

Chapter 164

Garegeot hernia: Is there a challenge in accurate diagnosis?



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ABSTRACT

Introduction: Garegeot's hernia is a condition that is difficult to diagnose. Objective: to reflect on the difficulties in diagnosing Garegeot's hernia. Method: a systematic review was used using databases enshrined in the Health Science literature. Discussion: the diagnosis of Garegeot's Hernia can be an arduous task, even with the use of physical, ultrasound, laboratory, and imaging examinations; this is because these tests may not be able to accurately confirm the diagnosis of this rare condition. Conclusion: Although computed tomography has high sensitivity and specificity, it is possible that, in some circumstances, it does not provide an accurate diagnosis of the referred pathology.

Keywords: Herniorrhaphy, Femoral hernia, Rare hernias, Appendix, Garegeot, Diagnosis.

1 OBJECTIVE

To carry out an integrative literature review on the difficulties in diagnosing Garegeot's hernia and highlight the striking anatomical points for understanding this rare condition.

2 METHOD

Conducted a systematic review based on keywords: herniorrhaphy, femoral hernia, rare hernias, Appendix, Garegeot, Diagnosis; searching for articles reported in the bibliographic databases PubMed, The Cochrane, Librare, EMBASE, LILACS, and BVS. Any type of article that included the keywords in English and Spanish was selected, with publication dates restricted to the last ten years. Subsequently, the authors selected 16 studies with academic rigor that included relevant responses to the topic discussed.

3 INTRODUCTION

Hernias are common surgical conditions in the contemporary world and are statistically responsible for most of the surgeries performed, mainly in elective surgeries and to a lesser extent for urgencies/emergencies.

Abdominal wall hernia consists of the exit of the parietal peritoneum through a natural or acquired orifice, with or without content. Among all hernias of the abdominal wall, there is one called Garengeot, which is the presence of the cecal appendix as part of the hernia content of the femoral hernia. This represents about 0.9% and when associated with acute appendicitis, about 0.1%^{1,3,8}.

Before starting the description of this condition, it is necessary to reinforce some important anatomical concepts. Hesselbach's triangle is a vulnerable area in the inguinal region. In keeping with the original description, its boundaries were described as being the inferior epigastric vessels superolateral, the wall of the rectum medially, and Cooper's ligament inferiorly. The lower portion of the triangle includes the weak area seen in the medial umbilical pit, where direct hernias develop; its limits are the aponeurotic arch superiorly and the iliopubic area inferiorly^{7,9,10}. The femoral orifice lies anteriorly inferiorly to the pectineal (or Cooper) ligament, the femoral vein lies medially, close to the pubis (Gimbernat's ligament), and it is believed that the femoral canal is structurally more rigid and narrower than the inguinal canal. Therefore, the risk of incarceration and consequently strangulation is greater. This makes strangulated hernias more likely in the femoral canal^{15,16}. Femoral hernias are more common in women, with a ratio of 3:1, especially in middle-aged women (from 45 years old) and obese^{2,4,6}. They are also more prevalent on the right side. It is believed that the significant incidence occurs due to the greater length of the inguinal ligament on the right and the tamponade that the sigmoid colon exerts on the left femoral wall^{5,12}. The transverse face is a fibrous tissue or adipose cell that covers the posterior face of Hesselbach's Triangle and the posterior face of the transverse muscle and its aponeurosis, separating it from the preperitoneal tissues and forming the posterior wall of the inguinal canal^{11,13,18}. The transverse surface closely adheres to the iliac surface behind its line of fusion with the crural arch. It is introduced through the internal ring of the inguinal canal, forming a bag that covers the testis and the cord. It continues its expansion in a descending and medial direction and joins the posterior border of the inguinal ligament and forms a kind of concavity that serves as a bed for the proper disposition of the spermatic cord in the inguinal canal. When approaching the femoral canals, the transverse face is closely related to the femoral vein, being separated from it by the crural or femoral septum^{6,9,14}. It finally passes behind the spine of the pubis and the posterior aspect of the abdomen, continuing with the fascia on the opposite side, being reinforced at this point by attaching itself to the linea alba.

Therefore, due to the nonspecific symptoms for the diagnosis of Garengeot's hernia, the clinical evaluation of this condition is considered difficult and the diagnosis is often only made intraoperatively, despite the efficiency of imaging methods.

4 DISCUSSION

Garengoet's hernia was first described by the Parisian surgeon René Jacques Croissant de Garengoet (1668 – 1759) in his “Traité des opérations de chirurgie” (Paris, 1720). We emphasize that Garengoet's hernia is an evaluation of femoral hernia, different from Amyand's hernia, which consists of the protrusion of the vermiform appendix, inflamed or not, in the inguinal hernial sac. The pathophysiology of this type of hernia is controversial, but some studies point to an increase in the cecum region and distension of the appendix towards the hernia sac, or even an anomalous position of the cecum or cecal appendix.

Figure 1 - Computed tomography revealed a suspicious femoral hernia with adjacent inflammation and a tubular structure, presumably the vermiform appendix, in the hernia sac. There were no radiological signs of small bowel obstruction.



Furthermore, in a study published in 2019 in the Brazilian Journal of Surgery, the authors point out that Garengoet's hernia occurs in about 1% of cases of inguinal hernias.

Clinical diagnosis is very difficult because the signs and symptoms are more related to the inguinal hernia, and may be signs and symptoms of entrapment or strangulation. In other cases, the symptomatology is confused with acute appendicitis. In this context, a study published in 2014 in the Journal of Surgical Case Reports highlighted that Garengoet's hernia can result in serious complications, such as acute appendicitis, infection and a bowel perforation.

5 CONCLUSION

Therefore, the diagnosis of Garengoet's hernia can be a challenge, since physical, ultrasound, laboratory and imaging examinations may not confirm the diagnosis. And although CT scans are highly sensitive and specific, they occasionally may not provide an accurate diagnosis. Corroborating the difficulty in diagnosis, another study published in 2018 in the Journal of Surgical Case Reports described a case of

Garengeot hernia in an elderly woman in which the authors highlighted that the condition can be difficult to diagnose due to its rarity and lack of symptoms. specific.

The treatment of Garengeot's hernia is the correction of the hernia, with open, videolaparoscopic, or robotic surgery and when there is an inflamed appendix, the surgery is complemented with an appendectomy.

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