A Review of Management of Hernias Containing the Vermiform Appendix

Kevin Bain D.O., Nicholas Morin D.O., Vadim Meytes D.O., Michael Nicoara D.O., Galina Glinik M.D.

NYU Langone Hospital - Brooklyn
Department of General Surgery

CASE PRESENTATION

33 year old male who presented to the ED with right lower quadrant abdominal pain for ten days, and a CT scan demonstrated acute perforated appendicitis (Figure 1).

During diagnostic laparoscopy, the appendix was visualized herniating through a previously undescribed orifice in the lateral right iliac fossa. The orifice was lateral to the femoral triangle, in the so called “triangle of pain,” which is a “V” shaped area bounded by the ilopubic tract, testicular vessels, and peritoneal fold (Figure 2).

Using laparoscopic technique, the appendix was reduced, and an endoscopic stapler was used to remove the appendix. The hernia was primarily repaired, and surgery was completed in the usual manner.

Figure 1: CT scan demonstrating perforated appendicitis, with a fluid collection in the right lower quadrant (blue arrow).

REFERENCES

DISCUSSION

The most commonly described hernia which contains the appendix is the Amyand hernia. This occurs when the appendix becomes trapped within an inguinal hernia sac. The incidence ranges from 0.19% to 1.7%. An Amyand hernia is three times more likely to be seen in childhood due to a persistently patent processus vaginalis.

The next most commonly described is De Garengeot’s hernia. This occurs when the appendix is trapped within a femoral hernia sac, and occurs in approximately 1% of all femoral hernia cases. It differs from the Amyand hernia in that it is more commonly found in females, and follows a bimodal age distribution.

The mechanism by which appendicitis develops within hernias is not fully understood, and is extremely rare with rates ranging from 0.07–0.13%. In these instances, perforation only occurs in approximately 0.1% of the cases. When perforation does occur, there is increased mortality due to the spread of severe peritoneal sepsis.

Therapeutic strategies for these hernias depend on the condition of the appendix. The Losanoff and Basson classification is a management strategy for dealing with Amyand hernias. The Rikki modification adds to this in dealing with incisional hernias. The general principle shared between the two is that for a non-inflamed appendix, the patient should have hernia repair without appendectomy. When an acutely inflamed appendix is encountered, appendectomy should be performed and the hernia should be primarily repaired. These principles should be applied to all hernias containing the appendix in order to avoid postoperative complications.