

Case of amyand hernia

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Section: Abdominal imaging

Area of Interest: Abdomen Anatomy Gastrointestinal tract

Imaging Technique: CT

Case Type: Clinical Cases

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Patient: 86 years, male

Clinical History:

An 86-year-old male presented acutely with six month history of unintentional weight loss, constipation and right-sided abdominal mass. Clinical examination identified a non-reducible, non-tender, right iliac fossa mass not extending into the scrotum. Haemoglobin 146g/L. Ferritin 293ug/L. CEA 3.9ng/mL.

Imaging Findings:

Volumetric contrast studies of chest (arterially enhanced) and abdomen pelvis (portal venous phase).

Dilated fluid filled vermiform appendix within right inguinal canal. Thickening and distal fluid filling of inguinal canal with mild inflammatory stranding of adjacent fat. (Figure 1). Circumferential abnormal thickening of ascending colonic wall superior to ileocecal valve, suspicious for bowel malignancy. (Figure 2). Subsequent red flag colonoscopy and repeat CT study were negative for malignancy, demonstrating resolution of thickened ascending colonic wall. Patient managed conservatively for Amyand Hernia.

Discussion:

Background

Amyand's hernia (AH) is defined as the protrusion of the vermiform appendix into an inguinal hernial sac. In clinical practice it is rare, accounting for 1% of all inguinal hernias with 0.1% of cases encountering acute appendicitis [1]. The appendix can be more prone to rupture when contained within the hernial sac [2].

Clinical Perspective

AH is more common in childhood secondary to a patent processus vaginalis but has been recorded in neonates through to the elderly. AH occur more frequently in males with the increased prevalence of inguinal hernias. Due to the anatomical position of the appendix, they are more likely to present as a right-sided inguinal hernia but on rarer occasions have been recorded as left inguinal hernias [3].

Presentation is variable, largely dependent on the degree of hernial incarceration and inflammation of the appendix. When appendicitis is present there may be gastrointestinal symptoms including nausea, vomiting and anorexia. If the appendicitis is incarcerated there may be episodic cramping as opposed to the dull ache experienced in an incarcerated hernia [4].

Imaging Perspective

Although the diagnosis of AH is rare preoperatively, ultrasonography (US) and computed tomography (CT) can be of help in making an early diagnosis [5,6]. US may demonstrate a blind-ended, non-compressible, tubular structure with increased vascularity and CT also demonstrating a blind-ending, tubular structure extending from caecum into the hernia sac [6].

Outcome

Surgical management of AH has been debated. A proposed Type 1-4 classification system formed by Losanoff & Basson in 2007 may help guide technique based on; the appendix appearance at time of surgery, presence of appendicitis, intra-abdominal sepsis or the presence of further concurrent disease [7]. Whilst historically management of AH does not support removal of a non-inflamed appendix or mesh repair, recent publications of case reports have suggested a basis for this type of surgical approach [8].

Teaching Points

AH should be considered when patients present with a complicated or uncomplicated inguinal hernia. Literature review suggests that AH is more likely to be found inflamed compared to a vermiform appendix within the abdominal cavity. Although an inflamed appendix is not always found with an AH, it is not an uncommon complication. Reason suggests that the appendix being present within a hernial sac makes it more vulnerable to injury and secondary inflammation as well as transient ischaemia because of intermittent abdominal muscular contractions [9].

Written informed patient consent for publication has been obtained.

Differential Diagnosis List: Right sided Amyand hernia., Right sided inguinal hernia containing small bowel., Femoral hernia containing appendix- De Garengeot hernia.

Final Diagnosis: Right sided Amyand hernia.

References:

