

# Amyand's hernia: a case report

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## Abstract

The presence of vermiform appendix, whether normal or inflamed in the inguinal hernia, is referred to as Amyand's hernia. This is rare occurring in about 1% of inguinal hernias in adults.<sup>1</sup> This is a report of Amyand's hernia, which presented as a component along with partially necrotic omentum with metastasis in a 75 year old male patient. Appendicectomy followed by hernia repair using synthetic mesh was performed with an uneventful recovery.

## Key words

Amyand's hernia, appendix, strangulated inguinal hernia, metastasis

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## Introduction

Claudius Amyand (1680 -1740) was surgeon to King George II and principal surgeon at St George's and Westminster hospitals of London. He performed the first recorded successful appendicectomy on an 11 year old boy with a perforated appendix within an inguinal hernia sac in 1735.<sup>2</sup>

## Case report

A 75 year old man presented at the emergency department with a right inguinal swelling present for the previous three weeks. The swelling was initially reducible, however it became irreducible two days prior to admission to hospital. He gave a history of right sided abdominal pain over the past two days with no symptoms related to the gastrointestinal or urinary tracts. On examination the patient had a tender, non reducible mass over the right inguinal region. A full blood count showed a haemoglobin of 11.4gm/dl and leucocyte count of 15 x 10<sup>9</sup>/L. Renal function and liver function tests were normal.

Two months prior to this event, the patient presented with melaena. Apart from being a heavy smoker, the patient did not have any relevant past medical history. Chest X-ray on admission showed a mass on the right side of the lung. Urgent CT scan of the thorax and abdomen showed consolidation in the left lung. CT guided biopsies from this lung consolidation were taken. Histology of these biopsies showed an undifferentiated lung carcinoma. Gastroscopy revealed a small gastric ulcer in the process of healing while colonoscopy was reported as normal.

A diagnosis of strangulated right inguinal hernia was established and the patient was scheduled for emergency surgery. At surgery, an irreducible inflammatory oedematous mass was found inside the inguinal canal. This mass was identified as the tip of the appendix adhered to the indirect inguinal hernia sac, together with partially necrotic fatty omentum. The base of the appendix did not show signs of inflammation. An appendicectomy and partial omentectomy was performed. This was followed by Lichtenstein hernioplasty using synthetic mesh. Broad-spectrum antibiotic cover was given. Postoperative recovery was uneventful and the patient was discharged home the next day on co-amoxiclav 1g bd for five days. Six weeks after discharge from hospital the patient suffered a cerebrovascular accident and died.

Histology of the appendix and omentum was reported as 'metastatic poorly differentiated neoplasm infiltrating the omentum and outer appendiceal wall'.

## Discussion

The contents of a hernial sac is rarely significant in an inguinal hernia, as the sac usually contains the omentum or small bowel. However, there can be surprising contents such as Meckel's diverticulum (Littre's hernia), portion of the circumference of the intestine (Richter's hernia), bladder (sliding hernia) or appendix (Amyand's hernia).<sup>3</sup> Literature search on Amyand's hernia with metastatic involvement is very scanty. A literature search from Medline resulted in only one documented case report of Amyand's hernia containing adenocarcinoid tumour of the appendix.<sup>4</sup>

The clinical presentation in Amyand's hernia is very similar to that of a strangulated hernia with local peritonism. It is rare to be able to diagnose Amyand's hernia pre-operatively. Pre-operative computed tomography (CT scan) of the abdomen may be helpful but we do not perform CT scans routinely for an irreducible hernia.<sup>5</sup> CT scan provides only indirect clues and diagnosis is almost always done intraoperatively.

The aetiology of Amyand's hernia is often questioned in literature.<sup>6</sup> A possible explanation could be that due to herniation, the appendix becomes more vulnerable to micro-traumatism. Following this, fibroses develops and the appendix gets adherent to the hernial sac. Muscle contractions and changes in abdominal pressure may cause compression of the appendix, resulting in decreased blood supply and secondary bacterial inflammation.

There is no standard protocol for the management of Amyand's hernia. Important determinants for appropriate surgery include the presence of an inflamed appendix, contamination of the surgical field, patient age and anatomic features.<sup>7</sup> A normal appendix can be returned back to the peritoneal cavity or alternatively appendectomy can be performed.<sup>7</sup> There is no clear consensus on mesh repair. Hernioplasty (mesh repair) without appendectomy is a favoured option in patients with a normal appendix.<sup>9</sup>

In our case report transherniotomy appendectomy with partial omentectomy followed by mesh repair was performed without any post-operative complications, with broad spectrum antibiotic cover. In cases of appendicitis transherniotomy appendectomy should be performed followed by herniorrhaphy (sutured repair).<sup>9,10</sup> The presence of pus or perforation is an absolute contraindication to mesh repair.<sup>10</sup>

## Conclusion

Appendicitis within an Amyand's hernia is rare, and when it occurs it is usually misdiagnosed as strangulated inguinal hernia. This also represents a surgical emergency. Early operative intervention is the mainstay of successful management of Amyand's hernia. Awareness of this disease and its misleading clinical presentation is of utmost importance as most of these cases are diagnosed intraoperatively.

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