Primary Adenocarcinoma of the Appendix Mimicking Appendicitis: A Case Report

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Abstract: Introduction: Adenocarcinoma of the vermiform appendix is a rare neoplasm of the gastrointestinal tract. Presentation mimics acute appendicitis, but right iliac fossa mass and intestinal obstruction have also been reported. These presentations reflect various stages of a locally expanding tumour causing luminal obstruction of appendix. Most of them are found accidentally on appendicectomies performed for appendicitis. Adenocarcinomas of appendix are only 0.08% of all cancers and the treatment remains controversial. Case report: We here present an unusual case of a 70 year old man who presented with right sided abdominal pain for which he underwent a CT scan. This showed a perforated appendix and he was initially treated in the outpatient setting, before having an appendicectomy, the histology of which showed adenocarcinoma of the appendix. He underwent a right hemicolectomy and adjuvant chemotherapy. He has remained well from his carcinoma point of view. Conclusion: Adenocarcinomas of the appendix are a category of rare cancers of the gastrointestinal tract. Although at present they are a well studied pathologic entity, the crucial issue of their preoperative diagnosis remains unsolved.

Keywords: Adenocarcinoma, Appendix, Perforated appendix, Appendicectomy, Hemicolectomy, Chemotherapy

1. Introduction

Primary tumors of the appendix are unusual and most of them (almost 85%) are carcinoids. Adenocarcinomas of the appendix are a category of rare tumors of the gastrointestinal tract, with a frequency of 0.2% - 0.5% of all intestinal malignancies and 4% - 6% over neoplasmatic lesions of the appendix. The first case of a primary adenocarcinoma of the appendix was reported by Berger on 1882. Mucin-producing cystadenocarcinomas or mucous adenocarcinomas, and non-mucin producing or colonic type adenocarcinomas are included in this category. The main presentation of these tumors is that of an acute appendicitis (30%-50%) or as a palpable mass mainly in the right lower quadrant. Less frequently they may present in female patients as an ovarian tumor. Nevertheless mucous adenocarcinomas are reported as having the greatest tendency among tumors to perforate.

2. Case

The patient is a 70 year old male farmer with a 40 year smoking history. He presented to his GP in January 2011 with right flank pain, which was thought to be renal colic and he underwent an outpatient CT KUB in February 2011. This demonstrated a thickened retrocaecal appendix with an associated inflammatory phlegmon, in keeping with a recent ruptured appendix. On the day of his CT KUB, he was examined by a surgical registrar and was reported to be well, with a soft abdomen and mild right iliac fossa tenderness. His blood tests showed a mild inflammatory response (white cell count 11.3, CRP 119 with otherwise normal U&Es and LFTs). He was discharged home with 1 week of oral Augmentin 625 mg TDS and a CT scan was repeated in a month’s time (March 2011). This showed that the phlegmon around the appendix was now smaller, though the retrocaecal appendix was still thick walled, in keeping with partial resolution of the inflammation (see Figure 1).

However, clinically, his right iliac fossa pain continued to repeatedly flare up, and he had three further week long courses of oral Augmentin, which only settled his pain temporarily. He was seen in the General Surgical clinic in April 2011, where he found to be still tender and have a palpable mass in his right iliac fossa and thus he was booked for an appendicectomy the same week. During the operation, a retrocaecal appendix was found but extensive adhesions between the caecum and lateral peritoneal wall. The operation was otherwise uneventful and the appendix was removed. Histology subsequently came back as a moderately differentiated mucinous adenocarcinoma of the appendix (T4b N0) with clear margins (see Figure 2).
The preferred surgical treatment is still controversial. While simple appendicectomy seems to be sufficient for early, non-invasive carcinomas of the appendix [4], most tumours usually present as advanced invasive carcinomas and secondary right hemicolectomy is usually recommended as the operative treatment of choice [17]. The role of adjuvant chemotherapy in adenocarcinomas of the appendix is not clear. Despite this, many oncologists recommend adjuvant 5-fluorouracil based chemotherapy particularly for patients with no depository intestinal type adenocarcinoma. Cardiotoxicity and colitis are two rare but serious complications of 5-fluorouracil therapy [18,19].

4. Conclusion

Mucin producing adenocarcinomas of the appendix are a category of rare cancers of the gastrointestinal tract. Although at present they are a well studied pathologic entity, the crucial issue of their preoperative diagnosis remains unsolved. Appendicular lesions, both inflammatory and neoplastic, are notorious for atypical presentation. It is thus not surprising that the rate of this misdiagnosis is quite high particularly if solely based on clinical grounds.

References


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