

Mucocele of the Appendix: An Unusual Cause of Disturbed Bowel Habits

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ABSTRACT

There are many causes of disturbed bowel habits. In this rare case of mucocele of appendix, patient presented with disturbed bowel habits of increased frequency, urgency and semisolid stool. Ultrasound of abdomen revealed fusiform cyst just below umbilicus. Differential diagnoses included mesenteric cyst, duplication cyst and mucocele of appendix. Coronal and sagittal reformats of CT abdomen confirmed its origin from cecum. Its tip was in contact with sigmoid colon. Surgical resection was carried out and histopathology revealed mucinous cyst adenoma.

Key words: Mucocele. Appendix. Appendiceal mass. Altered bowel habits. Mucinous cyst adenoma..

INTRODUCTION

Mucocele of appendix describes mucinous distension of the appendiceal lumen regardless of the underlying pathology. Tumours of the appendix arising from epithelium can be classified as mucinous or non-mucinous. Usually these tumours show mucin rich element with circumferential mucosal involvement, and have a strong tendency to form mucocele.¹ Etiologies for the mucinous distention of appendiceal loop include retention cyst, mucosal hyperplasia, cystadenoma and cystadenocarcinoma.² The anatomic location of cystic structure on ultrasound (u/s) and CT, in lower abdomen predominantly right lower quadrant suggests appendiceal mucocele in the differential diagnosis. In operated cases of appendicitis incidence of appendiceal mucocele is 0.2-0.4%.³⁻⁴ Underlying malignancy is a very well known complication of mucocele of appendix. Previous studies reported that the male-to-female ratio was 3-4 to 1 with a mean age of 55 years at diagnosis.⁵

This report describes mucocele of appendix as the cause of disturbed bowel habits.

CASE REPORT

A 50-year-old male patient presented with complaints of increased frequency of bowel habits (three times a day), urgency and semisolid stools for last one year. He had visited number of general physicians and taken a variety of treatments, but his problem remained persistent. Both his family history and medical history was un-remarkable.

Physical examination revealed slight discomfort in lower abdomen on palpation. The laboratory investigations were

within normal limits. Ultrasound examination of the abdomen revealed intraperitoneal fusiform cystic structure below the umbilicus (Figure 1). Doppler's study revealed no colour flow. Computed tomography (axial slices with coronal and sagittal reformatting) of the abdomen revealed fluid attenuation fusiform cystic mass originating from the cecal tip (Figure 2) consistent with mucocele

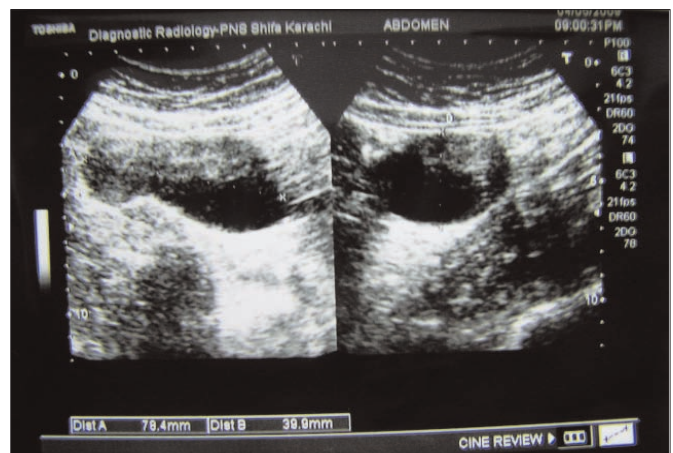


Figure 1: Axial and longitudinal u/s images of lower abdomen showing anechoic fusiform cystic structure below the umbilicus..

