



**Case Report**

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## Amyand's Hernia- two case reports along with review

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### Abstract

An Inguinal hernia is called as Amyand's hernia if it contains a vermiform appendix in addition to other contents in its sac. Appendix can be inflamed or non-inflamed and can be adherent or not adherent to the sac walls. The first successful appendectomy was performed in 1735 by Claudius Amyand, a French surgeon. It is arguable, whether or not an appendectomy should be performed at the time of hernia repair if appendix is non-inflamed. We report two cases of amyand's hernia.

**Keywords:** Inguinal hernia, Amyand's hernia, Vermiform appendix, Appendectomy.

### INTRODUCTION

Amyand's hernia means that the appendix protrudes through an inguinal hernia. The incidence is estimated to be 0.08%.<sup>[1]</sup> The first successful appendectomy was performed in 1735 by Claudius Amyand, a French surgeon.<sup>[2]</sup> Preoperative diagnosis is very difficult as there is no precise clinical picture and if appendix is inflamed then it can be confused with a strangulated inguinal hernia. Its treatment depends on the grade of inflammation of the appendix. In fact, it can range from the Bassini's repair to a prosthetic mesh repair, to appendectomy or simple reduction of appendix.<sup>[3]</sup>

### CASE REPORT

**1<sup>st</sup> Case-**A 55-year-old male presented with pain and mass in a right groin. Patient was diagnosed as a case of obstructed hernia. All laboratory data were within normal limits except Total leukocyte count which was on higher side. Emergency surgery was planned. The oblique conventional incision between external and internal rings was used. An appendix was inflamed and was found completely within the indirect hernia sac (Fig-1). The distal end of the appendix was adherent to the wall of sac. Appendectomy was performed and herniorrhaphy was done with Bassini's method. Postoperative period was uneventful and he was discharged on the 5<sup>th</sup> day. He was followed up at our OPD for stitches removal. Pathology revealed an acute appendicitis.

**2<sup>nd</sup> Case-**A 35 years male presented with inguinoscrotal swelling in Dec 2011 and was diagnosed as a case of indirect inguinal hernia. All blood investigations were within normal range. Patient was operated through conventional oblique incision. To our great surprise, there was appendix in hernial sac as its contents and it was not inflamed [Fig-2]. Appendix was replaced back in abdomen and herniorrhaphy was done with prolene mesh. Postoperative period was uneventful and patient was discharged on 5<sup>th</sup> day. He was followed up at OPD for sutures removal.

### DISCUSSION

The presence of acute appendicitis within an inguinal hernia sac is a rare entity. It was first reported by Claudius Amyand (1680–1740) and he found a perforated appendix in the inguinal hernia. The incidence of acute appendicitis occurring in a hernial sac varies between 0.13 to 1 percent.<sup>[4]</sup>

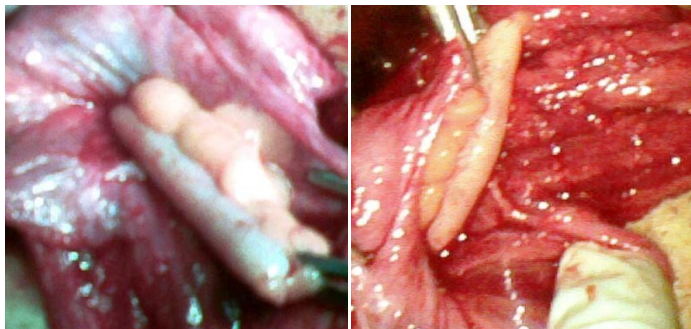
The pathophysiology of inflammation of appendix is unknown. When the appendix enters the sac it becomes susceptible to trauma and can get inflamed.<sup>[5]</sup> Other explanation is that due to contraction of abdominal muscles, there is sudden increase in intra-abdominal pressure causing compression of the

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appendix, which may promote inflammation and bacterial growth.<sup>[6]</sup> Mobile caecum may be a predisposing factor for developing Amyand's hernia.<sup>[7]</sup> If there is situs inversus then due to anatomical location, it can occur on left side.<sup>[8]</sup>



**Figure 1:** Showing inflamed appendix in hernial sac

**Figure 2:** Showing normal appendix in hernial sac

The most common presentation is irreducible painful hernia (83%). Most common differential diagnoses are strangulated hernia and incarcerated omentum.<sup>[9]</sup>

Due to nonspecific clinical features, diagnosis is very difficult during preoperative period. Computed tomography scan may be useful in diagnosis, but is not performed routinely.<sup>[10]</sup>

Whether to remove or leave behind a non-inflamed appendix is confusing. Patient's age, size of appendix, life expectancy and life-long are the risk factors of developing acute appendicitis. As younger patients have a higher risk of developing acute appendicitis so, appendectomy may be considered whereas in elderly individuals appendix may be left intact.<sup>[10]</sup> Even in the younger patients, hernioplasty is done along with appendectomy if hernia is of large size. This is done to reduce the incidence of recurrence.

Appendectomy for the normal appendix in the sac will definitely increase the risk of infection to an otherwise clean surgery. And also surgical handling to reach the base of appendix may weaken the muscles and thus increases the possibility of recurrence, so, ideally hernioplasty should be done after replacing back the appendix.<sup>[2]</sup>

If appendix is inflamed then appendectomy is mandatory and the hernial repair should be performed with Bassini or Shouldice techniques, without making use of synthetic meshes because mesh may get infected.<sup>[2]</sup> Usually in patients with small to moderate size hernia, appendectomy can be done with herniorrhaphy but in case of large size hernias which are more likely to recur, may be repaired with mesh with broad spectrum antibiotics. Laparoscopic reduction of Amyand's hernia has been described in literature. The mortality rate is estimated between 14-30% and is usually due to peritoneal spread of the septic process.<sup>[6]</sup>

## CONCLUSION

Surgeon comes across Amyand's hernia only on the operation table. It is important to know this condition in advance and should also know whether appendectomy should be performed for normal looking appendix.

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