

Aim and background: Providing insight and consideration during an encounter of De Garengeot hernia.

Case description: A 70-year-old gentleman presented with 1 day history of right groin pain. Physical examination revealed a tender reducible right inguinal hernia. The vital signs and blood tests were within normal range. Computed tomography (CT) imaging had shown De Garengeot hernia. The patient proceeded to laparoscopic appendicectomy and mesh repair of the right inguinal hernia. He made an uneventful recovery and returned baseline level of activity within 4 weeks.

Conclusion: Intraoperative findings in addition to the patient's general condition guide the choice of surgical approach to fixing the problem; however, the main consideration is still the surgeon's experience and comfort level.

Clinical significance: Providing insight and consideration of a surgeon during an encounter with De Garengeot hernia.

Keywords: Case report, De Garengeot, Hernia, Laparoscopic.

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Introduction

This is a rare case of De Garengeot hernia diagnosed on CT scanning, while physical examination was only suggestive of routine irreducible hernia. Our aim was to discuss the value of preoperative imaging and laparoscopic approach for appendicectomy and hernia repair.

Case Description

A 70-year-old gentleman presented to the emergency department with a day history of right groin pain with no other associated symptoms. Physical examination revealed he has a hard lump over the right inguinal region. Deep palpation resulted in tenderness and the cough was positive. Multiple attempts to "reduce" the lump with the suspicion of obstructed inguinal hernia were however unsuccessful. Initial differentials we had during the review were incarcerated right inguinal hernia, appendicitis, and femoral neck fracture; hence, the decision was made for imaging. Computed tomography (CT) was done and imaging has suggested the right inguinal lump was a De Garengeot hernia.

All blood investigations were within normal range. Vital signs were within normal range throughout presentation and admission. The patient was brought to theater for surgical management. Initially, it was approached with diagnostic laparoscopy using the Hassan port entry via the umbilical incision.

With the port visualization confirming appendix had not ruptured (Fig. 1A), the case was proceeded with laparoscopic appendicectomy after a successful attempt of dislodging the appendix from the deep inguinal ring (Fig. 1B). Subsequently, right inguinal hernia repair was done via a transabdominal preperitoneal approach. Mesh was used to fix the inguinal hernia due to the absence of pus or intraabdominal infection and good muscle wall integrity.

Figure 1A shows the appendix lodged into the inguinal opening. Figure 1B depicts an inflamed appendix that was successfully removed from the right inguinal hernia site. Figure 1C shows the mesh placed in the peritoneal cavity.

The patient was well postoperatively and discharged home the subsequent day. Follow-up was done in 1 month and 2 months period mark, patient was asymptomatic and able to regain baseline function by the 1-month mark.

Discussion

An appendix protruding through a femoral hernia was first described by a French surgeon René-Jacques Croissant De Garengeot.[1] Systematic review conducted in 2020 has resulted in a total of 391 cases reported; however, only 197 publications were included in the analysis after going through the eligibility and inclusion criteria.[2] Most patients were female in gender and generally present at the age of 70–80 years old. The usual presenting complaints are groin bulge or pain. In this case, our patient adheres to the general features other than being a male. And 98.5% of them had appendicectomy done and most of the patients were opted a groin incision for hernia repair in comparison to the laparoscopic approach that we have reported. De Garengeot hernia is diagnosed preoperatively in 35% of cases and most of these cases are diagnosed with the help of CT imaging, and