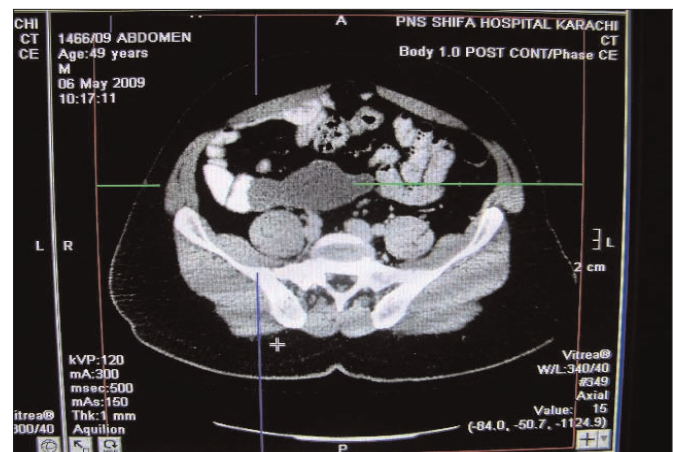


Figure 2: Axial slice CT abdomen showing fluid attenuation fusiform cystic mass originating from the cecal tip.

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of appendix. Patient underwent laparotomy. Specimen (Figure 3) sent for histopathology revealed mucinous cyst adenoma.

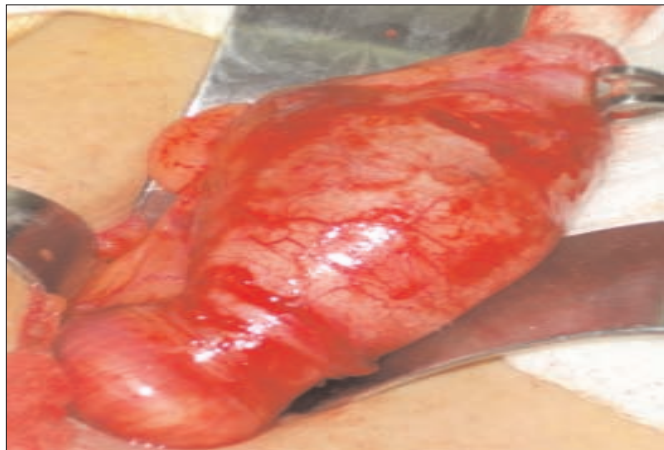


Figure 3: Operated appendiceal mucocoele.

DISCUSSION

Mucocoeles are usually discovered incidentally, at the physical examination, during abdominal imaging, or at laparotomy as a secondary surgical finding.⁶ Usually patients present with lower right abdominal pain, palpable abdominal mass and gastrointestinal bleeding.^{2,5,7} A palpable mass is found in upto 50% of patients.⁸ Other signs reported in some cases include; changes in bowel habits, weight loss, nausea/vomiting, pain due to inflammation. Around 25% of patients with mucocoele appendix are asymptomatic.⁹ Symptomatic patients are more likely to have a malignant disease. This patient presented with lower abdominal discomfort and disturbed bowel habits.

According to the epithelium four varieties of mucocoeles have been described. The first type is upto 2 cm in size and has a normal epithelium. It is a simple retention cyst with normal epithelium and is associated with mild luminal dilatation. Diameter of more than 2 cm can be seen in rest of the 3 types of mucocoele.¹⁰ The second group is defined by a hyperplastic epithelium and mild dilatation. In third group (cystadenomas) appearance of the epithelium is similar to that in villous adenomas and adenomatous polyps of the colon, with mild (low-grade) epithelial dysplasia. The fourth category, which accounts for 11–20% of cases, encompasses malignant mucinous cystadenocarcinomas. Appendiceal distention

is severe, and spontaneous rupture has occurred in 6% of the cases.⁸ Pseudomyxoma peritonei is a potential danger if it gets ruptured. Mortality is high in such cases. Concentric, echogenic layers within the cystic mass ("onion skin") are thought to be specific alteration.³ Fine needle aspiration under ultrasound guidance is dangerous, as mucinous cell can spill into the peritoneal cavity. CT is very effective in showing its consistency, size, shape and place of origin. In this patient coronal and sagittal reformats very effectively demonstrated its origin from ceecal tip. Laparoscopic resection can lead to spillage and peritoneal dissemination of an appendiceal mucinous tumour.⁴ In case of open surgery, as in this patient, it can be delivered very safely.

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