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### CASE REPORT

## Usual Inguinal Hernia with an Unusual Content

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#### ABSTRACT

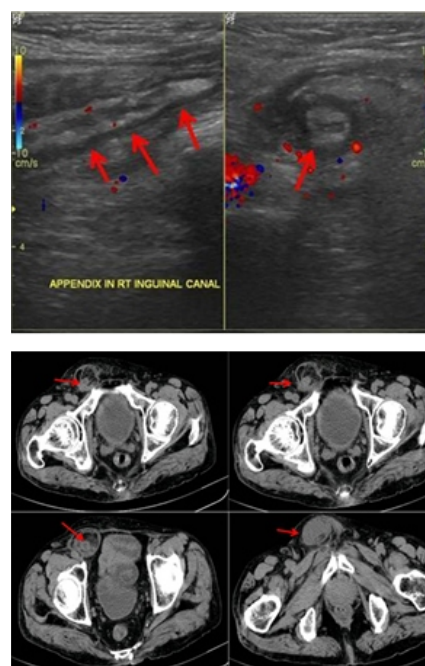
Inguinal Hernia is the commonest hernia in males. Usually bowel loops or omentum will be seen as contents. But an inflamed appendix is very rarely seen as content. Amyand's Hernia is a rare type of irreducible inguinal hernia with inflamed appendix/perforated appendix/normal appendix as content. Here this article describing the importance of ultrasound/Computed Tomography in the assessment of hernia sac and its contents before surgery which in turn modifies the way of management. This article describes an adult male presented with inguinal hernia containing an inflamed appendix as content and a brief discussion about few other named hernias.

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### Case report

A 75 years old male came to the causality with the complaints of right inguino-scrotal swelling and dull aching dragging pain for 2 months. For the past 2 days, pain in the inguinal region was aggravated and associated with fever and vomiting. Routine blood investigations such as Blood Hemoglobin, Total WBC count and Differential count were done which revealed raised Total WBC count and Neutrophils. Patient referred to radiology department for routine abdomen and NCCT Abdomen. Ultrasound abdomen revealed a blind tubular aperistaltic noncompressible gut like structure measuring 9 mm in diameter with severe probe tenderness, surrounding inflammation and minimal free fluid in the right inguinal region(Figure - 1) – Consistent with Right Inguinal Hernia with Inflamed Appendix as a content. The tip of appendix is seen near the root of scrotum and the adjacent spermatic cord structures show severe inflammation. NCCT Abdomen confirmed the ultrasound findings(Figure - 1). Patient underwent surgery where the hernia sac contains inflamed appendix. No evidence of rupture/abscess formation.

Figure – 1:



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### Legends:

Figure - 1: 75 years old male with right inguinal hernia and severe pain, Ultrasound & noncontrast CT images images of right inguinal region shows a blind ending tubular gut like structure (Red arrows) with surrounding inflammatory changes in the right inguinal canal. Suggestive of Inflamed Appendix in the right inguinal canal.

### Discussion

<sup>[1]</sup> Amyand's Hernia is a rare type of irreducible inguinal hernia with inflamed appendix/perforated appendix/normal appendix as content. It was named after a famous surgeon Claudius Amyand (1680 - 1740), who performed the first successful appendectomy in 1735.

Amyand's Hernia was very rarely diagnosed before surgery, usually found incidentally during surgery. Hence very few articles were published in the literature. Incidence of Amyand's hernia is very less (approximately 1%). Amyand's hernia is usually seen on right side. [2] But sometimes may be seen on left side in case of Situs Inversus totalis, Malrotation and mobile caecum. [3] The presence of appendix within the femoral sac is referred as De Garengeot Hernia, described first by a French surgeon Rene Jacques Croissant de Garengeot in 1731. Without the use of ultrasound and CT abdomen, diagnosis of this condition very difficult and always misdiagnosed as incarcerated hernia. Ultrasound can be used as a screening modality to look for the content of the hernia sac. [4,5,6] Surgical management may differ based on the stage of appendiceal inflammation and also it cautions the operating surgeon to be prepared for appendectomy (Table - 1). Ultrasound and CT are the useful modalities in the management to confirm the content of the hernia and to rule out the other diagnosis such as strangulated/incarcerated inguinal hernia.

**Table - 1:** Teaching point is whenever a patient comes with any type hernia, the content of the hernial sac should be assessed before surgical intervention.

**Table - 1:** <sup>[4, 5, 6]</sup> Classification of Amyand's Hernia after Losanoff and Basson

Classification	Description	Surgical Management
Type - 1	Normal appendix within an inguinal hernia sac	Hernia reduction, mesh repair, appendectomy in young patients
Type - 2	Acute appendicitis within an inguinal hernia sac, no abdominal sepsis	Appendectomy through hernia, primary endogenous repair of hernia, no mesh
Type - 3	Acute appendicitis within an inguinal hernia, abdominal wall or peritoneal sepsis	Laparotomy, appendectomy, primary repair of hernia, no mesh
Type - 4	Acute appendicitis within an inguinal hernia, related or unrelated abdominal pathology	Manage as types 1 to 3 hernia, investigate or treat second pathology as appropriate

### Few Named Hernia's:

Busse's Hernia: Testicle within the hernial sac.

Epigastric Hernia: Hernia through the defect in the linea alba above the umbilicus.

Hiatus Hernia: Herniation of stomach through the esophageal hiatus.

Cooper's Hernia: Femoral hernia with two sacs, the first being in the femoral canal and the second passing through a defect in the superficial fascia and appearing almost immediately beneath the skin.

Littre's Hernia: Inguinal hernia with Meckel's Diverticulum as content which is named after a French anatomist Alexis Littre (1658 - 1726).

Lumbar Hernia (Bleichner's Hernia): Hernia in the lumbar region, contains the following entities:

Petit's Hernia: Hernia through Petit's triangle (Inferior lumbar triangle).

Grynfeltt's Hernia: Hernia through Grynfeltt - Lesshaft triangle (Superior lumbar triangle).

Maydl's Hernia: Two adjacent loops of small intestine are within a hernial sac with a tight neck. The intervening portion of bowel within the abdomen is deprived of its blood supply and eventually becomes necrotic.

Morgagni Hernia: Hernia through the defect in the diaphragm (antero-medial aspect). Also known as Morgagni foramen.

Bochdaleck Hernia: Hernia through the defect in the diaphragm (Postero-medial aspect).

Pantaloon Hernia (Saddle Bag Hernia): Combined direct & indirect inguinal hernia, when the sac protrudes on either side of inferior epigastric vessels.

Richter's Hernia: Hernia involving only one side wall of the bowel which can result in bowel strangulation leading to perforation through ischemia without causing bowel obstruction or any of its warning signs. It is named after German surgeon August Gottlieb Richter (1742 - 1812).

Sliding Hernia: When an organ drags along part of the peritoneum or in other words, the organ is part of the hernia sac. The colon and urinary bladder are involved.

Sciatic Hernia: Hernia through the greater sciatic foramen, most commonly presents as an uncomfortable mass in the gluteal area. Bowel obstruction may also occur. This type of hernia is only a rare cause of sciatic neuralgia.

Spigelian Hernia: Spontaneous lateral ventral abdominal wall hernia through the spigelian fascia just lateral to rectus abdominis.

Sports Hernia: Hernia presenting as chronic groin pain in athletes with dilated superficial inguinal ring.

Velpeau Hernia: Hernia in the groin anterior to the femoral vessels.

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