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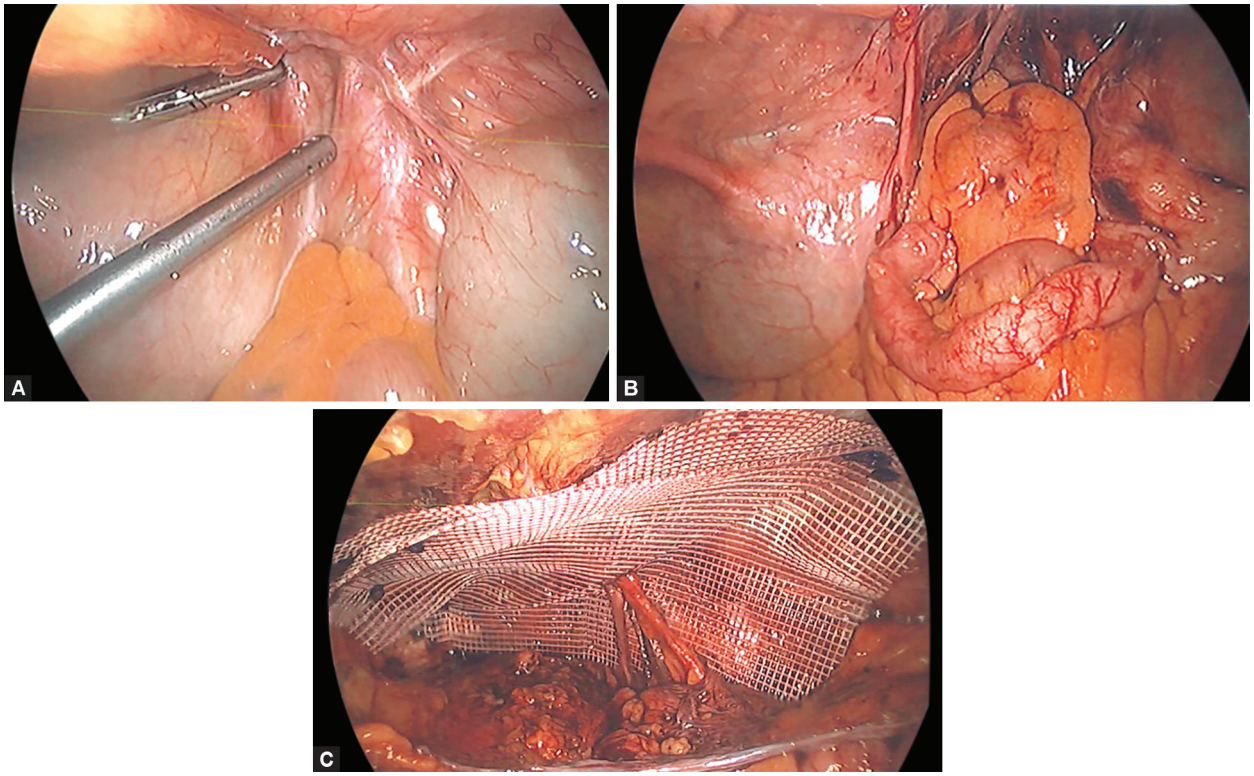

Figs 1A to C: (A) Shows the appendix lodged into the deep inguinal hernia ring; (B) Shows the appearance of the appendix post-removal from the deep inguinal hernia ring; (C) Shows mesh insertion

it is reported that CT has a sensitivity of 61%.[3] Due to the rare nature of the case, there is no standardized approach recommended for De Garengeot hernia and each surgeon is advised to choose a surgical approach that is best suited to own's comfort level.[4] Of all the cases reported and analyzed in the meta-analysis, only a publication has described a laparoscopic approach to appendicectomy and total extraperitoneal repair.[5] The main consideration in this case prior to a surgical approach decision was based on intraoperative findings as there are questions regarding adequate field of vision and evidence of intraabdominal contamination. In the setting where there is evidence of pus or contamination intraoperatively, we would have considered hernia repair without mesh due to a higher chance of mesh infection postoperatively.

Conclusion

De Garengeot hernia, a rare condition where the appendix is found within a femoral hernia, presents a unique diagnostic and surgical challenge. This case underscores the need for individualized surgical approaches and effective patient communication to ensure optimal outcomes. Further reporting and analysis of such rare cases are essential to refine management strategies and improve patient care.

Clinical Significance

1. De Garengeot hernia is a rare form of hernia with an appendix found within femoral hernia.
2. Despite clinical picture and biochemical markers suggesting an obstructed hernia, CT imaging will be able to provide a clearer picture of the exact pathology.
3. The decision on how to repair the hernia will depend on intraoperative findings because in cases where the appendix is perforated, mesh will not be an option due to the higher risk of infected mesh postoperatively.
4. Explaining to patient in simpler and smaller chunk of information to improve their understanding of the pathology and possible complications.

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