The Stump Appendicitis: A Warning Still Actual

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Abstract

An unusual case of “stump appendicitis” is reported, where diagnosis was possible pre-operatively. Surgical technical advices are given to avoid this complication in course of appendicectomy.

Introduction

The most common complications of appendicectomy, especially when performed for acute cases, are well known, and generally can be referred to this acute inflammatory condition.

In a first group we can include those involving the peritoneal cavity: diffuse peritonitis, ileo-caecal, sub-phrenic or hepatic abscess. In a second group we find post-operative pitfalls, commonly observed after other abdominal operations: venous thrombosis, pulmonary embolism, pleural effusion, or other respiratory complications (1,2).

Post-operative complications, directly connected to the surgical technique, are rare. Among these:
* hematoma of the ileo-cecal region, secondary to an imperfect haemostasis;
* digestive haemorrhage, secondary to an appendix stump inverted into the caecum, but without a previous safe haemostasis (3,4);
* a “stump appendicitis”, due to a long appendix stump, with symptoms of “recurrent appendicitis”, appearing after different periods of time (5-7).

The following case seems interesting from a diagnostic point of view, permitting also to underline some technical points of the appendicectomy, procedure usually simple, but not free of risks.

Case Report(s)

A 45 years old man, without important antecedents, three months before, was elsewhere submitted to an open urgent appendicectomy, for an acute gangrenous appendicitis. The post-operative was complicated by purulent discharge from the abdominal drain, solved with a conservative treatment. After an asymptomatic interval of more than two months, the patient complained of acute pain in the right lower abdominal quadrant, with tenderness, fever and leucocytosis. A plain X-ray of the abdomen was negative; an echography found only distended ileal bowels, while a computed tomography showed an effusion in the ileo-cecal region, with a 7 cm tubular structure inside, contrast-enhanced in its walls (Illustration 1 and 2).

The patient underwent to an emergency open re-laparotomy, performed through the same right iliac incision. An abscess was discovered in the ileo-cecal region, and inside, a tubular structure, referred to a residual appendicular stump, with acute suppurative inflammation. It was completely removed and its real stump easily enveloped inside the caecum. Diagnosis of acute perforated appendicitis was confirmed by histology. This second post-operative was uneventful, with complete recovery.

Discussion

This case aligns with others reported in the medical literature, and well resumed by M.K.Liang and coworkers (6), who interestingly report that the majority of stump-appendicitis did not follow operations for appendicular abscess or perforation, but simple appendicectomies.

We agree with the difficulties in the diagnosis of “stump appendicitis”, which is always misguided by the anamnestic appendicectomy; contemporary we underline the great value of diagnostic imaging techniques, especially computed tomography (8,9).

Surgeons must be aware of this possibility, when evaluating an acute abdomen, and respect some technical – anatomical landmarks (10).

In particular:
- The appendiceal-caecal junction must be identified as an essential point of arrive or departure, for a correct section of the appendix mesentery and its vascular arcade. For this the anterior taenia of the caecum is a sure landmark.
- A careful dissection of the entire appendix is always necessary, especially in case of concomitant peri-caecal abscess, or of its retroperitoneal dislocation, assuring its complete removal.
- An excessive traction or rough handling of the appendix, especially in case of acute inflammation, can cause its rupture, with a long stump disappearing in the depth of an abscess cavity.
- Mesentery and stump of the appendix must be clamped, tied and divided separately, and not “en bloc”, paying attention to their safe haemostasis.
Conclusion

Two general recommendations must be addressed, particularly to young surgeons:

- diagnosis of acute appendicitis can be not always easy, especially in the rare cases of “stump” or “recurrent” appendicitis; here computed tomography offers an effective aid;
- appendicectomy, usually considered a simple procedure, can offer difficulties, especially in identifying surgical anatomy, sometimes subverted by a suppurative inflammatory process.

References

Illustrations

Illustration 1

Contrast-enhanced computed tomography (axial section): the caecum walls appear thickened and hypervascularized, with an abscess inferiorly and medially placed (arrow).
Illustration 2

Contrast-enhanced computed tomography (axial section): a tubular structure, with hyper-enhanced walls, appears behind the caecum and inside the peri-caecal abscess (arrow).
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