Appendicitis Caused by Caecal Carcinoma: Report of a Case

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Summary: Appendicitis can rarely occur in association with carcinoma of the caecum, particularly in elderly patients. We report a case of acute appendicitis provoked by an adenocarcinoma of the caecum which obstructs the lumen of the appendix in a 58-year-old man. The patient underwent an ileocaecal resection with lymph node dissection. The difficulties of identifying a small tumor at laparotomy and the implication for optimal treatment are emphasized.

Key words: caecal carcinoma, appendicitis, ileocaecal resection

INTRODUCTION

Acute appendicitis is a very common illness, the highest incidence being found in children and young adults. In most cases obstruction of the appendix is the cause of appendicitis. In children, the appendix usually obstructed by fecaliths and lymphoid hyperplasia, while neoplasms may occlude the lumen of the appendix in elderly patients leading to an acute appendicitis. This is a rare occurrence, since only about 0.9% of all cases of appendicitis are provoked by tumors [1].

We report herein a case of acute appendicitis provoked by an adenocarcinoma of the caecum which obstructs the lumen of the appendix in an adult patient.

CASE REPORT

A 58-year-old man was admitted to our hospital because of abdominal pain of 48-hour duration localized in the right iliac fossa. Physical examination revealed peritonism in the right iliac fossa and the presence of a palpable mass. He had high temperature on admission, his white cells count was $17.5 \times 10^3 / \text{mm}^3$ and the serum level of C reactive protein was 17.7 mg/l. Abdominal ultrasonography revealed appendicitis without signs of perforation, and some intraperitoneal fluid was also detected. Emergency laparotomy was performed with a lower median incision under general anesthesia. At the operation a small amount of purulent fluid was found in the right iliac fossa. The appendix looked like a swollen small finger and a mass was palpated at the lower end of the caecum. Under the diagnosis of suspected neoplasm of the caecum, an ileo-caecal resection with lymph node dissection and end-to-end anastomosis between the terminal ileum and the colon were performed. The histopathological findings of the resected caecum were compatible with the diagnosis of acute phlegmonous appendicitis and the presence

Fig. 1. Photograph of the resected specimen showing the adenocarcinoma at the caecum which obstructed the appendix lumen.
Fig. 2. Microscopic findings were compatible with the diagnosis of well differentiated adenocarcinoma with mucin production (H&E ×100).

of an adenocarcinoma measuring 3.0×3.0 cm that obstructed the appendix, with serosal invasion of the caecal wall but without nodal involvement (Dukes B, pT3, pN0, pM0, stage II according to TNM classification) (Figs 1 and 2). The postoperative recovery was uneventful and adjuvant chemotherapy was provided to the patient.

DISCUSSION

Obstruction of the appendiceal lumen is the cause of acute appendicitis, in most cases. However, in elderly patients it may also be due to a neoplasm, and appendicitis can be its first manifestation [2]. These tumoral lesions may be appendiceal, colonic or caecal in origin. Primary neoplasm of the appendix can often be responsible for obstruction of the appendix thus precipitating appendicitis [3,4]. The association of carcinoma of the caecum with appendicitis was first reported by Shears in 1906 according to a report by Burt et al. [5]. Appendicitis caused by obstructing colonic cancer is relatively rare. Collins reviewed the cause of appendicitis in 10,181 patients and found that the incidence of obstructing colonic cancer was 0.8%, mostly in elderly patients [6]. Koyasaki et al. found that there were 24 reported cases of caecal cancer associated with appendicitis signs in Japanese literature [7]. In their report, 22 cases had high grade inflammation findings of the appendix and 23 had advanced caecal cancer. Adenocarcinoma of the caecum accounts for approximately 10% of colorectal malignancies and it may present itself as appendicitis, probably because of partial obstruction of the lumen of the appendix.

Large neoplasms are easy to diagnose at laparotomy for appendicitis, the problem is the detection of small carcinomas [8,9]. Detection of caecal carcinoma during appendectomy or surgical drainage of an appendiceal abscess may be missed because of inadequate visualization of the colon, a retrocaecal appendix in a limited incision or difficulty in exploration because of the inflammatory process. Costello and Saxon [10] reviewed 122 cases of caecal cancers, and found that the original diagnosis was appendicitis in 40% of those cases.

In our patient, we suspected at first that symptoms were indicative of acute appendicitis, and that the palpable mass was due to inflammation or was an abscess due to appendicitis. Therefore, we performed a laparotomy with a lower median incision, to have an adequate visualization.

When abnormal findings, such as a palpable mass, are found associated with symptoms of acute appendicitis in elderly patients under general or lumbar anesthesia, a colonic neoplasm should be suspected. It is important that palpation of the abdomen is carried out under anesthesia because palpation of the abdominal wall is difficult when a patient has severe abdominal pain with muscular rigor.

In conclusion, although the occurrence of synchronous colonic neoplasm and acute appendicitis in elderly patients is relatively rare, the concomitant presence of a caecal carcinoma should be borne in mind when patients over 50 years of age present with symptoms of acute appendicitis [11]. With younger patients, if the diagnosis is carcinoma, then a right hemicolectomy is the treatment of choice. With extremely old patients, or if the intraoperative diagnosis is uncertain we recommend a ileocaecal resection with regional lymph node dissection.

REFERENCES

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