Acute Appendicitis With Primary Appendiceal Adenocarcinoma

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Citation

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Abstract

Primary appendiceal adenocarcinoma of the appendix is rare (less than 250 cases described in the literature). We report a case of acute appendicitis with appendiceal carcinoma. A 61-years-old man presented with pain, tenderness and rebound in the lower quadrant of the abdomen and fever. These findings suggested acute appendicitis. Emergency laparotomy showed inflamed appendix, which adhered to the surrounding tissue. Appendectomy was performed. The histologic diagnosis revealed as highly differentiated appendiceal adenocarcinoma. The tumour had infiltrated and obstructed the lumen of the orifice of the appendix. He has undergone to right hemicolectomy at the second operation. He was examined at regular periodic follow-ups and no evidence of recurrence or metastasis was noted in the 18-month postoperative period. In case of acute appendicitis, the possibility of appendiceal adenocarcinoma should be considered.

INTRODUCTION

Adenocarcinoma of the vermiform appendix is a rare neoplasm of the gastrointestinal tract with an incidence of about 0.01-0.2% ([1]). The most common clinical presentation is that of acute appendicitis or a palpable abdominal mass ([2,3]). The diagnosis of carcinoma of the appendix is difficult to make preoperatively due to the lack of definite diagnostic, clinical, sonographic or radiological findings characteristic of this disease ([2,3]) We report here a case of acute appendicitis with appendiceal adenocarcinoma.

CASE REPORT

A 61-years-old man presented with fever, pain, tenderness and rebound over the McBurney's point, and Blumberg's sign was observed in the right lower quadrant of the abdomen. He was admitted to our hospital with the diagnosis of acute appendicitis.

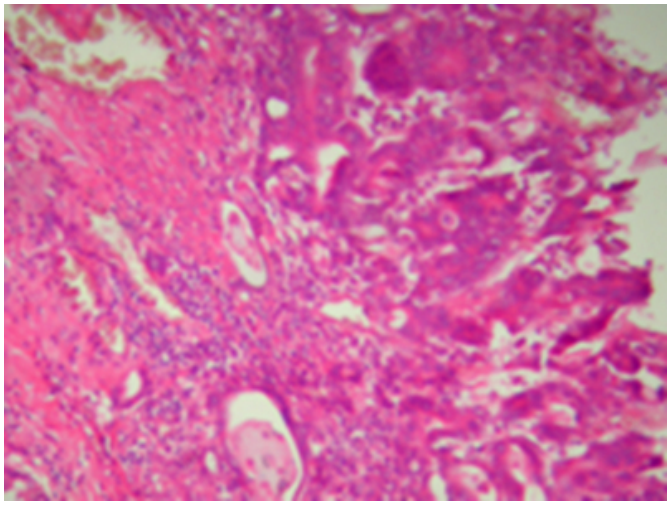
Body temperature was 37.8°C. Laboratory tests showed leukocytosis (WBC:15050/mm3) and there were no other abnormal values on peripheral blood analysis or serum biochemical analysis. Abdominal ultrasonography revealed minimal intra-abdominal free fluid.

Emergency laparotomy was performed. The appendix was inflamed and adhered to the surrounding tissue. Appendectomy was performed and peritoneal cavity was washed with saline and a closed drain was inserted.

Gross examination of the excised tissue showed infiltration of adenocarcinoma and obstruction of the lumen of the orifice of the appendix. Microscopic examination showed replacement of the serosa by necrotic tissue, with blood and fibrin There were inflammatory changes of appendix. The tumour was composed of gland-like structures and groups of cells without lakes of mucin or large cysts. The histological diagnosis was highly differentiated appendiceal adenocarcinoma. The regional lymph nodes were negative for metastasis (Figure-1).

Figure 1

Figure-1: The histological examination of tumor shows gland-like structures and groups of cells without lakes of mucin or large cysts (hematoxylin and eosin stain, original magnification X200).



The patient was undergone to right hemicolectomy 6 days from first surgery and discharged 9 days after the second surgery. He was examined at regular periodic follow-ups and no evidence of recurrence or metastasis was noted in the 18-month post-operative period.

DISCUSSION

Adenocarcinoma of the vermiform appendix is a rare neoplasm of the gastrointestinal tract with an incidence of about 0,01-0,2%. ([1]). A slight male predominance is reported and the mean age of presentation is in the fifth or sixth decade, with a reported range of 13 to 91 years ([4]). Epithelial noncarcinoid tumours and tumour-like lesions of the appendix are classified into 5 diagnostic groups based on the WHO criteria ([5]): simple mucoceles, hyperplastic polyps, adenomas, mucinous tumours of uncertain malignant potential (UMP), and adenocarcinomas. Simple mucoceles account for 6 % of the epithelial noncarcinoid tumours and tumour-like lesions, followed in prevalence by hyperplastic polyps, adenomas, mucinous tumours of UMP, and adenocarcinomas (10%, 23 %, 15 %, and 46%, respectively).

The patient often presents with a right lower quadrant mass, anaemia, or with symptoms and signs suggestive of acute appendicitis ([6]), and up to 70% of cases are not diagnosed intraoperatively ([3]). The symptoms of acute appendicitis are likely due to obstruction of the lumen by the tumour, as in the present case, infiltration by the tumour, superimposed infection of the wall, obstruction of lymphatic channels, obstruction of the vasculature, or invagination ([7]). Adenocarcinoma of the appendix, like carcinomas of the colon, spreads via local invasion, lymphatic vessels, and the bloodstream. The most common metastatic location is the peritoneal cavity, followed by the lymph nodes, liver, ovaries, abdominal wall, and lungs ([8]).

Adenocarcinoma of the appendix may present as an acute abdomen with a mass in pregnancy ([9]).

Adenocarcinoma of the appendix is never suspected pre-operatively, being usually first discovered by histological examination ([10]). Ileocaecal resection during the first operation and right hemicolectomy for a carcinoma diagnosed after appendectomy remain the main stay of treatment ([10]).

In conclusion, in cases of acute appendicitis, it is important to consider the possibility of appendiceal adenocarcinoma.

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