Amyand’s hernia. Historical perspective and current considerations

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Abstract. We report a case of an uncomplicated inguinal hernia containing a non-inflamed vermiform appendix, also known as Amyand’s hernia. The historical perspective together with possible variants of this condition and current consideration in the management of this rare disease are discussed.

Case report

A 50-year-old, otherwise healthy, Caucasian male, who had been suffering for about 5 years from a right inguinal mass was referred for an elective right inguinal hernioplasty. On clinical examination a reducible indirect inguinal hernia with no signs of strangulation was found. During surgery, performed with spinal anaesthesia, an indirect hernia sac was identified and opened. After opening the sac, a round structure measuring 20 cm at its long axis and about 0.5 cm wide, was found (Fig. 1). The structure was identified as a vermiform appendix with no signs of inflammation. The appendix was put back into the peritoneal cavity, the hernia sac was closed and the hernia repaired with polypropylene mesh and a preformed polypropylene cone (Bard® Mesh Perfix® Plug Extra Large, Monofilament Knitted Polypropylene fabricated by Davol Inc. Cranston, RI, USA) using the Rutkow-Robbins technique. The postoperative course was uneventful. The patient was discharged from the hospital 18 hours after surgery.

Discussion

On the sixth of December 1735, Claudius Amyand (1680-1740), a French Huguenot in exile in Britain, a military surgeon, a sergeant in the British Army and a surgeon at St.George’s Westminster Hospital in London, operated on an 11-year-old boy named Hanvil Anderson. The patient suffered from a right inguinal hernia complicated by a faecal fistula. Considering the fact that Amyand operated without any anaesthesia, the surgery took quite a long time; it lasted for half an hour. “‘Tis easy to conceive that this operation was as painful to the patient as laborious to me” commented Amyand after the operation had been concluded (1). The operation performed by Claudius Amyand is important for two reasons. Firstly, it is the earliest description of a hernia containing a vermiform appendix. Secondly, it is the earliest documented appendicectomy in the history of surgery. To commemorate Amyand’s achievement an inguinal hernia containing a vermiform appendix is referred to as Amyand’s hernia (2).

The pre-operative diagnosis of Amyand’s hernia is very rare (3). In the majority of cases the suspicion of an appendix location within the groin hernia sac can only be raised pre-operatively as a result of acute appendicitis. However, this situation is hard to distinguish from an incarcerated groin hernia and, even more important, is a very rare one. In a classic paper, Ryan estimated the frequency of acute appendicitis within the groin hernia sac as 0.13% (11 cases from a series of more than 8000 consecutive appendicitis cases) (4). The occurrence of an unchanged appendix in the groin hernia seems to be

Fig. 1
Operative view of the Amyand’s hernia after the indirect hernia sac has been opened. Note the appendix held by two Allis clamps.
even rarer. In his review of sliding hernias, Bendavid states that appendix is a “common” found in the right type I sliding hernia (5) and Lippolis suggests that even up to 1% of all groin hernias may contain an appendix (3). This statement is however not strongly supported by the literature. There are only casual case reports of this finding. During three consecutive years we have operated on 2000 groin hernias and found only 1 case of Amyand’s variant, which accounts for 0.05% of elective groin hernia operations.

The vermiform appendix can occasionally be found within the femoral hernia sac. This variant of groin hernia is referred to as the De Garengeot hernia, to commemorate its first anatomical description by French surgeon René Jacques Croissant de Garengeot in 1731 (6).

In cases when appendix or meso-appendix forms part of the hernia sac, the Amyand’s hernia also becomes a sliding hernia (7). In each case, the operating surgeon confronted by an Amyand’s hernia has got to deal with two problems. As in any given operation it is obligatory to precisely identify all anatomical structures, which can be a tricky thing in patients with a big sliding hernia. Secondly, the decision has to be taken whether to perform an appendicectomy or not. Losanoff proposed a classification aimed at clarifying this problem (8). We think, however, that due to the rarity of Amyand’s variant, rather than aiming at classifying, a surgeon has to use his surgical common sense. In cases where no inflammation is encountered (Losanoff type I), one should perform hernioplasty without appendicectomy in order to keep the operation clean. It is also our opinion that in these cases the use of mesh plugs is as safe as in any other elective hernia operation. In cases of acute appendicitis found in the sac (Losanoff II-IV), appendicectomy is advised, followed by a hernioplasty with endogenous tissues. The use of meshes seems too risky in the infected appendectomy field.

**Conclusion**

Amyand’s hernia is a rare variant of groin hernia presenting either as a strangulated or non-strangulated hernia. Depending on the state of the appendix the surgeon has to decide whether to perform appendicectomy with hernia repair or hernia repair alone.

**Potential conflict of interest**

Dr. Komorowski and Dr. Moran Rodriguez report receiving congress and travel fees from Bard Spain.

**References**

1. AMY AND C. Of an inguinal rupture, with a pin in the appendix caeci encrusted with stone ; and some observations on wound in the guts. Phil Trans R Soc Lond, 1736, 39: 329-342.