- Kose E, Sisik A, Hasbahceci M. Mesh Inguinal Hernia Repair and Appendectomy in the Treatment of Amyand's Hernia with Non-Inflamed Appendices. *Surg Res Pract.* 2017;2017:7696385. (PMID: [28194430](#))
- Doyle GS, McCowan C. Amyand hernia: a case of an unusual inguinal herniace. *Am J Emerg Med.* 2008;26(5). (PMID: [18534318](#))
- Patoulias D, Kalogirou M, Patoulias I. Amyand's Hernia: an Up-to-Date Review of the Literature. *Acta Medica (Hradec Kralove).* 2017;60(3):131-134. (PMID: [29439761](#))
- Ebaugh EP, Hessel K, Udobi K. Appendiceal perforation, necrotizing groin infection and spermatic cord necrosis in a case of Amyand's hernia. *Int J Surg Case Rep.* 2016;24:172-174. (PMID: [27266828](#))
- Johari HG, Paydar S, Davani SZ, Eskandari S, Johari MG. Left-sided Amyand hernia. *Ann Saudi Med.* 2009;29(4):321-322. (PMID: [19587524](#))
- Morales-Cárdenas A, Ploneda-Valencia CF, Sainz-Escárrega VH, et al. Amyand hernia: Case report and review of the literature. *Ann Med Surg (Lond).* 2015;4(2):113-115. (PMID: [25941568](#))
- Losanoff JE, Basson MD. Amyand hernia: what lies beneath--a proposed classification scheme to determine

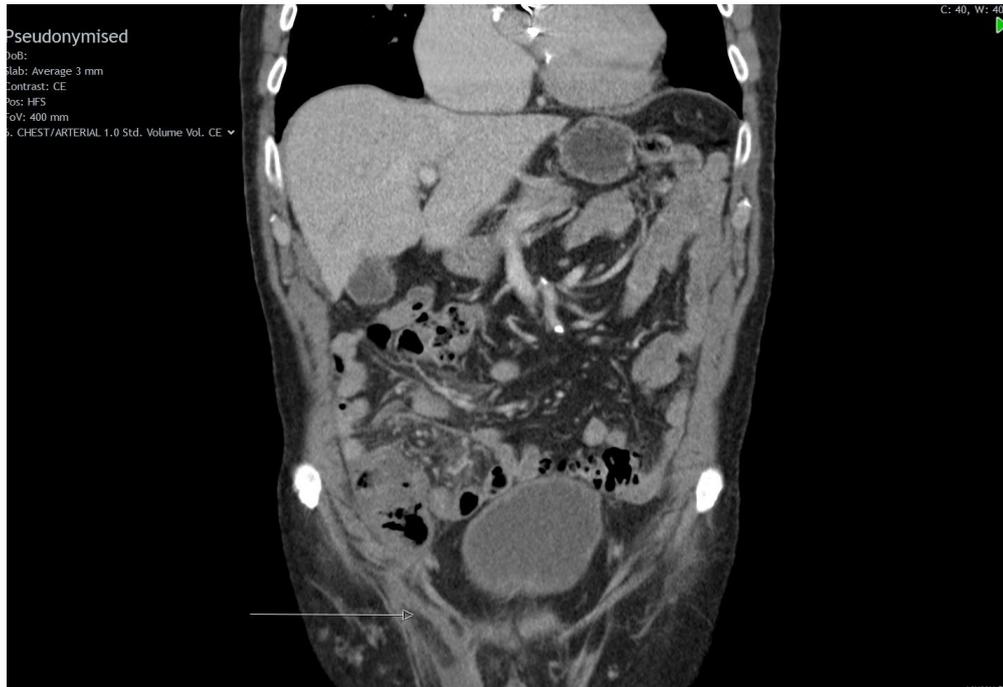
management. Am Surg. 2007;73(12):1288-1290. (PMID: [18186392](#))

Holmes K, Guinn JE. Amyand hernia repair with mesh and appendectomy. Surg Case Rep. 2019;5(1):42. Published 2019 Mar 15. (PMID: [30877403](#))

Karanikas I, Ioannidis A, Siaperas P, Efstathiou G, Drikos I, Economou N. Incarcerated Amyand hernia with simultaneous rupture of an adenocarcinoma in an inguinal hernia sac: a case report. J Med Case Rep. 2015;9:120. (PMID: [26018608](#))

Figure 1

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Description: Coronal portal venous study demonstrating dilated fluid filled tubular appendix within inguinal canal. Adjacent free fluid and mild inflammatory stranding within inguinal canal **Origin:** Department of Radiology, Mid Ulster Hospital, Northern Health & Social Care Trust, Northern Ireland, United Kingdom, 2020.

Figure 2

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Description: Coronal portal venous study demonstrating circumferential thickening of ascending colonic wall superior to the ileocecal valve. Appearance concerning for malignancy **Origin:** Department of Radiology, Mid Ulster Hospital, Northern Health & Social Care Trust, Northern Ireland, United Kingdom, 2020.