



Case Report

Primary Mucinous Adenocarcinoma of Appendix a Rare Case Report

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ABSTRACT

Appendicitis is the most common cause of pain abdomen in right iliac fossa, tumor is very rare as the preoperative investigations are limited to identify the small tumors. We report a 33 year old male with primary mucinous adenocarcinoma of appendix presented with features of appendicular mass. The interval appendicectomy done revealed mucinous adenocarcinoma on histopathology with Duke stage A. Follow up investigations did not reveal any other source of growth or metastasis. Exact diagnosis of the pathology of appendix is important as the treatment varies so as the prognosis of the patient.

Introduction

Appendix a true diverticulum of caecum is more prone to inflammation rather than tumor.

Carcinoid is the most common tumor and adenocarcinomas are rare in appendix incidence of adenocarcinoma in appendix is 0.01-0.2%. Clinically these tumors present as appendicitis and very rarely as a mass in right iliac fossa, therefore preoperative recognition of adenocarcinoma is not possible and is usually diagnosed after histopathological evaluation of specimen after removal for suspected appendicitis.

Exact diagnosis and staging of adenocarcinoma is very important as the treatment varies^{1,2,3}.

We report a case of mucinous adenocarcinoma of appendix in middle aged patient on a resolved appendicular mass.

CASE STUDY

A 33year old male presented to the emergency with symptoms of lower abdominal pain and vomiting. Emergency ultrasound revealed a mass of 6x6cm, patient was treated conservatively and was



advised for interval appendectomy. Baseline investigations were normal except absolute eosinophil count which was very high therefore patient was put on tab hetrazan for six weeks, with all the treatment eosinophil count did not come to normal values. Patient was planned for interval appendectomy, preoperatively mass was completely resolved. On opening the abdomen appendicular mass was noted which was fixed to the caecum, the appendix was resected from caecum with difficulty and the specimen was sent for histopathology. Grossly, specimen was 6x4cm, external surface revealed congested blood vessels, cut section showed a grey white lesion measuring 1x1cm, wall was thickened and partially obstructing the lumen (Fig 1& 2). Histopathology sections revealed an ulcerated mucosa which was invaded by tumor tissue. Tumor was composed of variable sized glands lined by tall columnar malignant epithelial cells showing intracellular mucin. Mucinous pools in submucosa and subserosa were also noted (Fig 3&4). Surgical resected margin was free from tumor. A histopathological diagnosis of well differentiated mucinous adenocarcinoma of appendix - duke stage 1 was given.

Discussion

Primary adenocarcinoma of the appendix is uncommon with less than 300 cases reported in literature. It is typically found in adults of 50 to 60 years old, they often presents with symptoms of acute appendicitis. Preoperative detection of appendiceal adenocarcinoma is rarely feasible, unless they are large tumors involving the stump of appendix^{1,4}.

Adenocarcinomas of the appendix show interesting morphological variations, from those that resemble the usual colorectal carcinoma to those that arise from a carcinoid and to mucinous tumours that may

appear well differentiated and indistinguishable from adenoma⁵.

Mucinous adenocarcinoma and colonic adenocarcinoma are the two most common variants that are found in appendix. 40% of them are mucin secreting mucinous adenocarcinomas. In the present case patient was 33 year old male, where malignancy is less in this age group and clinical features were more suggestive of appendicitis rather than malignancy. The mass on ultrasound was unable to be diagnosed as tumor mass. Only on histopathological examination the tumor was diagnosed as mucinous adenocarcinoma. Classifying the type of adenocarcinomas is important because colonic adenocarcinoma has a bad prognosis as compared to mucinous adenocarcinoma. Metastatic mucinous adenocarcinoma deposits from elsewhere should be ruled out in order to plan the treatment especially in female patients mucinous adenocarcinoma of ovary must be ruled out. Appendiceal stump should be evaluated thoroughly because involvement of stump of appendix requires right hemicolectomy^{5,6}. Duke staging should be done on tumors of appendix, since stage C1 and C2 require adjuvant chemotherapy⁷.

