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# De Garengéot Hernia: A Case Study And Literature Review

A Bhalla, V Bhalla

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## Abstract

De Garengéot hernias are extremely rare. We present a case of a 73-year-old gentleman who presented acutely with an incarcerated femoral hernia containing an inflamed appendix. We will also review the associated literature.

## CASE REPORT

A 73-year-old gentleman attended our accident and emergency department with a two day history of abdominal pain associated with a lump in his right groin. Upon questioning he described the pain as being sharp in nature, and radiating to the right iliac fossa. The lump was first noticed the previous day.

He had been suffering from a sore throat which had given him a dry cough for a few days prior to his attendance. The lump had become increasingly tender and the pain was radiating away from the lump and into the right iliac fossa. Occasionally he felt nauseous but had not vomited and had been opening his bowels normally. There were no other associated symptoms.

His past medical history was unremarkable, apart from mild Asthma. His medication on admission included a Beclotide inhaler which he took when required.

On examination he was well, but did complain of right groin pain. This was exacerbated by standing and sitting upright. He was haemodynamically stable, but pyrexial with a temperature of 37.6°C. Both the respiratory and cardiovascular examinations were normal. Abdominal examination revealed severe tenderness, located over a lump in the right groin. The lump was irreducible and tender to touch. The skin overlying it was erythematous and there were bowel sounds within it.

There were no other palpable masses and digital rectal examination was normal. The blood tests noted a mild leukocytosis. Abdominal x-ray was unremarkable. A diagnosis of an incarcerated femoral hernia was made and it was decided that the patient should undergo an operation to

explore the right groin lump with a view to proceed as necessary.

The operative findings noted that the lump contained an intact but inflamed appendix and some abdominal mesentery. The defect through which these structures were communicating was identified as the femoral canal (below the inguinal ligament, medial to the femoral vein). It was decided to remove the appendix via a lower midline incision. The femoral defect was closed with three interrupted 2.0 prolene sutures placed between Cooper's ligament and the Iliopubic tract.

Postoperatively, the patient made a good recovery, aided by three doses of intravenous antibiotics. Histology noted that the specimen sent showed inflammatory changes within the appendix consistent with appendicitis. No evidence of malignancy was noted.

## DISCUSSION

Rene Jacques Croissant de Garengéot, a Parisian surgeon is quoted in the literature as the first to describe the appendix in a femoral hernia sac in 1731. Femoral hernias are thought to be due to a congenital defect and occur much more commonly in women [1]. Because of the narrowness and rigidity of the femoral canal, the rate of incarceration in femoral hernias (14-56%) is significantly higher than in inguinal hernias (6-10%), and it therefore requires early surgical repair [1].

Acute appendicitis within an external hernia accounts for 0.13% of all cases of acute appendicitis [2]. Usually inflammation of the appendix is attributed to intraluminal obstruction or obstruction at the opening with the caecum.

However, it is thought that the cause of acute appendicitis

within femoral hernias is most commonly external compression of the appendix at the neck of the hernia [3, 4]. The narrowness and rigidity of the femoral canal usually prevents intraperitoneal spread of infection, and therefore the patient will not present with symptoms of peritonitis but rather local signs such as erythema, and groin tenderness [5]. In this case no bowel obstruction was noted as only the appendix was involved.

The use of imaging in these cases is controversial. Computed Tomography scanning has been shown to be of benefit in some studies [5], however it is notoriously difficult to diagnose appendicitis within the groin mass itself. Optimal investigation and treatment is still surgical exploration with resection of the appendix and closure of the femoral defect. Often it is impossible to place synthetic mesh plugs within the defect due to the infective and inflammatory processes involved with appendicitis.

### **CONCLUSION**

Although extremely rare, De Garengeot hernia should be included in the differential diagnosis for right groin lump. Diagnosis is often only made at the time of surgery. A variety of techniques are available for successful resection of the appendix and closure of the femoral canal.

### **References**

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**Author Information**

**Ashish Bhalla, MRCS**

Dept. General Surgery, Watford General Hospital

**Vishal Bhalla, B.Sc.**

Dept. General Surgery, Watford General Hospital