



Adenocarcinoma of Appendix Mimicking Acute Appendicitis

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Authors' contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

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Case Study

ABSTRACT

Introduction: Acute appendicitis is one of the most common causes of acute abdomen. Obstruction of the lumen of the appendix due to fecolith, lymphoid hyperplasia and tumors can cause appendicitis. Appendicular tumors are rare, with carcinoids being the most common. Adenocarcinoma accounts for only 0.5% of all GI cancers, and for 0.05-0.2% of all appendectomies. Peak incidence is around 6th decade. Here we present one such case of adenocarcinoma of appendix presenting as acute appendicitis.

Materials and Methods: A 69-yearold male patient presented with complaints of right lower quadrant abdominal pain. He had a previous history of ERCP and CBD stent placement for cholangiocarcinoma. On examination, he had right iliac fossa tenderness. No icterus. Patient was evaluated with USG abdomen and pelvis, which showed inflamed appendix, 6.8mm in caliber. Patient was taken up for surgery and open appendectomy was done. Specimen was sent for histopathology. Perioperative period was uneventful.

Results: On histopathology, the external surface of the appendix was unremarkable. Cut section revealed obliterated lumen with tip of appendix showing mass of 2x1 cm. Individual cells arranged in glandular pattern with high N:C ratio, features suggestive of adenocarcinoma of appendix-metastatic/primary.

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Conclusion: Adenocarcinomas are usually diagnosed postoperatively on histopathology. Although rare, it should be considered as one of the causes of acute appendicitis in the elderly. All appendectomy specimens should be sent for histopathology. Once diagnosed as adenocarcinoma, a right hemicolectomy is the preferred surgery.

Keywords: Acute appendicitis, Appendectomy, Adenocarcinoma appendix, Neoplasm.

1. INTRODUCTION

Malignant neoplasms of the Vermiform Appendix are rare entities, and account for 0.4-1% of all gastrointestinal malignant neoplasms [1]. Of these, carcinoid tumors are common. Adenocarcinomas are very rare, most commonly occurring in the 6th-7th decade of life, with a slight male predominance [2]. They are diagnosed histopathologically in 0.08-0.1% of appendectomies [1]. In this study, we are reporting a case of acute appendicitis in an elderly male, with a known history of cholangiocarcinoma, treated with open appendectomy. On postoperative histopathological examination, it was diagnosed as adenocarcinoma of the appendix.

2. CASE REPORT

A 69 year old male patient, who is a known case of cholangiocarcinoma and had undergone ERCP and stenting, presented with complaints of right lower quadrant abdominal pain. No history of fever, significant weight loss, abdominal mass, altered bowel habits, nausea and vomiting. On

examination, he had right iliac fossa tenderness, no rebound tenderness. No icterus. USG abdomen and pelvis showed an inflamed appendix, ~6.8 mm in maximum caliber, with minimal free fluid in pelvic cavity. CT abdomen showed an ill-defined heterogeneous enhancing lesion in left lobe of liver, 3.9x3.7x3.0cm, mild to moderate IHBRD, likely cholangiocarcinoma, CBD stent insitu, with minimal ascites. Based on clinical and radiological diagnosis of acute appendicitis, patient underwent open appendectomy (Fig. 1). The specimen of appendix was sent for histopathological examination. Peri-operative period was uneventful, patient recovered well and was discharged in a stable condition. On histopathology, the external surface of the appendix was unremarkable. The cut section revealed obliterated lumen with the tip of the appendix showing a mass of 2x1cm. Appendix lined by dysplastic cells with infiltration of tumor cells into the sub-epithelium. Individual cells arranged in glandular pattern with high N:C ratio, vesicular nucleus and prominent nucleoli, features suggestive of adenocarcinoma of appendix (Fig. 2).



Fig. 1. Open appendectomy, intra-operative image

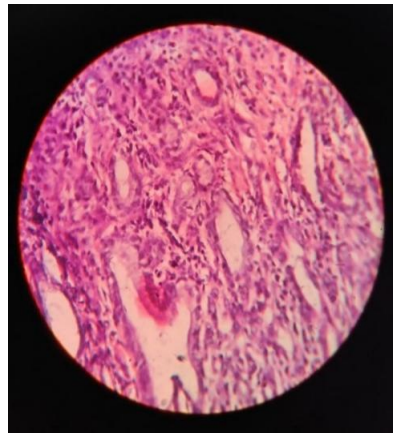


Fig. 2. Histopathology of the resected specimen on HPF, with high N:C ratio and glandular pattern-Adenocarcinoma

3. DISCUSSION

Appendicular neoplasms account for approximately 0.4-1% of GI neoplasms, the most common being Carcinoids (80-90%). Remaining 10-20% include mucinous-cystadenoma, adenocarcinoma, etc [1]. Primary adenocarcinoma of vermiform appendix is a rare entity, with an approximate incidence of 0.1% of all appendectomies [1]. Metastatic cholangiocarcinoma that cause appendicitis is extremely rare, with only a few cases reported in literature [3]. The most common presenting symptom is acute pain abdomen in right lower quadrant, with fever and anorexia [4] making pre-operative diagnosis of adenocarcinoma is difficult [5], as it mimics the symptoms of acute appendicitis [6]. Diagnosis is usually on postoperative histopathology following appendectomy, or other exploratory surgical procedures. Adjuvant chemotherapy is not yet a well-established clinical practice. The minimum treatment for adenocarcinoma appendix is right hemicolectomy, even if it is a secondary surgical procedure after histopathological diagnosis following appendectomy [1].

4. CONCLUSION

Adenocarcinoma should be considered as one of the causes of acute appendicitis in the elderly and it is mandatory to send specimen for HPE.

CONSENT

As per university standard guideline, participant consent and ethical approval have been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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