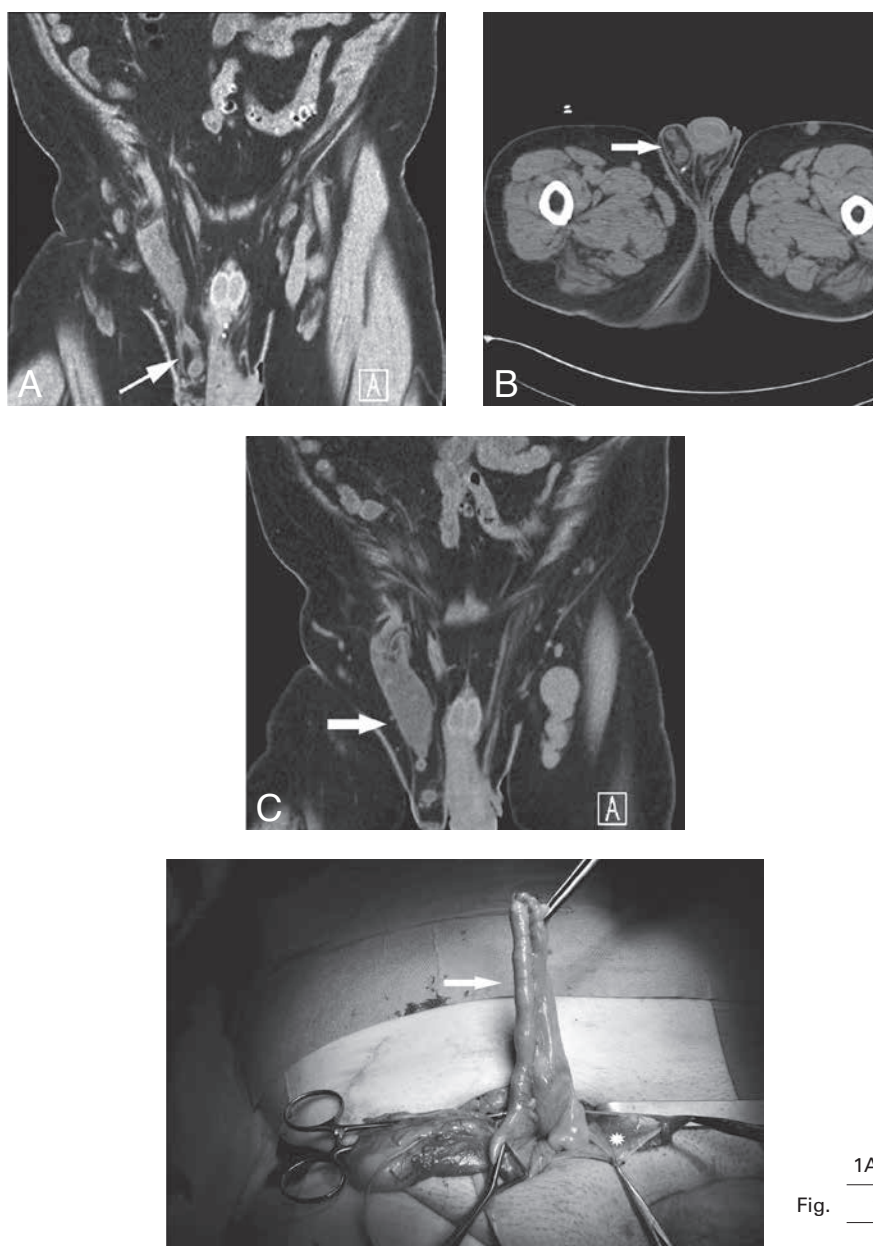


## AMYAND'S HERNIA

L.J. Ceulemans<sup>1,2</sup>, N.P. Deferm<sup>2</sup>, T. Spiessens<sup>1</sup>, F.M. Vanhoenacker<sup>3,4,5</sup>

**Key-word:** Hernia, inguinal

**Background:** A 70-year-old man was referred to our hospital with increasing pain and tenderness over a pre-existing right inguinal hernia, which had been present for the past 12 years. On clinical examination, there was an irreducible inguinal bulge and a tender palpable mass at the right groin. Laboratory results revealed a normal leukocytosis ( $6.800/\text{mm}^3$ ) and a normal CRP of 0.1 mg/dl. CT scan was performed, followed by appendectomy during 'routine' inguinal herniorrhaphy.



	1A	1B
Fig.	1C	
	2	

Departments of 1. Abdominal Surgery and 3. Radiology<sup>1</sup> AZ Sint-Maarten, Duffel, Belgium, 2. Department of Surgery, University Hospital Leuven, Leuven, Belgium, 4. Department of Radiology, Antwerp University Hospital, Edegem, Belgium, 5. Faculty of Medicine and Health sciences, University of Ghent, Ghent, Belgium

## Work-up

CT scan of the abdomen (Fig. 1) includes a coronal (A) and an axial (B) reformatted image which show a blind-ended tubular structure with a thickened wall was seen within the right inguinal canal (arrow). On coronal reformatted image (C) continuity of the caecum (arrow) with the contents of the hernial sac is observed.

On peroperative photograph (Fig. 2) a long vermiform appendix, with a mildly congested tip (arrow) within the inguinal sac (asterisk) is demonstrated.

## Radiological diagnosis

Based on the CT findings, the diagnosis of an *Amyand's hernia* was made, which was confirmed on subsequent surgical intervention. The hernia was reduced and after resection of the incarcerated appendix, histological examination confirmed the inflamed appendix.

## Discussion

The presence of the appendix within an inguinal hernia is referred to as Amyand's hernia. This type of hernia is named after Claudius Amyand, who reported the first documented and successful appendectomy of a perforated vermiform appendix in a hernial sac.

The following classification has been suggested, based on the condition of the appendix within the hernial sac containing: (A) non-inflamed appendix, (B) inflamed appendix, or (C) perforated appendix. A non-inflamed appendix is estimated to be present in 1% of all adult hernia repairs, whereas concomitant appendicitis is present in 0,1% of cases.

In the past, the correct diagnosis of the latter was mostly made on the operating table, due to the similar clinical presentation of this disorder with an incarcerated or strangulated inguinal hernia. Ultrasound often demonstrates a potentially inflammatory mass within the hernial sac. CT with multiplanar reconstruction is the imaging technique of choice, for precise visualization of the appendix within the hernial sac and its relationship with the surrounding structures, such as the caecum. CT may provide an early preoperative diagnosis, which is of utmost importance considering the high risk of perforation. The correct treatment is still debated and depends on the fact whether the appendix is inflamed or not. In a non-inflamed appendix, appendectomy or surgical restraint will depend on the surgeon's assessment of the future risk of appendicitis versus the risks of mesh or wound infection and hernia recurrence. In case of a severely inflamed or perforated appendix, the use of a synthetic mesh is absolutely contra-indicated. Meticulous analysis of the CT features of appendicitis will enable the surgeon to make a confident decision.

## Bibliography

1. Amyand C.: Of an inguinal rupture, with a pin in the appendix coeci, incrusted with stone: and some observations on wounds in the guts. *Philos T R Soc Lond*, 1736, 39: 329.
2. Hutchinson R.: Amyand's hernia. *J R Soc Med*, 1993, 86: 104-105.
3. Laermans S., Aerts R., De Man R.: Amyand's hernia: inguinal hernia with acute appendicitis. *JBR-BTR*, 2007, 90: 524-525.
4. Sharma H., Gupta A., Shekhawat N.S., et al.: Amyand's hernia: a report of 18 consecutive cases over a 15-year period. *Hernia*, 2007, 11: 31-35.