Peritoneal accumulation of gelatinous ascites caused by malignant neoplasms of the vermiform appendix is an important finding that must be looked in all adenocarcinomas of appendix as it alters the staging of the tumor.

In the present case since the surgical margin was free from tumor with Duke stage A simple appendectomy was done, post-operative ultrasound did not reveal any significant pathology, therefore patient was advised for follow up.

Conclusion

Neoplasm of appendix should be aware of while operating appendicitis, all appendectomy specimens should be

carefully examined grossly to detect subtle mural lesions or tumors; routine histologic examination of appendiceal margin of excision is highly recommended.

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Figure 1: Cut section of appendix: Grey white lesion, partially obstructing the lesion

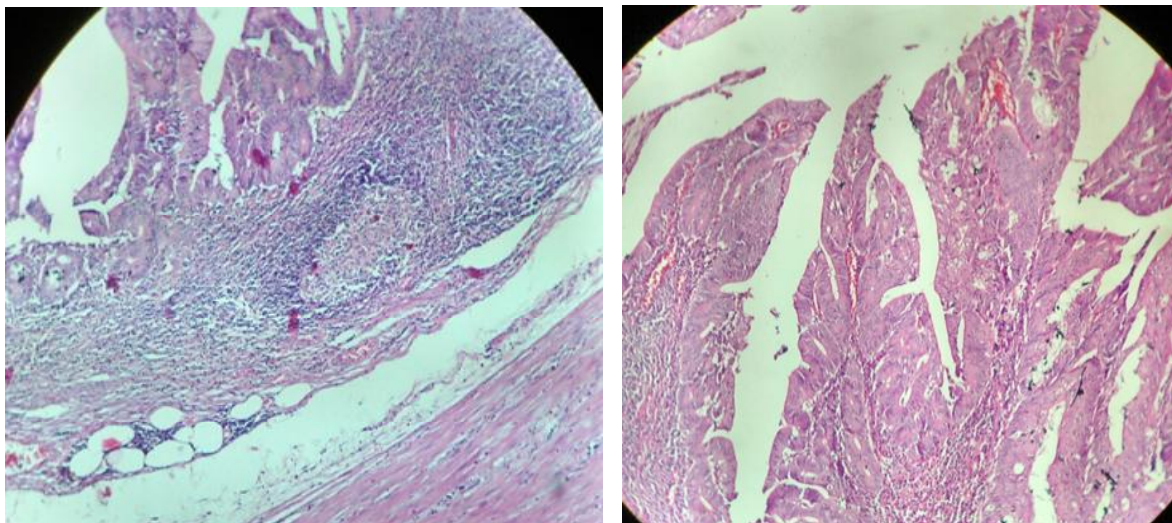


Figure 2 & 3: Microscopy of appendix showing dysplastic glands (100x)

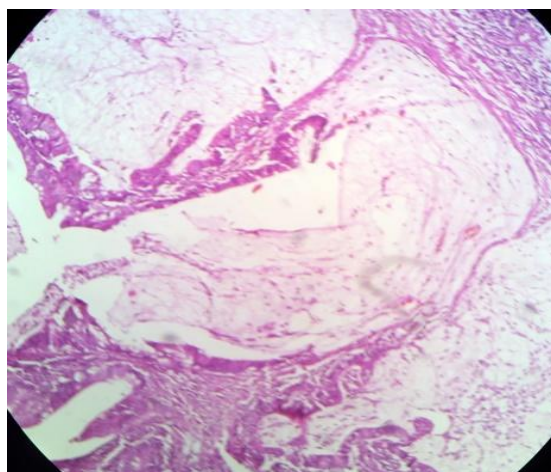


Figure 4: Microscopy of appendix showing pools of mucin and malignant glands (100x)